OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN

Building 2A - Oakdale West Industrial Estate
SSD 9794683

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.

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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
630.30393-R01-v1.1	11 October 2022	Sam McDonald	Alanna Ryan	Alanna Ryan

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1 Introduction

1.1 Development Overview

Goodman Property Services (Aust) Pty Ltd (Goodman) obtained a State Significant Development Consent (SSD), 9794683 for the Oakdale West Estate (Oakdale West) Stage 3 Development including construction, fit out, operation and use of warehouse buildings 2A, 2C and 2D and, associated office space and parking.

Oakdale West is a warehousing and a distribution hub at 2 Aldington Road, Kemps Creek in Western Sydney Employment Area (**Figure 1**). SSD 7348 was approved on 13 September 2019 for the 'Concept Plan' and 'Stage 1 Development' of Oakdale West.

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 2**). The Stage 1 Development includes estate-wide earthworks, infrastructure, and services and the construction and operation of warehouses in Precinct 1.

SSD 7348 has since been modified ten times with the most recent modification (MOD 10) being approved on 17 August 2022.

Approved Development Consent SSD 9794683 is available online at this direct link to the NSW Planning Portal.

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

- *Oakdale West Industrial Estate Stage 3 Environmental Impact Statement* (EIS) prepared by Keylan Consulting (2021), including all specialist assessments and other appendices;
- *SSD 7348 MOD1 - Oakdale West Stage 4 – S.4.55(1A) Application to Modify Architecture Plans and Subdivision Plan*, prepared by Goodman (2021), including appendices;
- *SSD 7348 MOD2 - Oakdale West Industrial Estate – S.4.55(1A) Application to Modify Architecture Plans and Subdivision Plan*, prepared by Goodman (2021), including appendices;
- *Environmental Impact Statement, Oakdale West Estate – State Significant Development Application* (EIS) prepared by Urbis (2017), including all specialist assessments and other appendices;
- *Oakdale West Industrial Estate (SSD 7348) Modification 1* prepared by Urbis (2019), including all specialist assessments and other appendices;
- *Environmental Impact Statement, Oakdale West Industrial Estate Stage 3 – State Significant Development Application* (EIS) (SSD 9794683) prepared by Keylan Consulting (2021), including all specialist assessments and other appendices;
- *Oakdale West Industrial Estate Concept Plan and Stage 1 Modification (MOD 3 SSD 7348) and Stage 2 Development Application (SSD 10397) – Environmental Impact Statement* prepared by GHD (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;
- *Application to Modify Architecture Plan, SSD 7348 MOD 8, Oakdale West Stage* prepared by Goodman (2021), including Architecture Plans;

- *Modification Application 9, Oakdale West Industrial Estate SSD 7348*, prepared by Keyland Consulting (2021), including Estate Masterplan; and
- *Application to Modify Architecture Plans, SSD 7348 MOD 10, Oakdale West Stage* prepared by Goodman (2022).

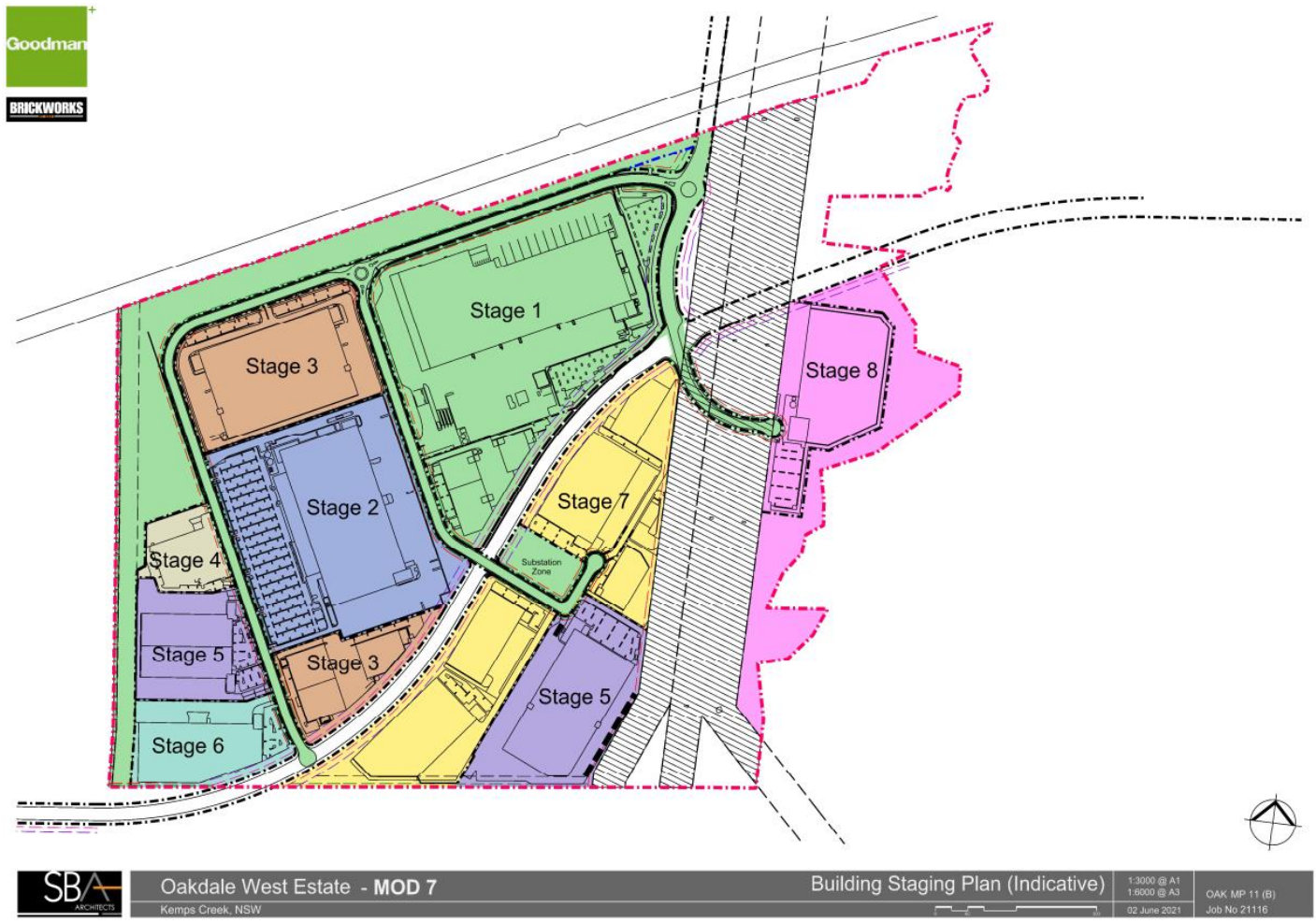

Figure 1 Oakdale West Staging Plan

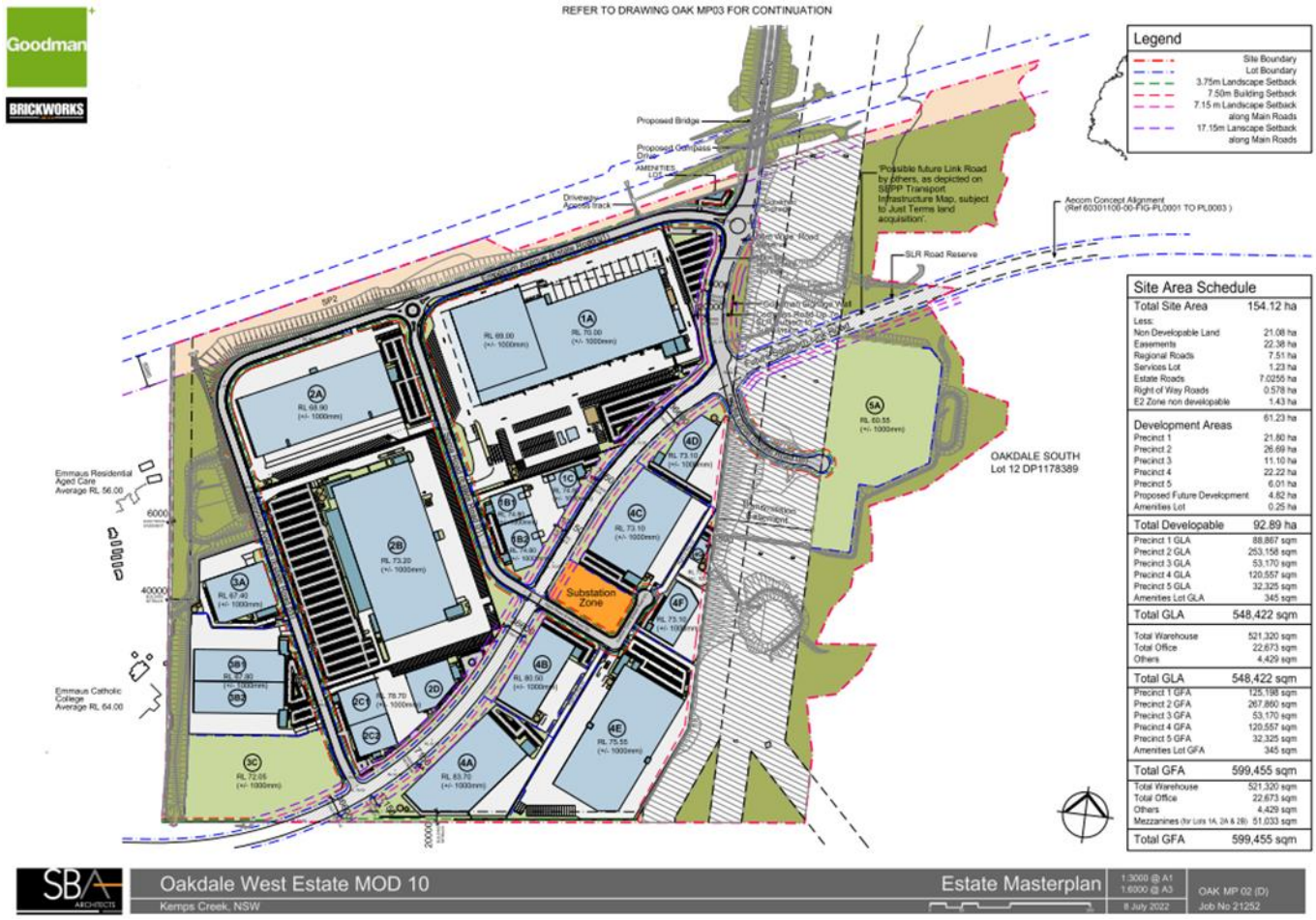

Figure 2 Oakdale West Precinct Plan

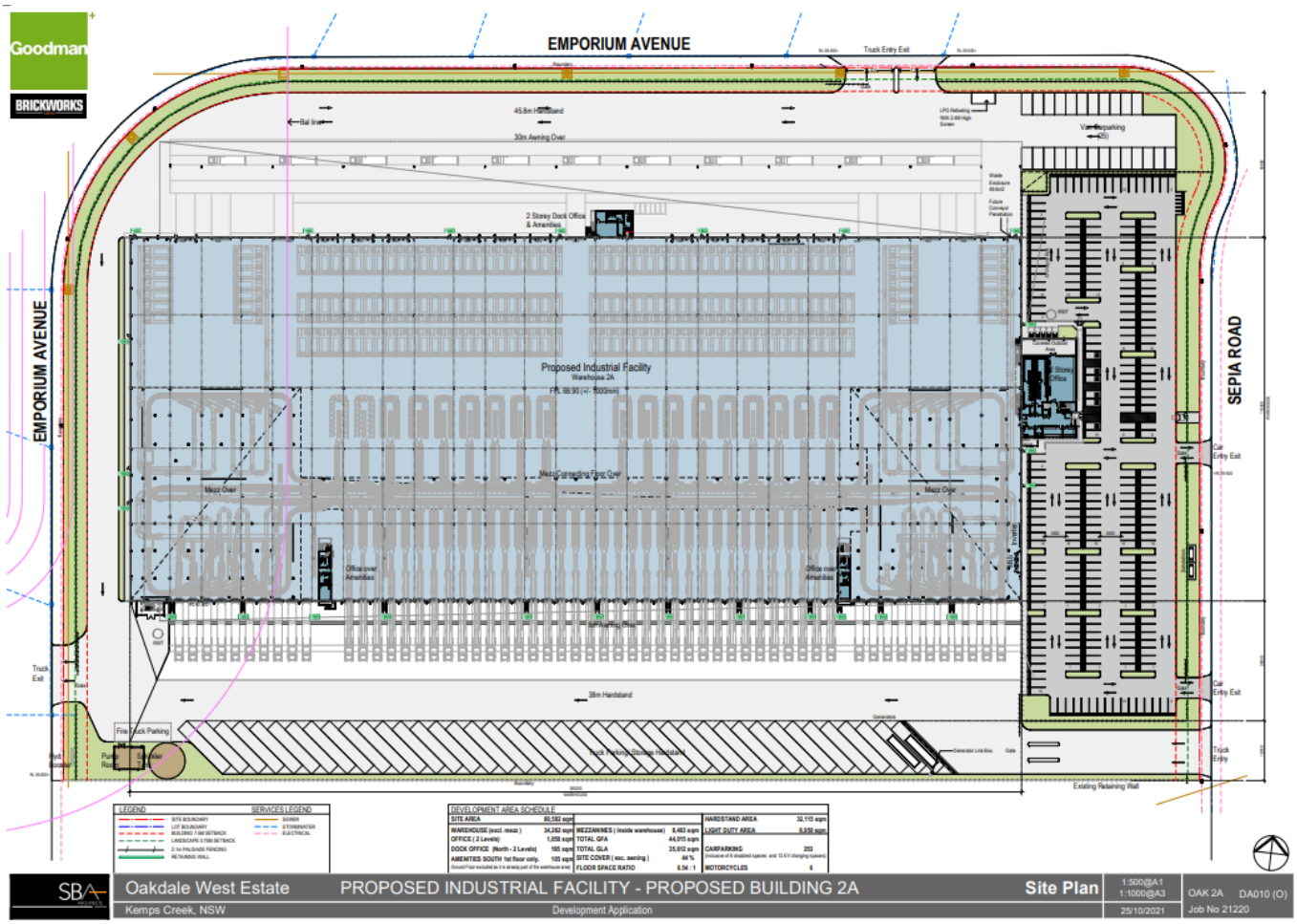

Figure 3 Building 2A Layout

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 2A (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 Operational Environmental Management Plan – Oakdale West Industrial Estate SSD 7348* (as modified) (SLR 2022) 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:
    - OWE Community Communication Strategy
    - 2A Construction Air Quality Management Plan
    - 2A Operational Traffic Management Plan
    - 2A Waste Management Plan
    - 2A Landscape Management Plan
    - 2A Bushfire Emergency Management and Evacuation Plan
    - 2A Fire Management Plan
    - OWE Vegetation Management Plan
    - 2A Building User's Guide
    - Sustainability Management Plan

1.2.1 Scope

This OEMP has been prepared to satisfy statement of commitment for the 'preparation of updated OEMP for OWE Concept Proposal for Stage 3' of Approved Development Consent SSD 9794683 in relation to Building 2A. The Approved Development Consent conditions within SSD 9794683 and SSD 7348 that define this OEMP Scope are listed below in **Table 1**, along with where these requirements have been addressed within this document.

In addition to this, all conditions of Approved Development Consent from SSD 9794683 and SSD 7348 relevant to this OEMP are attached as **Appendix A** and **Appendix B**, respectively, including reference to where they have been addressed.

Table 1 OEMP Scope SSD 9794683 and SSD 7348

Condition	Section
SSD 9794683	
C1. Management plans required under this Development 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, the development or any management measures;	i. Section 3.3 Section 4 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: i. impacts and environmental performance of the development; and ii. effectiveness of the management measures set out pursuant to paragraph (b) above;	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 the development over time;	Section 5
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	i. Section 3.5 ii. Section 3.6 iii. Section 3.5
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.*	Section 7
SSD 7348	
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

In addition to meeting the specific performance measures and criteria in this Development 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 in ensuring:

- The Building 2A Operational Environmental Management requirements under SSD Development Consent 9794683 are undertaken and adhered to in line with the relevant Approved Development Consent conditions;
- Establish the framework for managing and mitigating the potential for adverse environmental impacts as a result of the operation of Building 2A;
- Clearly and concisely document the commitments made in the relevant assessment 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 Approved Development Consent;
- Clearly and concisely document the conditions imposed by SSD 9794683 and SSD 7348 that are required to be implemented and/or complied with during operation; and
- Assist to establish Building 2A 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
Kate McKinnon Associate - Environmental Assessment & Management	MPlan BArts	Kate is and environmental planner with twelve years' experience in engagement and development management and planning. Kate's work has included preparation and project management, preparation and stakeholder engagement for developments ranging from large scale green and brown field subdivisions to commercial / industrial developments including significant involvement in projects in the Western Sydney Employment Area. Kate has represented her clients in community forums, development panels and at the Land and Environment Court. Her expertise also includes the preparation of detailed reports and the negotiation and coordination of advice with respect to government departments and stakeholders.
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.
Sam McDonald Senior Project Consultant Environmental Assessment & Management	B Env. Sc.	Sam is a Senior Project Consultant with the Environmental Assessment & Management team and has over four years of experience in as a project consultant with SLR. Sam graduated with a Bachelor of Environmental Science (majoring in Environmental Sustainability) from the University of Newcastle in 2015. Sam has experience in project management, report writing and auditing. Project experience includes mining, quarrying, infrastructure and intensive agriculture. Sam also has experience in mine closure, environmental impact assessments, environmental management programs, environmental management strategies, management plans, compliance, environmental risk assessments.
Breah Heinrich Senior Project Consultant Environmental Assessment & Management	B Env. Eng.	Breah is a Senior Project Consultant in the Environmental Assessment & Management (EA&M) team and has over five years of experience working in environmental management across heavy industry, construction and local government. Breah graduated with a Bachelor of Environmental Engineering from the University of Wollongong in 2016. Breah has experience in project management, contractor management, field work, management plans and risk assessments. Areas of experience include the development and on-site implementation of Environmental Management Plans, environmental monitoring and reporting of data.

1.2.4 Consultation

In accordance with SSD 9794683 and SSD 7348, consultation has been undertaken with the applicable stakeholders which is summarised in **Table 3**, and documentation attached at **Appendix C**.

Table 3 Consultation

Condition	Comment
SSD 9794683	
Notification of Commencement A9. 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: (a) construction; (b) operation; and (c) cessation of operations.	Noted – The Applicant will notify The Department of the commencement of operation as per Condition A9.
Notification of Commencement A10. 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.	Noted – The Applicant has notified The Department of the commencement of this stage of development as per Condition A10.
Evidence of Consultation A11. Where conditions of this Approved Development 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)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.	Evidence of consultation will be provided as required and in accordance with the evidence provisions set out in Condition A11.

Condition	Comment
Sustainable Travel Plan B5. Prior to the commencement of operation of any part of the development, the Applicant must prepare a Sustainable Travel Plan. The Sustainable Travel Plan must: (a) be prepared in consultation with TfNSw;	Undertaken as part of the preparation of the Green Travel Plan (equivalent to a Sustainable Travel Plan) (refer to Appendix C of the OTMP (attached as Appendix G of this Plan)).
Bushfire Protection B25. Prior to the commencement of operation, the Applicant must prepare a Fire Management Plan (FMP) for the development. The FMP must: be prepared in consultation with the NSW RFS; …	The FMP has been submitted to NSW RFS for consultation. NSW RFS has not provided comment on the FMP. Evidence of consultation is attached as Appendix C.

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).

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 2A is within Precinct 2, in the north-western corner of Oakdale West.

2.2 Operational Activities

In accordance with the Approved Development Consent, the site will operate as a warehouse and distribution centre.

2.3 Hours of Operation

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

2.4 Site Access

All access to the Estate is provided via Compass Drive. 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.

Warehouse 2A movements will be facilitated via an access onto Emporium Avenue to the northern boundary of the OWE precinct. A truck entry is provided from Sepia Road on the eastern boundary and a truck exit is provided onto Emporium Avenue to the north and Sepia Road to the east. Two car entry/exit points will be provided directly onto Emporium Avenue and Sepia Road to facilitate access to the proposed car parking areas.

The site has limited active and public transport services. A Shared Path (cyclists and pedestrians) is provided along the northern side of Lenore Drive and western side of Old Wallgrove Road, providing connections to the regional pedestrian and cycle networks. Compass Drive and the internal roads include a 2.5-metre shared path for both pedestrians and cyclists. The introduction of a new bus route provided additional access for workers/ visitors within OWE. This new bus service (Route 779) commenced operations on 24 October 2021 and provides direct access to and from St Marys Train Station. Introduction of a direct connection with St Marys Train Station increases the accessibility of the site via public transport services.

A Green Travel Plan has been developed to identify alternative and sustainable modes of transport and to reduce single-occupancy car travel for journeys to and from the Site. Strategies that will be implemented to influence travelling behaviour include travel planning and demand management, promotion of public transport, carpool and electric vehicle use, cycling and walking. Implementation of the Green Travel Plan will be monitored to review efficiencies and identify further opportunities.

2.5 Contact Details

The Goodman Representative will be responsible for all environmental management at Building 2A. Contact details are outlined in **Table 4**.

Table 4 Contact Details

Role	Name	Contact Details
Building 2A		
Goodman's Representative	Michael Trotnar – Senior Building Manager	0409 999 447 Michael.Trotnar@goodman.com
Tenant's Representative	Steve Zoric	0450 803 357 Steve.Zoric@auspost.com.au

2.6 Relevant Companies

2.6.1 Tenant

Building 2A has one tenancy which includes one warehouse, two Ancillary Offices and two Dock Offices. 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)	Ensure the dedicated internal Oakdale West Estate Road network is managed in accordance with the requirements noted under the SSD Approved Development Consent.
Oakdale West Estate Infrastructure (Excluding Council Owned Roads)	Goodman's Representative (Goodman Rep)	Ensure that non Council owned infrastructure is managed in accordance with the requirements noted under the SSD Approved Development Consent and the OWE OEMP.
Sites / Warehouses	Goodman's Representative (Goodman Rep)	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. Advise and assist the tenant in the implementation of the OEMP, as required.
Sites / Warehouses	Tenant Representatives (Tenant Rep)	Ensure that the obligations of this OEMP are implemented and communicated to all relevant parties. Implement the Complaints and Incident Handling Procedures, as required.

Site	Company and Role	Responsibilities
Sites / Warehouses	Tenants/employees/ contractors (T/E/C)	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 9794683

The Approved Development Consent conditions for SSD 9794683 applicable to the operation of Building 2A 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 operation of Building 2A shall be carried out in accordance with SSD 9794683 and also in accordance with the documents referenced under Condition A2 of the Approved Development Consent:

- The EIS (Urbis 2017) and RTS;
- The development layout plans and drawings attached to the Development Approved Development Consent as Appendix 1 and Appendix 2;
- the Applicant's Management and Mitigation Measures in Appendix 7; and
- Modifications to SSD 7348 and associated EIS's and assessment reports.
- In accordance with Condition A3 of SSD 9794683, consistent with the requirements of the Development Approved Development Consent, the Planning Secretary may make written directions to Goodman 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 Approved Development 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 A3(a) of the Development Approved Development Consent.
- In accordance with Condition AA of SSD 9794683, the conditions of this Approved Development 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 A2(c) or A2(e). In the event of an inconsistency, ambiguity or conflict between any of the documents listed in condition A2(c) or A2(e), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict. Goodman's Representative will be notified if any inconsistencies are identified.

3.3.2 SSD 7348

The Approved Development Consent conditions for SSD 7348 (as modified) applicable to the operation of Building 2A are listed in **Appendix B**. (N.B. The administrative conditions and conditions relating to the construction phase have not been included in **Appendix B**, 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 Approved Development Consent:

- EIS 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 Approved Development Consent.

In accordance with Condition B6 and D4 of the SSD 7348 Approved Development 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.

3.3.3 Other licences, permits, approvals and Approved Development Consents

In accordance with Condition B4 of the SSD 7348 Approved Development Consent and Condition AN1 or SSD 9794683 Approved Development Consent, all licences, permits, approvals and Approved Development Consents as required by law must be obtained and maintained as required for the development. No condition of this Approved Development Consent removes any obligation to obtain, renew or comply with such licences, permits, approvals and Approved Development 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/Approved Development 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 Approved Development Consents required throughout operation as described in SSD 7348 and SSD 9794683 Approved Development 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 Approved Development Consents

Licence, permit, approval or Approved Development Consent	Person Responsible	Timing	References / Notes
All licences, permits, approvals and Approved Development Consents as required by law must be obtained and maintained as required for the development.	Goodman	As required	SSD 9794683 Condition AN1 SSD 7348 Condition B4

Licence, permit, approval or Approved Development Consent	Person Responsible	Timing	References / Notes
A Compliance Certificate for water and sewerage infrastructure servicing of the site will be obtained.	Goodman	Before the commencement of operation	SSD 9794683 Condition A25

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	- Ensure all other employees and contractors are appropriately inducted and aware of their obligations under the OEMP. - 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
Hours of operation	Section 2.3
Goodman's Responsibility and Sustainability Policy	Section 3.1
Conditions of any environmental licences, permits and Approved Development Consent approvals	Section 3.3

Inductions and Environmental Training	Reference / Notes
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 Approved Development Consent.

Material Harm is defined within SSD 9794683 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 4** 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 Approved 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
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 2A	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
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

Notification Requirement	Responsible	Timeframe
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; and
- Fire and Rescue NSW.
- Water NSW (if the event has an effect on the Water NSW 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
	Head office (Sydney)	02 9995 5000

Regulatory Authority / Stakeholder	Key Contact	Contact Details	
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 Approved Development 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.

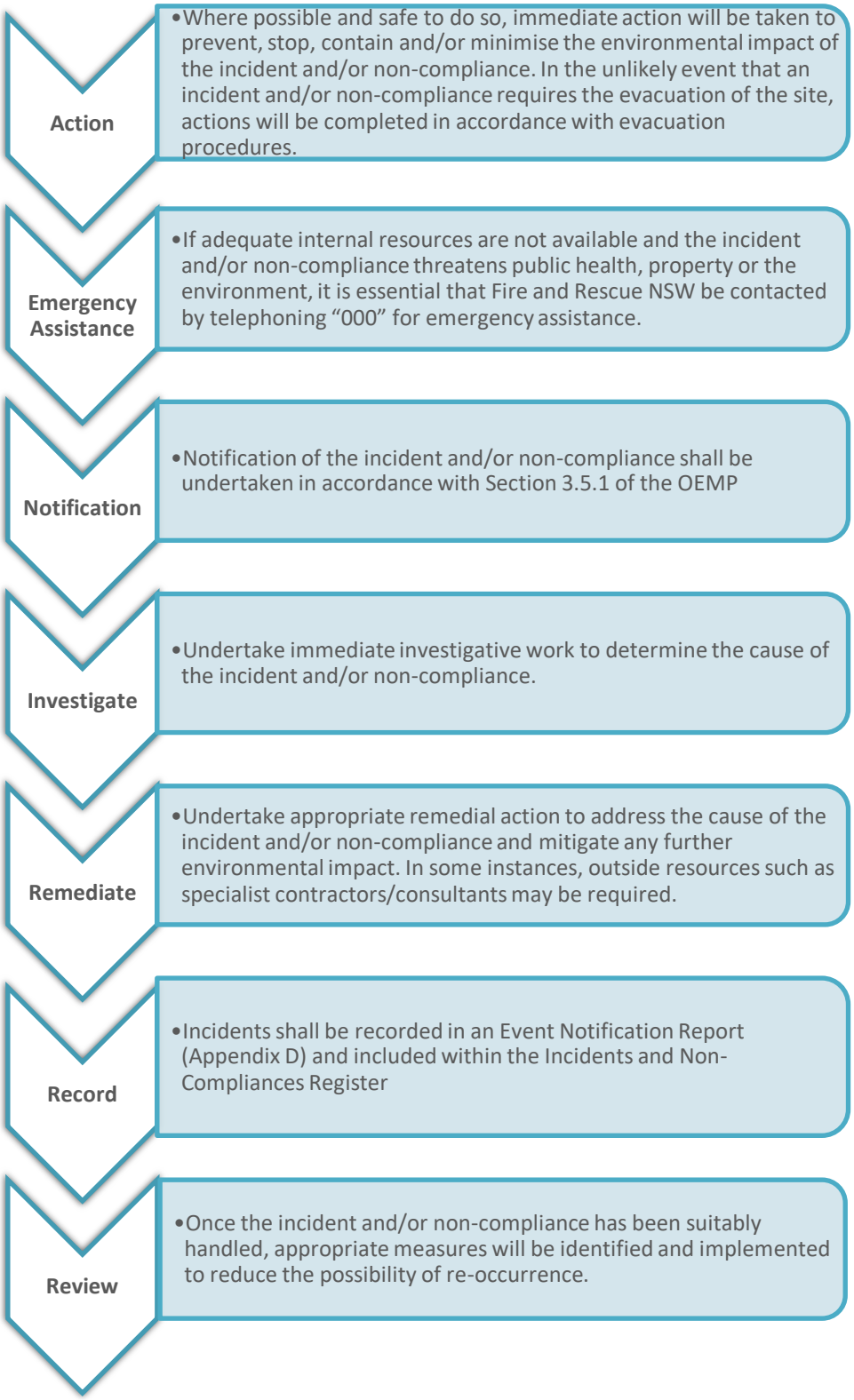

Figure 4 Incidents and Non-Compliance Handling Procedure

3.6 Complaints Response and Handling Procedure

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

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 5** 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 Approved Development Consent or relevant matter relating to the operation of Building 2A, 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 E**.

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.

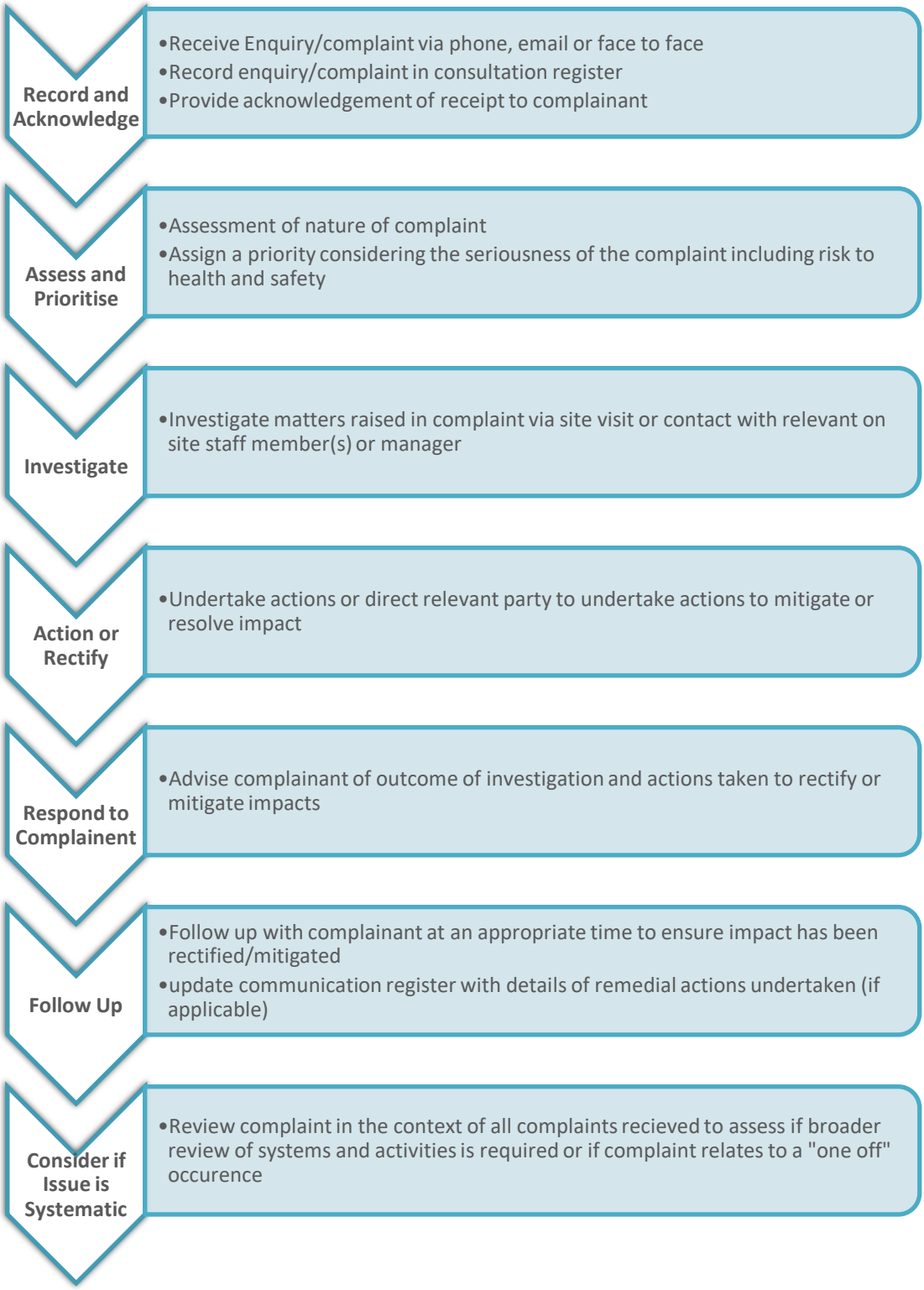

Figure 5 Complaints Handling Procedure

4 Environmental Management Commitments

Environmental aspects with the potential to be impacted by Building 2A 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 and operation.	Tenant Rep / Goodman Rep	Ongoing	SSD 9794683 Condition A1

4.2 Noise

The environmental management controls in **Table 12** will be implemented to minimise the potential for adverse noise emissions from the 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 9794683 and SSD7348.	Tenant Rep, T/E/C	Ongoing	SSD 9794683 Condition B9 and B10 SSD 7348 Conditions B18 and B19
All plant and equipment will be maintained and operated in a proper and efficient manner.	Tenant Rep	Ongoing	SSD 9794683 Condition A20
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

Operational Traffic will be managed in accordance with the Construction and Operational Air Quality Management Plan (COAQMP) (SLR, 2021) and attached as **Appendix F**.

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

Table 13 Environmental Management Controls for Air Quality

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
All listed mitigation and management measures outlined in the COAQMP will be implemented throughout operation. These mitigation measures cover the following activities: • Refuelling; • Minimisation of Onsite Vehicles Idling Times; • Onsite Vehicle Movements; • Fugitive Dust; • Exhaust Air Discharge; • Staff Awareness and Training; and • Contingency Plan	Goodman Rep, Tenant Rep	Ongoing	COAQMP Section 9.2 and 12

4.4 Traffic

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

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

Table 14 Environmental Management Controls for Traffic

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
All listed mitigation and management measures outlined in the OTMP will be implemented throughout operation. These mitigation measures cover the following activities: • Pedestrian Management; • Vehicle Management; • Loading and Unloading Materials; • Service Vehicle Access Rotes; • Temporary or Unplanned Works; • Dangerous Goods; • Driver Code of Conduct; 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

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 Approved Development Consent SSD 7348 and Development Approved Development Consent SSD 9794683.

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 Rep, T/E/C	Ongoing	SSD 9794683 Condition B19
The stormwater management system will be operated in accordance with Conditions B20 a)-e).	Goodman	Ongoing	SSD 9794683 Condition B20
Water storage basins and stormwater infrastructure owned and managed by Goodman will be managed in accordance with the manufacturers specifications.	Goodman	Ongoing	Best practice

4.6 Waste

As required by Condition B35 of SSD 9794683, the Waste Management Plan (WMP) (SLR 2022) prepared as part of the RtS has been updated to be relevant to the operation. A copy of the WMP is attached as **Appendix H**.

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

Table 16 Environmental Management Controls for Waste

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
All listed mitigation and management measures outlined in the WMP will be implemented throughout operation. These mitigation measures cover the following activities: • Targets for Resource Recovery; • Waste Streams and Classifications; • Estimated Quantities of Operational Waste; • Waste Storage Area Size; • Waste Storage Room Location; • Waste Storage Area Features; • Waste Servicing; • Waste Avoidance, Reuse and Recycling Measures; and • Communication Strategies.	Goodman Rep, Tenant Rep	Ongoing	WMP Section 6
Recycling of packaging and pallets where possible	Goodman Rep, Tenant Rep, T/E/C	Ongoing	EIS Section 8.8 - Waste Management (Keylan Consulting, 2021)

4.7 Biodiversity

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
• Stop-work procedure for unexpected uninjured wildlife or unexpected injured wildlife is encountered.	Goodman Rep, Tenant Rep	Ongoing	Section 6

4.8 Visual Amenity

The visual amenity and landscaping at Building 2A. 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
All listed management measures outlined in the LMP will be implemented throughout operation. These management measures focus on the implementation of maintenance works including: • Plant care; • Fertilising; • Spraying; and • Erosion control. • The LMP also includes a Contingency Plan (also replicated in Section 6 of this OEMP).	Goodman Rep, Tenant Rep	Ongoing	LMP Section 5 and 6
Outdoor lighting will comply with AS/NZS 1158.3.1:2005 Pedestrian Area (Category P) Lighting and AS/NZS 4282:2019 Control of Obtrusive Effects of Outdoor Lighting.	Goodman Rep, Tenant Rep	Ongoing	SSD 7348 Condition C6
Illuminated signage will be oriented away from the sensitive receivers on the western and southern Site boundaries.	Goodman Rep, Tenant Rep	Ongoing	SSD 7348 Condition C7

4.9 Hazardous Goods and Contamination

Table 19 lists the management strategies for hazards, risks and emergencies as contained in SSD 7348 and SSD 9794683.

Table 19 Environmental Management Controls for Hazard, Risk and Emergency

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
The quantities of dangerous goods stored and handled at the site must be below the threshold quantities listed in the Department of Planning's Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 at all times.	Tenant Rep	Ongoing	9794683 Condition B28
Chemicals, fuels and oils will be stored in bunded areas in accordance with relevant Australian Standards and/or the *Storing and Handling of Liquids: Environmental Protection – Participants Manual* (Department of Environment and Climate Change 2007).	Tenant Rep	Ongoing	SSD 7348 Condition D110 SSD 9794683 Condition B29
Spill kits will be provided and maintained on site.	Tenant Rep	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 Rep	Ongoing	Best practice
In the event of a major spill, the Incident response actions in Section 3.5 will be implemented.			Section 3.5

4.10 Fire Safety and Emergency

The Bushfire Emergency Management and Evacuation (BEME) (Blackash, 2022) and the Fire Management Plan (FMP) have been prepared for operation and are attached as **Appendix J** and **Appendix K** respectively.

Table 20 lists the management strategies for fire safety and emergency.

Table 20 Environmental Management Controls Fire Safety and Emergency

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
Maintain asset protection zones as indicated in the Bushfire Hazard Assessment (Blackash Bushfire Consulting, 2020)	Goodman Rep, Tenant Rep	Ongoing	EIS Section 8.11 – Bushfire (Keylan Consulting, 2021)
All listed mitigation and management measures outlined in the BEME will be implemented throughout operation. These mitigation measures cover the following activities: • Emergency Management and Evacuation; • Emergency Management Procedures; • Post Bushfire Event Actions; and Triggers for Action (also replicated in Section 6 of this OEMP).	Goodman Rep, Tenant Rep	Ongoing	BEME Section 6 to 9
All listed mitigation and management measures outlined in the FMP will be implemented throughout operation.	Goodman Rep, Tenant Rep	Ongoing	FMP

4.12 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 E**.

Table 21 Environmental Management Controls for Community Communication

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
All strategies outlined in the CCS will be implemented throughout operation. These include: • 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

4.13 Sustainability

Sustainability will be managed in accordance with the Building User's Guide (SLR, 2022) and the Sustainability Management Plan (SLR, 2021) attached as **Appendix L** and **Appendix M** respectively. The Building User Guide will be updated as required to include any improvements or changes to the building.

Table 22 lists the management strategies for Sustainability**.**

Table 22 Environmental Management Controls for Sustainability

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
Objectives, targets and strategies will be implemented and managed for the following categories in accordance with Table 3 of the SMP 'ESD Assessment Summary': • Design and Management • Façade Performance • Social Sustainability • Minimising Transport • Optimising Indoor Environmental Quality (IEQ) • Minimising Energy Use • Choosing Materials • Minimising Waste • Water Conservation and Reuse • Land Use and Ecology Impact	Goodman Rep, Tenant Rep	Ongoing	Sustainability Management Plan Section 5.1
Controls as identified in the Building User's Guide	Goodman Rep, Tenant Rep	Ongoing	Building User's Guide
Electric Vehicle charging stations will be provided and maintained	Goodman Rep	Ongoing	SEE Section 6.4
End of trip facilities, including showers and changing areas will be provided and maintained to encourage active modes of transport	Goodman Rep	Ongoing	SEE Section 6.4

5 Monitoring, Reporting and Auditing

Table 23 summarises the monitoring requirements for the operation of Building 2A 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 and Reporting 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 and reporting commitments outlined in the OEMP and appended management plans.

Table 23 Monitoring and Inspections Requirements

Aspect	Monitoring / Inspection Requirement	Person Responsible	Timing / Frequency	References / Notes
Weekly				
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/ Goodman Rep	Weekly	Best practice
General	The Tenant Representative will report environmental performance during regular management meetings and/or 'toolbox talks'. Items to be discussed include: • 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. • Any required maintenance, process improvements or staff training identified in order to comply with OEMP commitments.	Tenant Rep	Weekly	Section 3.4
Monthly				
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.	Goodman Rep for DLP only	Monthly	Sustainability MP Section 7.1
Half-yearly				

Aspect	Monitoring / Inspection Requirement	Person Responsible	Timing / Frequency	References / Notes
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 6.8
Waste	A waste audit will be conducted according to the WMP to ensure its provisions are being maintained.	Tenant Rep	Half-yearly	WMP Section 6.8
Sustainability	An energy audit and management review will be undertaken in accordance with the Sustainability Management Plan	Tenant Rep/ Goodman Rep	Half-yearly	Sustainability MP Section 7.1
Annual				
General	This OEMP and all specialist management plans will be reviewed in accordance with Section 7 of this CEMP	Tenant Rep / Goodman Rep	Annually	OEMP Section 7
General	Within six months after the first year of commencement of operation of the development, and in the same month each subsequent year (or such other timing as agreed by the Planning Secretary), the Applicant must submit a Compliance Report to the Planning Secretary reviewing the environmental performance of the development to the satisfaction of the Planning Secretary. Compliance Reports must be prepared in accordance with the Compliance Reporting Post Approval Requirements (Department 2020).	Goodman Rep	Within six months after the first year of commencement of operation of the development and annually thereafter	SSD 9794683 Condition C11
General	Compliance monitoring and reporting will be undertaken in accordance with the Compliance Monitoring and Reporting Program (SLR 2019).	Goodman Rep	Annually	SSD 7348 Condition D139
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
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
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 7.1
Event Based				
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

Aspect	Monitoring / Inspection Requirement	Person Responsible	Timing / Frequency	References / Notes
General	The Applicant must submit a Compliance Report to the Planning Secretary reviewing the environmental performance of the development to the satisfaction of the Planning Secretary. Compliance Reports must be prepared in accordance with the Compliance Reporting Post Approval Requirements (Department 2020).	Goodman Rep	Within six months after the first year of commencement of operation	SSD 9794683 Condition C11
Noise	A noise verification report will be prepared in accordance with Condition D75B of SSD 7348.	Goodman Rep	Within 3 months of commencing operation	SSD 7348 Condition D75B
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	Weekly in the first two months of operation	WMP Section 6.8
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
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 7
Other				
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
Air Quality	Air quality reporting and monitoring will be conducted in accordance with Section 11.2 of the COAQMP.	Tenant Rep	Ongoing	COAQMP Section 11.2
Traffic	Traffic reporting and monitoring will be conducted in accordance with Section 6.1 of the OTMP.	Tenant Rep	Ongoing	OTMP Section 7.1
Waste	Waste reporting and monitoring will be conducted in accordance with Section 6.8 of the WMP.	Tenant Rep	Ongoing	WMP Section 6.8
Landscaping	Monitoring, maintenance, irrigation and pruning will be undertaken in accordance with Section 6 of the LMP	Goodman Rep	Ongoing	LMP Section 6
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

Aspect	Monitoring / Inspection Requirement	Person Responsible	Timing / Frequency	References / Notes
Fire Safety and Emergency	Monitoring and reporting will be undertaken in accordance with the BEMEP.	Tenant Rep/ Goodman Rep	Ongoing	BEMEP
Fire Safety and Emergency	Monitoring and reporting will be undertaken in accordance with the FMP.	Fire Safety and Emergency	TBC	TBC
Community	The performance of the Community Communication Strategy will be monitored in accordance with the CCS.	Goodman Rep	Ongoing	CCS Section 6
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 Management Plan Section 7
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 and SSD 9794683.	Goodman Rep	Ongoing	SSD 7348 Condition D143 SSD 9794683 Condition C14

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 **Table 23** 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
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: • 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.	Condition Amber responses, plus the following additional responses; • Undertake additional noise surveys to review cause in more detail. • 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.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
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.	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; • 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 heavy 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.	Any impediments to access roads will be cleared. Road maintenance teams shall repair any potholes and remove excess water when expected traffic volumes are lowest.	Condition Amber responses, plus the following additional responses; • Install a detour around any unsafe obstacle to ensure safety for all motorists and/or pedestrians.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
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	Review and investigate parking rates and where appropriate, implement additional remediation measures such as: • 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.	Condition Amber responses, plus the following additional responses; • Temporary halting of activities and resuming when conditions have improved. • Provide incentives for carpooling and utilising active transport measures.
	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	• 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; • 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.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
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: • 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; • 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
	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, implement additional remediation measures such as: • 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; • 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 anon-compliance.
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	Review and investigate operational activities, and where appropriate, implement additional remediation measures such as: • 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; • 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
	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	• 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.	Condition Amber responses, plus the following additional responses; • 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
Traffic Queuing	Trigger	No queuing identified at the Site access.	Queuing identified at the Site access.	Queuing 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. • 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.	Condition Amber responses, plus the following additional responses; • 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
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 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 Site Manager and Estate Coordinator, for immediate remedy.	Condition Amber responses, plus the following additional responses; • 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.
Soil and Water - 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
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.
Biodiversity - 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.	Stop Work Procedure: • 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.	Stop Work Procedure: • 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.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
Visual Amenity - 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.
Visual Amenity - 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.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
Visual Amenity - 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.
Visual Amenity - 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.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
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.	Follow the Triggers for Action table in Section 8 of the BEMEP. Stop work and contact NSW Fire and Rescue on '000'. Evacuate the site as directed by NSW Fire and Rescue.
Community - Submission	Trigger	General feedback/comment (no complaint	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.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
Community - 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
Community - 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.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
Community - 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 SMP/Building Users' Guides.

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 C5 of SSD 9794683 also states that all strategies, plans and programs required under SSD 9794683 will be reviewed and Planning Secretary notified of the review within three months of:

- the submission of a Compliance Report under condition C11;
- the submission of an incident report under condition C7;
- the approval of any modification of the conditions of this Approved Development Consent; or
- the issue of a direction of the Planning Secretary under Condition A2(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.

Notwithstanding the review requirements outlined above, in accordance with the requirements of Condition C1(g) the following is provided as the protocol for periodic review of this OEMP and all management plans required under SSD 9794683.

- All management plans required under SSD 9794683 are to be reviewed every 12 months by Goodman's Environmental Consultant.
- The periodic review is to take account of any required changes to procedures, updates or changes to best practice, any non-compliances in the proceeding 12 month period and whether changes can be made to improve the environmental performance of the development.
- As per Condition C6 of SSD 9794683, 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 Tenant Representative's toolbox talk during toolbox talks.
- Note: 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 conditions of SSD 9794683.

8 References

Ason (2022) *Operational Traffic Management Plan*

Australian Bushfire Protection Planners (ABPP) (2016) *Bushfire Protection Assessment*

Blackash (2022) *Bushfire Emergency Management and Evacuation Plan – Building 2A – Oakdale West Industrial Estate*

Blackash Bushfire Consulting (2020) *Bushfire Hazard Assessment*

Ecologique (2019) *Oakdale West Estate – Vegetation Management Plan*

GHD (2020) *SSD 7348 MOD3 – Oakdale West Industrial Estate Concept Plan and Stage 1 Modification (MOD 3) and Stage 2 Development Application (SSD 10397) – Environmental Impact Statement*

Goodman (2018) *Corporate Responsibility and Sustainability Policy*

Goodman (2021) *SSD 7348 MOD1 - Oakdale West Stage 4 – S.4.55(1A) Application to Modify Architecture Plans and Subdivision Plan*

Goodman (2021) *SSD 7348 MOD2 - Oakdale West Industrial Estate – S.4.55(1A) Application to Modify Architecture Plans and Subdivision Plan*

Goodman (2021) *SSD 7348 MOD8 Oakdale West Stage – S.4.55(1A) Application to Modify Architecture Plans*

Goodman (2021) *SSD 9794683 Oakdale West Estate Stage 3 - Response to Submissions Report (RtS)*

Goodman (2022) *SSD7348 MOD 10, Oakdale West Stage – S.4.55(1a) Application to Modify Architecture Plans*

Keylan Consulting (2021) *SSD 7348 MOD7 – 2 Aldington Road, Kemps Creek - Assessment Report Section 4.55(1A) Modification*

Keylan Consulting (2021) *SSD 9794683 Environmental Impact Statement*

Keylan Consulting (2021) *SSD7348 MOD9 – Oakdale West Industrial Estate Masterplan*

NSW Rural Fire Service (2019) *Planning for Bushfire Protection*

Scape Design (2022) *Oakdale West Estate, Precinct 2 Building 2A - Landscape Management Plan*

SLR (2021) *Oakdale West Industrial Estate – Lot 2A – Construction and Operational Air Quality Management Plan*

SLR (2022) *Oakdale West Estate – Building 2A Waste Management Plan*

SLR (2022) *Oakdale West Estate Concept and Stage 1 - Community Communication Strategy*

SLR (2022) *Oakdale West Industrial Estate Operational Environmental Management Plan – Oakdale West Industrial Estate SSD 7348 Mod 9 Update* (OWE OEMP)

Urbis (2017) *Oakdale West Estate State Significant Development Application – Environmental Impact Statement*

Urbis (2019) *SSD 7348 MOD1 – Oakdale West Industrial Estate*

APPENDIX A

Approved Development Consent SSD 9794683

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 26 April 2021, 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.

Chris Ritchie
Director
Industry Assessments

Sydney 16 December 2021 File: SF20/107249

SCHEDULE 1

Application Number:	SSD-9794683
Applicant:	Goodman Property Services (Aust) Pty Ltd
Consent Authority:	Minister for Planning and Public Spaces
Site:	2 Sepia Road, Kemps Creek NSW 2178 (Lot 105 DP 1262310) 19 Emporium Avenue, Kemps Creek NSW 2178 (Lot 107 DP 1262310)
Development:	Oakdale West Estate Stage 3 Development including construction, fit out, operation and use of warehouse buildings 2A, 2C and 2D, associated office space and parking

TABLE OF CONTENTS

DEFINITIONS

Applicant	Goodman Property Services (Aust) Pty Ltd, or any person carrying out any development to which this consent applies
BCA	Building Code of Australia
Carrier	Operator of a telecommunication network and/or associated infrastructure, as defined in section 7 of the *Telecommunications Act 1997* (Cth)
Certifier	A council or an accredited certifier (including principal certifiers) who is authorised under section 6.5 of the EP&A Act to issue Part 6 certificates
CEMP	Construction Environmental Management Plan
Conditions of this consent	Conditions contained in Schedule 2 of this consent
Construction	The carrying out of works for the purpose of the development, including detailed earthworks, erection of buildings 2A, 2C and 2D, internal fit-out and construction of associated infrastructure permitted by this consent
Council	Penrith City Council
Day	The period from 7 am to 6 pm on Monday to Saturday, and 8 am to 6 pm on Sundays and Public Holidays
Department	NSW Department of Planning, Industry and Environment
Development	The development described in Schedule 1, the EIS and RTS, including construction and operation of three warehouses and associated office space and infrastructure
Development layout	The plans at Appendix 1 of this consent
DPIE	Has the same meaning as the definition of the Department in development consent
Earthworks	Bulk earthworks, site levelling, import and compaction of fill material, excavation for installation of drainage and services, to prepare the site for construction
EES	Environment, Energy and Science Group of the Department
EIS	The Environmental Impact Statement titled *Oakdale West Industrial Estate – Stage 3, 2 Aldington Road, Kemps Creek*, prepared by Keylan Consulting Pty Ltd dated February 2021, submitted with the application for consent for the development
Environment	As defined in section 1.4 of the EP&A Act
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EP&A Regulation	Environmental Planning and Assessment Regulation 2000 (NSW)
Evening	The period from 6 pm to 10 pm
Fibre ready facility	As defined in section 372W of the *Telecommunications Act 1997* (Cth)
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 *Heritage Act 1977,* and assessed as being of local, State and/ or National heritage significance*,* and/or an Aboriginal Object or Aboriginal Place as defined under the *National Parks and Wildlife Act 1974'*, the World Heritage List, or the National Heritage List or Commonwealth Heritage List under the *Environment Protection and Biodiversity Conservation Act 1999* (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 Note: 'material harm' is defined in this consent
Land	Has the same meaning as the definition of the term in section 1.4 of the EP&A Act
Material harm	Is 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)
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
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
Operation	The use of Buildings 2A, 2C and 2D for storage and distribution as described in the EIS and RTS
OWE	Oakdale West Estate including the approved Concept Plan for 22 warehouse buildings and associated infrastructure and Stage 1 development including bulk earthworks across the site, construction and operation of 3 warehouses and the Western North-South Link Road, as described in the development consent SSD 7348, approved on 13 September 2019, as modified
Principal Certifier	The certifier appointed as the principal certifier for the building work under section 6.6(1) of the EP&A Act or for the subdivision work under section 6.12(1) of the EP&A Act.
Planning Secretary	Planning Secretary under the EP&A Act, or nominee
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 "*Aboriginal cultural heritage consultation requirements for proponents 2010*" (DECCW)
Rehabilitation	The restoration of land disturbed by the development to a good condition, to ensure it is safe, stable and non-polluting
Response to Submissions (RtS)	The Applicant's response to issues raised in submissions received in relation to the application for consent for the development under the EP&A Act and includes the document titled *Oakdale West Estate Stage 3 (SSD 9794683) – Response to Submissions* prepared by Goodman Property Services (Aust) Pty Ltd and dated April 2021 and *Oakdale West Industrial Estate Stage 3 (SSD 9794683) – Amended Development Application* prepared by Keylan Consulting Pty Ltd and dated 9 November 2021
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 Schedule 1
SLR	Proposed Southern Link Road as shown in the WSEA SEPP and the document titled *Broader WSEA SLRN Options Refinement Report* prepared by AECOM, 2014
TfNSW	Transport for New South Wales
Waste	Has the same meaning as the definition of the term in the Dictionary to the POEO Act
WNSLR	Western North-South Link Road as shown in the WSEA SEPP and approved under the OWE development consent SSD 7348
WSEA	Western Sydney Employment Area
WSEA SEPP	State Environmental Planning Policy (Western Sydney Employment Area) 2009
Year	A period of 12 consecutive months

SCHEDULE 2

PART A ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

A1. 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 the development, and any rehabilitation required under this consent.

TERMS OF CONSENT

A2. 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 Development Layout in Appendix 1; and

(e) in accordance with the management and mitigation measures in Appendix 3.

A3. 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 A3(a).

A4. 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 A2(c) or A2(e). In the event of an inconsistency, ambiguity or conflict between any of the documents listed in condition A2(c) or A2(e), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.

LIMITS OF CONSENT

Lapsing

A5. This consent lapses five years after the date from which it operates, unless the development has physically commenced on the land to which the consent applies before that date.

Development Controls

A6. The total area of warehousing and office space at the development must not exceed the following maximum gross lettable area:

(a) Building 2A – 35,612 square metres;

(b) Building 2C – 10,565 square metres; and

(c) Building 2D – 6,235 square metres.

A7. The development must be consistent with the development controls in the OWE, as shown in **Table 1**.

Table 1: *Development Controls*

Development Aspect	Control
Minimum building setbacks from:	
• Southern Link Road	17.15 m
• Compass Drive	20 m
• Local Estate Roads	7.5 m
• Western boundary of the OWE	40 m
• Southern boundary of the OWE	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 2A	18 m

Development Aspect	Control
- 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)

A8. Notwithstanding the controls listed in Table 1 in Condition A7, no warehouse building in the development, except Buildings 2A and 2C in Precinct 2, shall exceed a ridgeline height of 13.7 m, excluding roof mounted mechanical plant and solar panels.

NOTIFICATION OF COMMENCEMENT

A9. 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:

(a) construction;

(b) operation; and

(c) cessation of operations.

A10. If the construction or 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.

EVIDENCE OF CONSULTATION

A11. 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

A12. 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).

A13. 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.

A14. 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

A15. Before the commencement of construction of the development, the Applicant must consult with the relevant owner and provider of services that are likely to be affected by the development to make suitable arrangements for access to, diversion, protection and support of the affected infrastructure;

A16. 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 the development; and

(b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

STRUCTURAL ADEQUACY

A17. 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 BCA.

Note:

- *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

A18. 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 the development.

CONTRIBUTIONS TO COUNCIL

A19. Before the issuing of an occupation certificate for any part of the development, a payment of a levy of 1% of the proposed cost of carrying out the development must be paid to Council under section 7.12 of the EP&A Act.

Note: There are approval requirements for imposing a condition under section 7.12 in respect of land within a special contributions area.

OPERATION OF PLANT AND EQUIPMENT

A20. All plant and equipment used on site, or to monitor the performance of the development, must be:

(a) maintained in a proper and efficient condition; and

(b) operated in a proper and efficient manner.

EXTERNAL WALLS AND CLADDING

A21. The external walls of all buildings including additions to existing buildings must comply with the relevant requirements of the BCA.

A22. Prior to the issuing of:

(a) any Construction Certificate relating to the construction of external walls (including the installation of finishes and claddings such as synthetic or aluminium composite panels); and

(b) an Occupation Certificate,

the Applicant must provide the Certifier 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 BCA.

A23. The Applicant must provide a copy of the documentation given to the Certifier to the Planning Secretary within seven days after the Certifier accepts it.

UTILITIES AND SERVICES

A24. Before the construction of any utility works associated with the development, the Applicant must obtain relevant approvals from service providers.

A25. Before the commencement of operation of the development, the Applicant must obtain a Compliance Certificate for water and sewerage infrastructure servicing of the site under section 73 of the *Sydney Water Act 1994*.

A26. The Applicant must demonstrate that the carrier has confirmed in writing they are satisfied that the fibre ready facilities are fit for purpose.

A27. Before the issuing of the Occupation Certificate for the development the Applicant must demonstrate that the carrier has confirmed in writing it is satisfied that the fibre ready facilities are fit for purpose.

WORK AS EXECUTED PLANS

A28. Before the issuing of the Occupation Certificate for the development, work-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 Principal Certifier.

APPLICABILITY OF GUIDELINES

A29. 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.

A30. 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 the development. No condition of this consent removes any obligation to obtain, renew or comply with such licences, permits, approvals and consents.

PART B SPECIFIC ENVIRONMENTAL CONDITIONS

TRAFFIC AND ACCESS

Construction Traffic Management Plan

B1. Prior to the commencement of construction of the development, the Applicant must prepare a Construction Traffic Management Plan for the development to the satisfaction of the Planning Secretary. The plan must form part of the CEMP required by condition C2 and must:

(a) be prepared by a suitably qualified and experienced person(s);

(b) detail the measures that are to be implemented to ensure road safety and network efficiency during construction;

(c) detail heavy vehicle routes, access and parking arrangements;

(d) include a Driver Code of Conduct (see Condition B12);

(e) include a program to monitor the effectiveness of these measures; and

(f) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.

B2. The Applicant must:

(a) not commence construction until the Construction Traffic Management Plan required by condition B1 is approved by the Planning Secretary; and

(b) implement the most recent version of the Construction Traffic Management Plan approved by the Planning Secretary for the duration of construction.

Parking

B3. The Applicant must provide sufficient parking facilities on-site, including for heavy vehicles and for site personnel, to ensure that traffic associated with the development does not utilise public and residential streets or public parking facilities.

Operating Conditions

B4. 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) associated with the development are constructed and maintained in accordance with the latest version of *AS 2890.1:2004 Parking facilities Off-street car parking* (Standards Australia, 2004), *AS 2890.2:2018 Parking facilities Off-street commercial vehicle facilities* (Standards Australia, 2018) and *AS 2890.6.2009 Parking facilities Off-street parking for people with disabilities* (Standards Australia, 2009)

(b) 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;

(c) the development does not result in any vehicles queuing on the public road network;

(d) heavy vehicles and bins associated with the development are not parked on local roads or footpaths in the vicinity of the site;

(e) all vehicles are wholly contained on site before being required to stop;

(f) all loading and unloading of materials is carried out on-site;

(g) all trucks entering or leaving the site with loads have their loads covered and do not track dirt onto the public road network; and

(h) the proposed turning areas in the car park are kept clear of any obstacles, including parked cars, at all times.

Sustainable Travel Plan

B5. Prior to the commencement of operation of any part of the development, the Applicant must prepare a Sustainable Travel Plan. The Sustainable Travel Plan must:

(a) be prepared in consultation with TfNSW;

(b) outline facilities and measures to promote public transport usage, such as car share schemes and employee incentives; and

(c) describe pedestrian and bicycle linkages and end of trip facilities available on-site.

B6. The Applicant must implement the Sustainable Travel Plan throughout operation of the development.

NOISE

Hours of Work

B7. The Applicant must comply with the hours detailed in **Table 2**, unless otherwise agreed in writing by the Planning Secretary.

Table 2: *Hours of Work*

Activity	Day	Time
Construction	Monday – Friday	7 am to 6 pm
	Saturday	8 am to 1 pm
Operation	Monday – Sunday	24 hours

B8. Works outside of the hours identified in Condition B7 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.

Operational Noise Limits

B9. The Applicant must ensure that noise generated by operation of the development does not exceed the noise limits in **Table 3**.

Table 3: *Noise Limits (dB(A))*

Location	Day $L_{Aeq(15\ minute)}$	Evening $L_{Aeq(15\ minute)}$	Night $L_{Aeq(15\ minute)}$	Night 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 Kemps Creek	47	42	42	52
N2 Emmaus Catholic College (school)	**When in use:** 45 $L_{eq(1h)}$			

Note 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.

B10. The noise limits in Table 2 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.

Construction Noise Limits

B11. The development must be constructed to achieve 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 management and mitigation measures in the Appendix 3.

Road Traffic Noise

B12. Prior to the commencement of construction of the development, the Applicant must prepare a Driver Code of Conduct and induction training for the development to minimise road traffic noise. The Applicant must update the Driver Code of Conduct and induction training for construction and operation and must implement the Code of Conduct for the life of the development.

VISUAL AMENITY

Building Design

B13. The Applicant must construct Buildings 2A, 2C and 2D in accordance with the RtS and as shown on the figures in **Appendix 1**.

Landscaping

B14. Prior to the commencement of operation of the development, the Applicant must implement the Landscape Plan included in the RtS and shown on the figures in **Appendix 1**.

B15. The Applicant must maintain the landscaping on the site in accordance with the approved Landscape Plan for the life of the development. If any aspect of the landscaping has not been successful, the Applicant must undertake replanting and rehabilitation works, as reasonably practicable.

Lighting

B16. The Applicant must ensure the lighting associated with the development:

(a) complies with the latest version of AS 4282-2019 - *Control of the obtrusive effects of outdoor lighting* (Standards Australia, 2019); 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.

Signage and Fencing

B17. All signage and fencing must be erected in accordance with the development plans included in the RtS.

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

SOILS, WATER QUALITY AND HYDROLOGY

Erosion and Sediment Control

B18. Prior to the commencement of any construction or other surface disturbance for the development, the Applicant must install and maintain suitable erosion and sediment control measures on-site, in accordance with the relevant requirements of the *Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book* (Landcom, 2004) guideline and the Erosion and Sediment Control Plan included in the CEMP required by condition C2.

Discharge Limits

B19. The development must comply with section 120 of the POEO Act, which prohibits the pollution of waters, except as expressly provided for in an EPL.

Stormwater Management System

B20. The Applicant must install and operate a stormwater management system for the development that:

(a) is designed by a suitably qualified and experienced person(s);

(b) is generally consistent with the *Civil, Stormwater and Infrastructure Services Report DA Modification No.7, Rev 01, report REP005-01-15-272-MOD 7 Civil Report, prepared by AT&L, dated June 2021*;

(c) is in accordance with applicable Australian Standards and Penrith City Council's *Design Guidelines for Engineering Works, Water Sensitive Urban Design Policy December 2013* and *Water Management Development Control Plan*;

(d) ensures peak stormwater flows from the site are in accordance with *DA Modification No.7, Rev 01, report REP005-01-15-272-MOD 7 Civil Report, prepared by AT&L, dated June 2021*;

(e) incorporate rainwater harvesting measures to supplement non-potable water demand for the development.

B21. All stormwater drainage infrastructure on the site shall remain under the care, control and ownership of the registered proprietor of the lot.

BUSHFIRE PROTECTION

B22. The Applicant must ensure the development complies with:

(a) the relevant provisions of *Planning for Bushfire Protection, 2019*;

(b) the recommendations of the Bushfire Report prepared by Blackash Bushfire Consulting dated 13 October 2021; and

(c) the relevant sections of Australian Standard AS3959-2018 *Construction of buildings in bush fire-prone areas* or NASH Standard (1.7.14 updated) *National Standard Steel Framed Construction in Bushfire Areas – 2014* as appropriate, and Section 7.5 of *Planning for Bushfire Protection 2019.*

B23. The Applicant must ensure the part of Building 2A located in the Bushfire Attack Level (BAL) 12.5 area is constructed entirely with non-combustible materials and provided with measures to improve ember protection. Ember protection improvements include enclosing all openings (excluding roof sheet and tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2 mm. This includes any subfloor areas, openable windows, vents, weep holes and eaves. External doors are to be fitted with draft excluders.

B24. The Applicant must ensure the entire site, including landscaping, is managed as an inner protection area (IPA) in accordance with *Planning for Bushfire Protection 2019*.

B25. Prior to the commencement of operation, the Applicant must prepare a Fire Management Plan (FMP) for the development. The FMP must:

(a) be prepared in consultation with the NSW RFS;

(b) include 24-hour emergency contact details including alternative telephone contact

(c) include plans of site infrastructure plan, firefighting water supply, site access and internal roads;

(d) include implementation of asset protection zones (APZ) and on-going maintenance;

(e) include location of hazards that will impact on firefighting operations and procedures to manage identified hazards during firefighting operations; and

(f) any additional matters required by the RFS Fire Control Centre (e.g. FMP review and updates)

B26. The Applicant must implement the most recent version of the Fire Management Plan for the duration of the development.

B27. Prior to the commencement of operation, the Applicant must prepare a Bushfire Emergency and Evacuation Management Plan for the development, consistent with the NSW RFS' *A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan* and must include planning for the early relocation of occupants.

HAZARDS AND RISK

Dangerous Goods

B28. The quantities of dangerous goods stored and handled at the site must be below the threshold quantities listed in the Department of Planning's *Hazardous and Offensive Development Application Guidelines – Applying SEPP 33* at all times.

Bunding

B29. The Applicant must store all chemicals, fuels and oils used on-site in appropriately bunded 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).

AIR QUALITY

Dust Minimisation

B30. The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.

B31. During construction of the development, the Applicant must comply with the dust minimisation measures detailed in the Construction Environmental Management Plan required by Condition C2.

Operational Air Quality – Building 2A

B32. Prior to the commencement of operation of Building 2A, the Applicant must prepare an Air Quality Management Plan (AQMP) for Building 2A. The AQMP must:

(a) be prepared by a suitably qualified and experienced person(s);

(b) detail all emission sources from the operation of Building 2A;

(c) describe a program that is capable of evaluating the performance of the operation and determining compliance with key performance indicators;

(d) identify the control measures that will be implemented for each emission source, including details of extractions systems and rooftop vents;

(e) nominate the following for each of the proposed controls:

(i) key performance indicator;

(ii) monitoring method, location, frequency and duration of monitoring;

(iii) response procedures; and

(iv) compliance monitoring.

(f) Include a complaint register and response procedures

B33. The Applicant must implement the AQMP for the duration of operation of Building 2A.

WASTE MANAGEMENT

Waste Storage

B34. Waste must always be secured and maintained within designated waste storage areas and must not leave the site onto neighbouring public or private properties.

Waste Management Plan

B35. The Applicant must implement the Waste Management Plan (WMP) in the RtS for the duration of construction and operation of the development.

Statutory Requirements

B36. All waste materials removed from the site must only be directed to a waste management facility or premises lawfully permitted to accept the materials.

B37. 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.

B38. Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal.

COMMUNITY ENGAGEMENT

B39. The Applicant must consult with the community regularly throughout the development, including consultation with the nearby sensitive receivers identified in **Figure 9**, relevant regulatory authorities, Registered Aboriginal Parties and other interested stakeholders. Community engagement shall be undertaken in accordance with the Community Communication Strategy for the OWE.

PART C ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Management Plan Requirements

C1. 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, the development 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 the development; and

(ii) effectiveness of the management measures set out pursuant to paragraph (c) 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 the development 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

C2. The Applicant must prepare a Construction Environmental Management Plan (CEMP) for the development in accordance with the requirements of condition C1 and to the satisfaction of the Planning Secretary.

C3. As part of the CEMP required under Condition C2 of this consent, the Applicant must include the following:

(a) Construction Traffic Management Plan (see Condition B1);

(b) a Driver Code of Conduct (see Condition B12);

(c) an Erosion and Sediment Control Plan (see Condition B18); and

(d) a Waste Management Plan (see Condition B35).

C4. The Applicant must:

(a) not commence construction of the development until the CEMP is approved by the Planning Secretary; and

(b) carry out the construction of the development in accordance with the CEMP approved by the Planning Secretary and as revised and approved by the Planning Secretary from time to time.

REVISION OF STRATEGIES, PLANS AND PROGRAMS

C5. Within three months of:

(a) the submission of a Compliance Report under condition C11;

(b) the submission of an incident report under condition C7;

(c) the approval of any modification of the conditions of this consent; or

(d) the issue of a direction of the Planning Secretary under condition A2(b) which requires a review,

the strategies, plans and programs required under this consent must be reviewed, and the Planning Secretary must be notified in writing of the outcomes of any review.

C6. If necessary to either improve the environmental performance of the development, 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 required under condition C8, or such other timing as agreed by the Planning Secretary.

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 the development.*

REPORTING AND AUDITING

Incident Notification, Reporting and Response

C7. The Planning Secretary must be notified in writing via the Major Projects website 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 4.

Non-Compliance Notification

C8. The Planning Secretary must be notified in writing via the Major Projects website within seven days after the Applicant becomes aware of any non-compliance.

C9. 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.

C10. A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

Compliance Reporting

C11. Within six months after the first year of commencement of operation of the development, and in the same month each subsequent year (or such other timing as agreed by the Planning Secretary), the Applicant must submit a Compliance Report to the Planning Secretary reviewing the environmental performance of the development to the satisfaction of the Planning Secretary. Compliance Reports must be prepared in accordance with the Compliance Reporting Post Approval Requirements (Department 2020) and must also:

(a) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and

(b) describe what measures will be implemented over the next year to improve the environmental performance of the development.

C12. 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 seven days before this is done.

Monitoring and Environmental Audits

C13. 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

C14. At least 48 hours before the commencement of construction of the development 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 A2 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) 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;

(v) 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;

(vi) a summary of the current stage and progress of the development;

(vii) contact details to enquire about the development or to make a complaint;

(viii) a complaints register, updated monthly;

(ix) the Compliance Report of the development;

(x) 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 DEVELOPMENT LAYOUT PLANS

Architectural Plans prepared by SBA Architects Pty Ltd			
Lot 2A			
Drawing	**Revision**	**Title**	**Date**
OAK 2A DA000	H	Cover Page	21 October 2021
OAK 2A DA001	H	Perspectives – Office 2A	21 October 2021
OAK 2A DA010	O	Site Plan	25 October 2021
OAK 2A DA200	I	Roof Plan	20 October 2021
OAK 2A DA201	J	Floor Plans - Office	22 October 2021
OAK 2A DA203	F	Floor Plans – Dock Offices	20 October 2021
OAK 2A DA210	N	Warehouse Elevations & Section	29 October 2021
OAK 2A DA211	I	Elevations Office	21 October 2021
OAK 2A DA300	I	Signage Plan	20 October 2021
Lot 2C and 2D			
OAK 2C & 2D DA000	H	Cover Page	29 October 2021
OAK 2C & 2D DA001	G	Office Perspectives	29 October 2021
OAK 2C & 2D DA002	PF	Warehouse Perspective	28 October 2021
OAK 2C DA20	L	Site & Warehouse Plan	16 November 2021
OAK 2C & 2D DA300	D	Roof Plan	15 October 2021
OAK 2C & 2D DA305	E	Floor Plan – Office 2C1	28 October 2021
OAK 2C & 2D DA306	F	Floor Plan – Office 2C2	16 November 2021
OAK 2C & 2D DA307	F	Floor Plan – Office 2D	16 November 2021
OAK 2C & 2D DA310	H	Elevations – Warehouse 2C	29 October 2021
OAK 2C & 2D DA311	H	Elevations – Warehouse 2D	29 October 2021
OAK 2C & 2D DA312	G	Office Elevations – 2C1	29 October 2021
OAK 2C & 2D DA313	G	Office Elevations – 2C2	29 October 2021
OAK 2C & 2D DA314	G	Office Elevations – 2D	29 October 2021
OAK 2C & 2D DA315	D	Sections - Warehouse	28 October 2021
OAK 2C DA400	E	Signage Plan	16 November 2021

Landscape Plans prepared by Scape Design Pty Ltd			
Drawing	**Revision**	**Title**	**Date**
L.SK.00	H	Cover Sheet	23 November 2021
L.SK.01	F	Landscape Sketch Plan – Lot 2A	1 November 2020
L.SK.02	E	Landscape Sketch Plan – Lot 2C & 2D	23 November 2021
L.SK.03	F	Planting Plan – Lot 2A	1 November 2020
L.SK.04	H	Planting Plan – Lot 2C & 2D	23 November 2021
L.SK.05	F	Planting Schedule – Lot 2A	1 November 2020
L.SK.06	E	Planting Schedule – Lot 2C & 2D	23 November 2021
L.SK.07	D	Character & Materials	23 November 2021
L.SK.105	F	Landscape – Detailed Plan & Notes – Lot 2A	1 November 2020

Landscape Plans prepared by Scape Design Pty Ltd			
L.SK.106	D	Landscape – Detailed Plan & Notes – Lot 2C & 2D	23 November 2021
L.SK.200	F	Carpark Details	23 November 2021
L.SK.201	E	Landscape – Typical Street Sections – Lot 2A	1 November 2020
L.SK.202	D	Landscape – Typical Street Sections – Lot 2C & 2D	23 November 2021

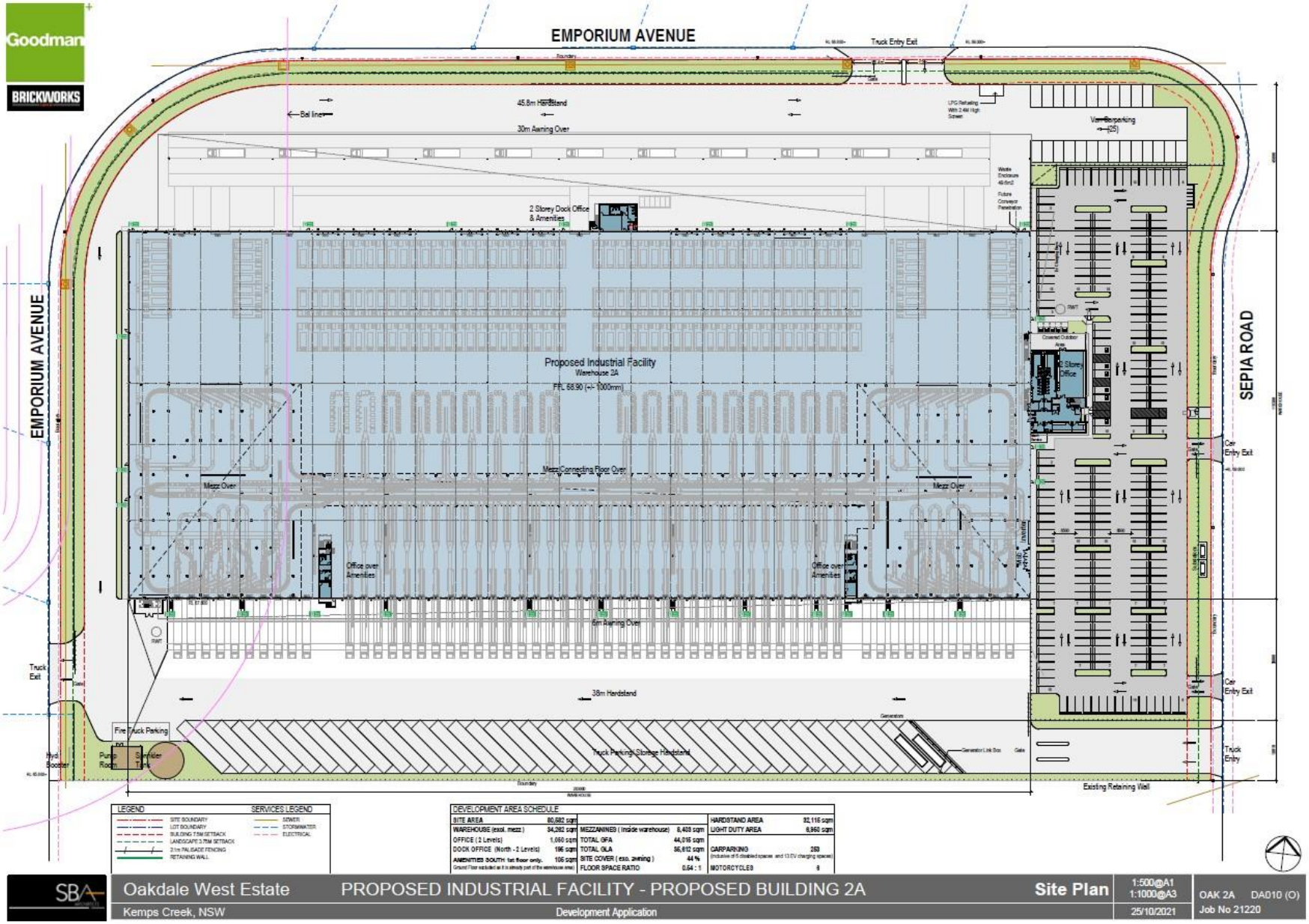

Figure 1: Building 2A Site Plan

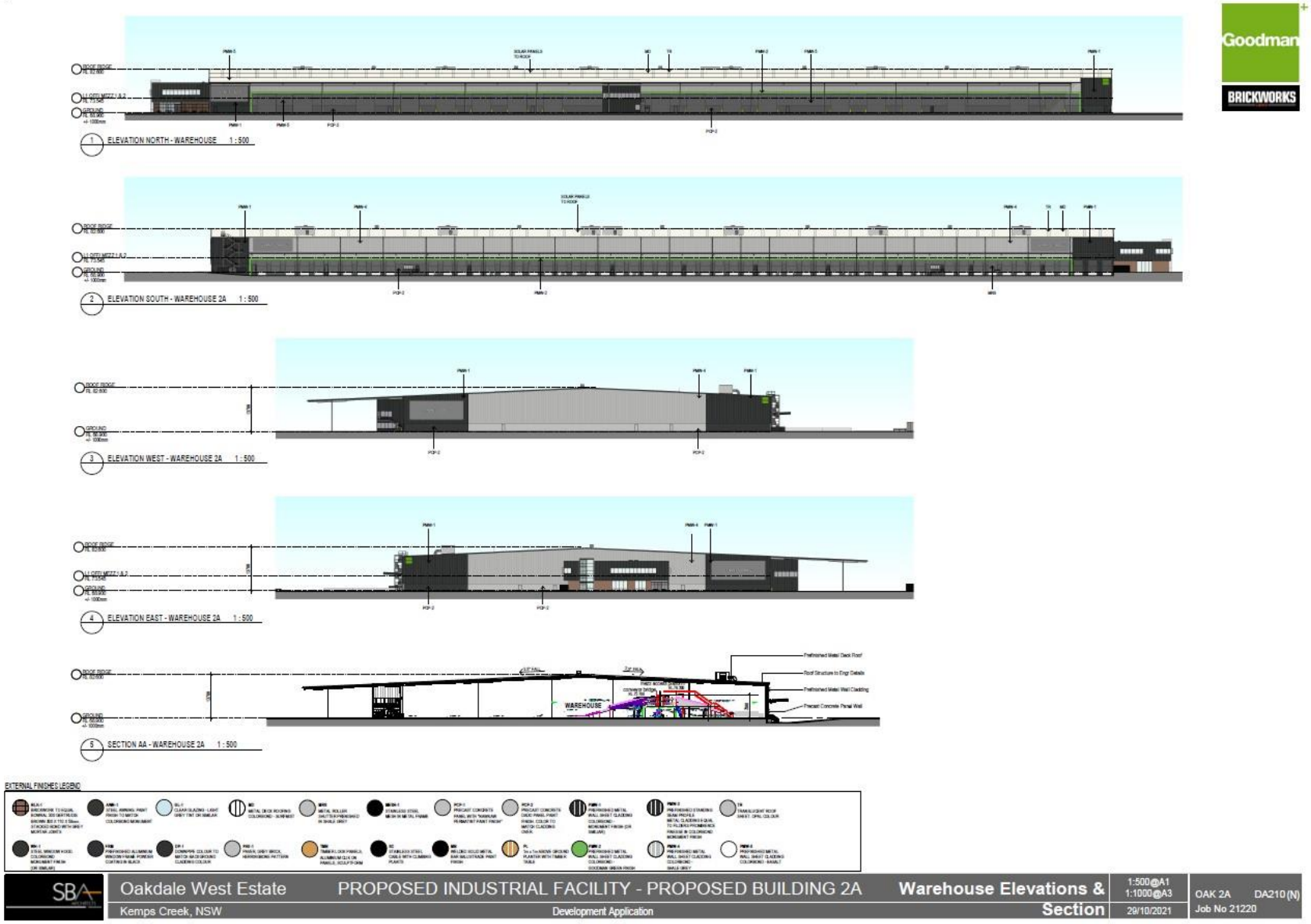

Figure 2: Building 2A Warehouse Elevations

Figure 3: Building 2A Office Elevations

Figure 4: Building 2A Landscape Plan

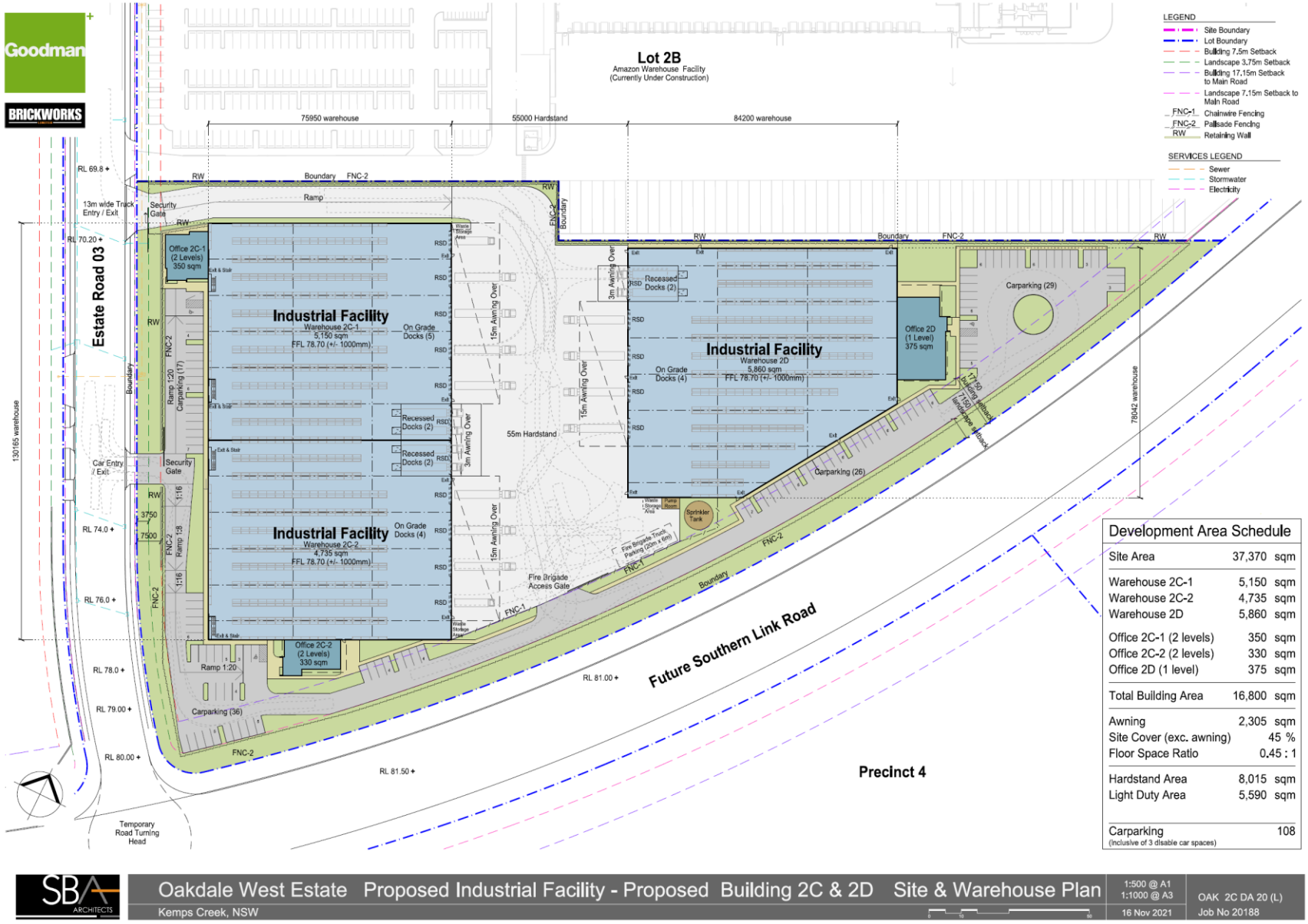

Figure 5: Building 2C and 2D Site Plan

Figure 6: Building 2C Elevations

Figure 7: Building 2D Elevations

Figure 8: Building 2C and 2D Landscape Plan

APPENDIX 2 SENSITIVE RECEIVERS

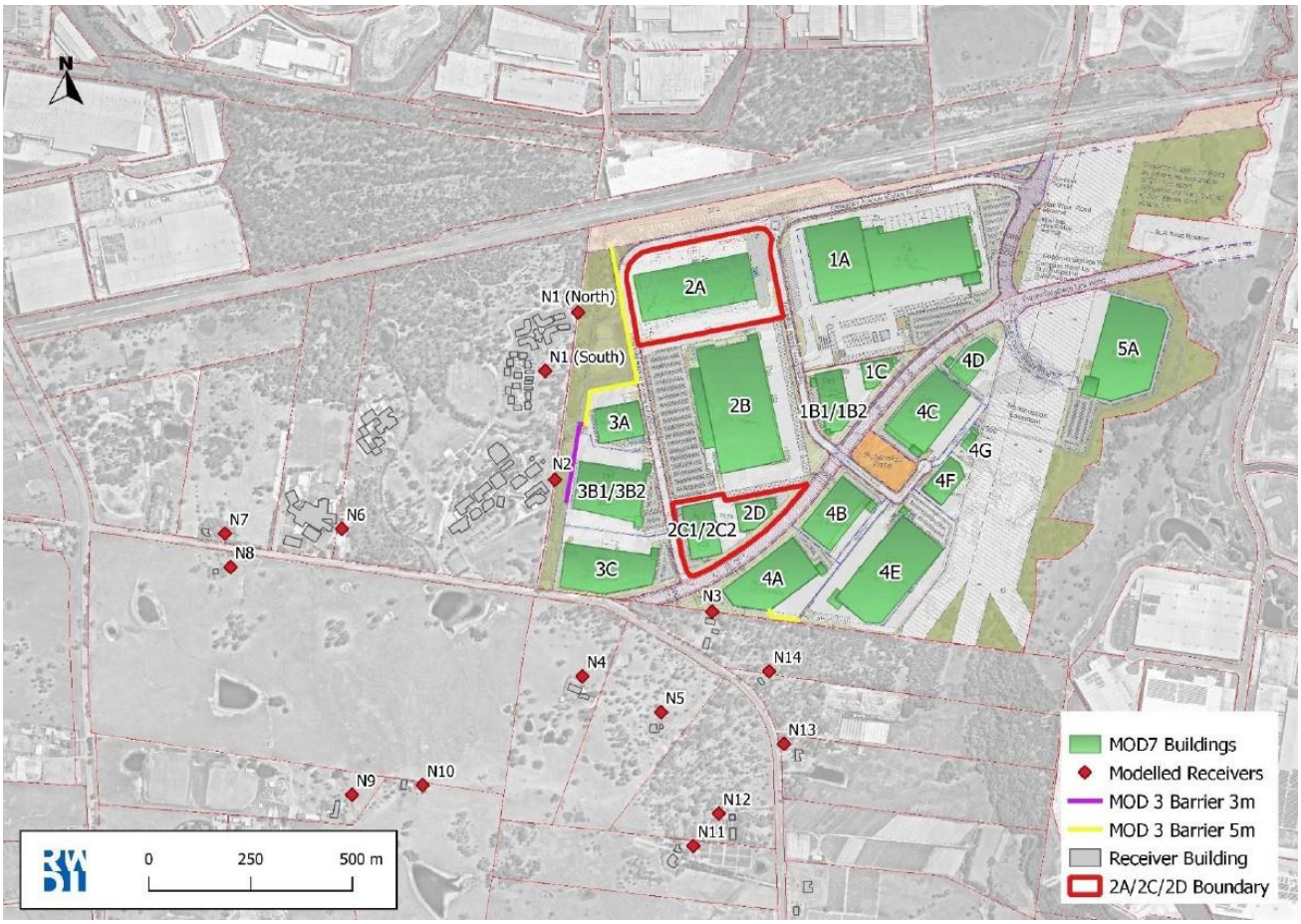

Figure 9: Sensitive Receiver Locations

APPENDIX 3 APPLICANT'S MANAGEMENT AND MITIGATION MEASURES

Issue	Mitigation measures
General	• preparation of updated CEMP for OWE Stage 3 Developments • preparation of updated OEMP for OWE Concept Proposal for Stage 3
Visual amenity	• the existing vegetation on the eastern, southern and western boundary will be retained where possible to assist filtering views to the proposed buildings • warehouses have been articulated to reduce the overall visual impact of the development from surrounding viewpoints • the proposed material palette assists in articulating the built form and providing consistent materials within the OWE • the proposed landscape design is consistent with the OWE landscape masterplan and provides vegetated setbacks to estate roads and within parking areas to provide shade
Traffic and transport	• construction traffic management measures to be described in the CEMP • use of WNSLR for construction traffic • detailed STP to be implemented
Noise and vibration	• minimising coinciding use of noisy plant items • shutting down intermittently used equipment when not in use • regular compliance checks on the noise emissions of all plant and machinery • non-tonal reversing alarms used on all items of plant and heavy vehicles • equipment oriented away from sensitive receivers • pre-construction and ongoing consultation with adjoining sensitive receivers
Soil and water	• CEMP to include erosion and sediment controls consistent with the requirements of Landcom (2004)
Waste management	• implementation of the Stage 3 Waste Management Plan • recycling of packaging and pallets where possible
Air quality	• CEMP to include standard air quality control measures, contingency plans and response procedures and suitable reporting and performance monitoring procedures • CEMP to include standard odour mitigation measures for construction including keeping excavation surfaces moist, covering excavation faces and/or stockpiles, use of soil vapour extraction systems and regular monitoring of discharges as appropriate • Operational air quality management in Building 2A to include: o vehicles will not be left to 'idle' while loading/unloading (appropriate signage is required). o no refuelling is to occur inside the building. o building air pollutants will be captured by a BCA and AS1668.2-2012 compliant extractions system and directed to rooftop vents. o locating exhaust as far as practicable from the sources of make-up air to ensure effluents are effectively removed from all paRtS of the enclosure o effluent shall be collected as it is produced, as close as practicable to the source of generation o objectionable air discharges shall be: o emitted vertically with discharge velocities not less than 5 m/s. o situated at least 3 m above the roof at point of discharge. o treated to reduce the concentration of contaminants where required. o emitted to the outside at velocities and in a direction that will ensure, to the extent practicable, a danger to health or a nuisance will not occur. o situated a minimum separation distance of 6 m (where the airflow rate is ≥ 1,000 L/s) from any outdoor) air intake opening, natural ventilation device or opening, and boundary to an adjacent allotment, except that where the dimensions of the allotment make this impossible, then the greatest possible distance shall apply.
Energy efficiency	• use of a 750 kW photovoltaic solar system in Building 2A • use of a 300 kW photovoltaic solar system in Buildings 2C and 2D • embodied carbon offset strategy • use of low energy LED lighting with zone controls via motion sensors • maximise the access to natural lighting, particularly in offices • use of efficient air conditioning systems • design of facades and roofing to comply with NCC performance requirements • installing 4-star rated toilets, urinals and taps and rainwater harvesting facility

	• a Building Users' Guide to provide details regarding the everyday operation of a building, include energy minimisation initiatives • quarterly reviews to verify the performance of energy and water efficiency measures
BCA	• preparation of the Performance Solutions and corresponding fire safety measures during detailed design to ensure compliance with BCA and International Fire Engineering Guidelines
Fire safety	• preparation of Performance Solutions and fire safety measures in the detailed design phase
Bushfire	• establish and maintain asset protection zones as indicated in the BHA • provide fire hydrants in accordance with the BCA • buildings to be constructed in accordance with *AS 3959 Construction of buildings in bushfire-prone areas* and measures outlined in the BHA

APPENDIX 4 INCIDENT NOTIFICATION AND REPORTING REQUIREMENTS

WRITTEN INCIDENT NOTIFICATION REQUIREMENTS

1. A written incident notification addressing the requirements set out below must be submitted to the Planning Secretary via the Major Projects website 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 C7 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

Relevant Approved Development Consent Conditions - SSD 7348

SSD 7348 Relevant Conditions

SSD 7348 OEMP Consent Condition	Section Addressed
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.	SSD 9794683
TERMS OF CONSENT	
B5. The Applicant shall carry out the Concept Proposal in accordance with the: EIS 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.	Noted
B7. The Applicant shall comply with any reasonable requirement(s) of the Planning Secretary arising from the Department's assessment of: • any reports, plans or correspondence that are submitted in accordance with this consent; and • the implementation of any actions or measures contained within these reports, plans or correspondence.	Noted
STAGING PLAN	
B16. The Applicant must: implement the most recent version of the Staging Plan approved by the Planning Secretary.	Figure 2 Oakdale West Precinct Plan
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.*	Noted
WATER NSW	
B23. The Applicant must: 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; comply with the requirements of Water NSW for any works adjacent to or over, the water pipelines corridor; and advise Water NSW of any proposed amended or modified encroachment into the water pipelines corridor.	Noted
SCHEDULE C – CONDITIONS FOR FUTURE DEVELOPMENT APPLICATIONS	
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.	Section 4.12 Community CCS (Appendix E)

SSD 7348 OEMP Consent Condition	Section Addressed
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.	(a) complete (b) Section 4.12 Community CCS (Appendix E)
SCHEDULE D – CONDITIONS FOR STAGE 1 DA	
PART 1 – GENERAL CONDITIONS	
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.	Section 3.3.2 SSD 7348
D3. Consistent with the requirements in this consent, the Planning Secretary may make written directions to the Applicant in relation to: 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 the implementation of any actions or measures contained in any such document referred to in Condition D3(a).	Noted

SSD 7348 OEMP Consent Condition	Section Addressed
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.	Section 3.3.2 SSD 7348
PART 2 – ENVIRONMENTAL PERFORMANCE CONDITIONS	
VISUAL AMENITY	
Noise Verification D75B. Within three months of commencing operation of any buildings on the site, the Applicant must prepare a noise verification report, to the satisfaction of the Planning Secretary. The noise verification report must: (a) be prepared by an appropriately qualified and experienced noise expert; (b) describe the noise monitoring undertaken to verify the effectiveness of the noise barrier; (c) demonstrate compliance with the noise limits in Condition B18; and (d) if required, recommend, prioritise and implement measures to improve noise controls to ensure the development meets the noise limits in Condition B18. (e) include monitoring during the night-time to confirm the development complies with the sleep disturbance limits in Condition B18.	Section 5
Pests, Vermin and Noxious Weed Management D115. The Applicant must: • implement suitable measures to manage pests, vermin and declared noxious weeds on the Site; and • 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.	Section 5 Monitoring, Reporting and Auditing
COMMUNITY CONSULTATION	
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.	Section 4.12 Community CCS Appendix E
PART 3 – ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING	
REPORTING AND AUDITING	
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.	Section 5 Monitoring, Reporting and Auditing
D140. Compliance Reports of the Development must be carried out in accordance with the Compliance Reporting Post Approval Requirements (Department 2018).	Section 5 Monitoring, Reporting and Auditing
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.	Section 3.5 Incident and Non-Compliance Response and Handling Procedure

APPENDIX C

Consultation

Mario Dizon

From: Raymond Tran <Raymond.TRAN@transport.nsw.gov.au>
Sent: Monday, 15 August 2022 10:07 AM
To: Lachlan O'Reilly
Cc: Stephanie Partridge; Rob Moody; Luke Ridley; Alasdair Cameron; Malgy Coman; Laura Van putten
Subject: RE: Oakdale West Estate - Building 2A | Sustainable Travel Plan Consultation

Hi Lachlan

I have reviewed the OTMP and have no comment.

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

From: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>
Sent: Saturday, 6 August 2022 5:14 PM
To: Pahee Rathan <Pahee.RATHAN@transport.nsw.gov.au>; Raymond Tran <Raymond.TRAN@transport.nsw.gov.au>
Cc: Stephanie Partridge <Stephanie.Partridge@goodman.com>; Rob Moody <Rob.Moody@goodman.com>; Luke Ridley <Luke.Ridley@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>
Subject: Oakdale West Estate - Building 2A | Sustainable Travel Plan Consultation

Dear Pahee and Reymond,

As you're aware, Goodman are currently constructing the Oakdale West Estate. We're hoping to shortly commence operation of our Lot 2A warehouse (see indicated in red in Fig.1) within the Estate.

Figure 1 - Oakdale West, including Lot 2A

In accordance with the Consent for the development (SSD 9794683) , Goodman have prepared an Operational Traffic Management Plan (OTMP) and Sustainable Travel Plan (STP) for the facility which is in line with the Estate's (SSD 7348) approved overarching OTMP.

Based on the Consent, it is a requirement of Condition B5 (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:

Sustainable Travel Plan

B5. Prior to the commencement of operation of any part of the development, the Applicant must prepare a Sustainable Travel Plan. The Sustainable Travel Plan must:

(a) be prepared in consultation with TfNSW;

(b) outline facilities and measures to promote public transport usage, such as car share schemes and employee incentives; and

(c) describe pedestrian and bicycle linkages and end of trip facilities available on-site.

We'd therefore be grateful if you're able to please review the STP (contained within Appendix C of the attached Building 2A 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 15 August 2022 to remain on programme.

Regards,

Goodman

Lachlan O'Reilly
Project Administrator
Lachlan.OReilly@goodman.com

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M. +61 481 254 556

The Hayesbery
1-11 Hayes Road
Rosebery NSW 2018
Australia

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OFFICIAL

From: Sophia Grieve <Sophia.Grieve@transport.nsw.gov.au>
Sent: Friday, 19 August 2022 10:41 AM
To: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>; Rosie Selby <Rosie.Selby@transport.nsw.gov.au>; David Surplice <David.Surplice@transport.nsw.gov.au>
Subject: FW: Lot 2A, Oakdale Industrial Estate - SSD 9794683

Dear Lachlan
Thanks very much for making all of the revisions requested from us.
We have formally closed out items below in yellow.
I can confirm that TfNSW is now satisfied with the content of the GTP; and for the requirement for the proponent to consult with Transport for NSW on the GTP, as per Condition B5 and B6.
Many thanks
Cheers Sophia Grieve

Sophia Grieve
Travel Demand Project Manager
Customer Journey Planning
Greater Sydney
Transport for NSW

E sophia.grieve@transport.nsw.gov.au
transport.nsw.gov.au

231 Elizabeth Street, Sydney
NSW 2000

From: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>
Sent: Thursday, 18 August 2022 4:58 PM
To: Sophia Grieve <Sophia.Grieve@transport.nsw.gov.au>; Rosie Selby <Rosie.Selby@transport.nsw.gov.au>; David Surplice <David.Surplice@transport.nsw.gov.au>
Cc: Stephanie Partridge <Stephanie.Partridge@goodman.com>; Rob Moody <Rob.Moody@goodman.com>; Luke Ridley <Luke.Ridley@goodman.com>
Subject: RE: Lot 2A, Oakdale Industrial Estate - SSD 9794683

Hi Sophia,

Thanks for your feedback below.

We have worked with ASON over the last few days to update the plan as requested, and provide the attached revision for your records.

In respect of how we have addressed your comments, I refer to our response below in Orange.

We trust this now closes this report out, and appreciate if you could confirm closure by COB 19 Aug 22.

We appreciate yours and Rosie's assistance to date on these plans, and look forward to hearing from you shortly.

Regards,
Lachie

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From: Sophia Grieve <Sophia.Grieve@transport.nsw.gov.au>
Sent: Tuesday, 16 August 2022 11:49 AM
To: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>; Rosie Selby <Rosie.Selby@transport.nsw.gov.au>; David Surplice <David.Surplice@transport.nsw.gov.au>
Subject: FW: Lot 2A, Oakdale Industrial Estate - SSD 9794683

Hi Lachlan
Thank you for your response.
Please find my below response in blue.
Cheers Sophia

From: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>
Sent: Monday, 15 August 2022 12:40 PM
To: Sophia Grieve <Sophia.Grieve@transport.nsw.gov.au>; Rosie Selby <Rosie.Selby@transport.nsw.gov.au>; David Surplice <David.Surplice@transport.nsw.gov.au>
Cc: Stephanie Partridge <Stephanie.Partridge@goodman.com>; Ben Milner <Ben.Milner@goodman.com>; Luke Ridley <Luke.Ridley@goodman.com>; Alasdair Cameron <Alasdair.Cameron@goodman.com>; Rob Moody <Rob.Moody@goodman.com>
Subject: RE: Lot 2A, Oakdale Industrial Estate - SSD 9794683

Hi Sophia,

Thanks for providing the below feedback on the STP.

Please see below Goodman's response in green to TfNSW comments.

Noting we have just closed out the Building 4E STP consultation (attached) and this plan is aligned with Building 4E strategy, we trust the below will close this consultation review out also.

If you could please confirm so we can submit accordingly that would be greatly appreciated.

Regards,
Lachie

Lachlan O'Reilly
Project Administrator
Lachlan.OReilly@goodman.com

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M. +61 481 254 556

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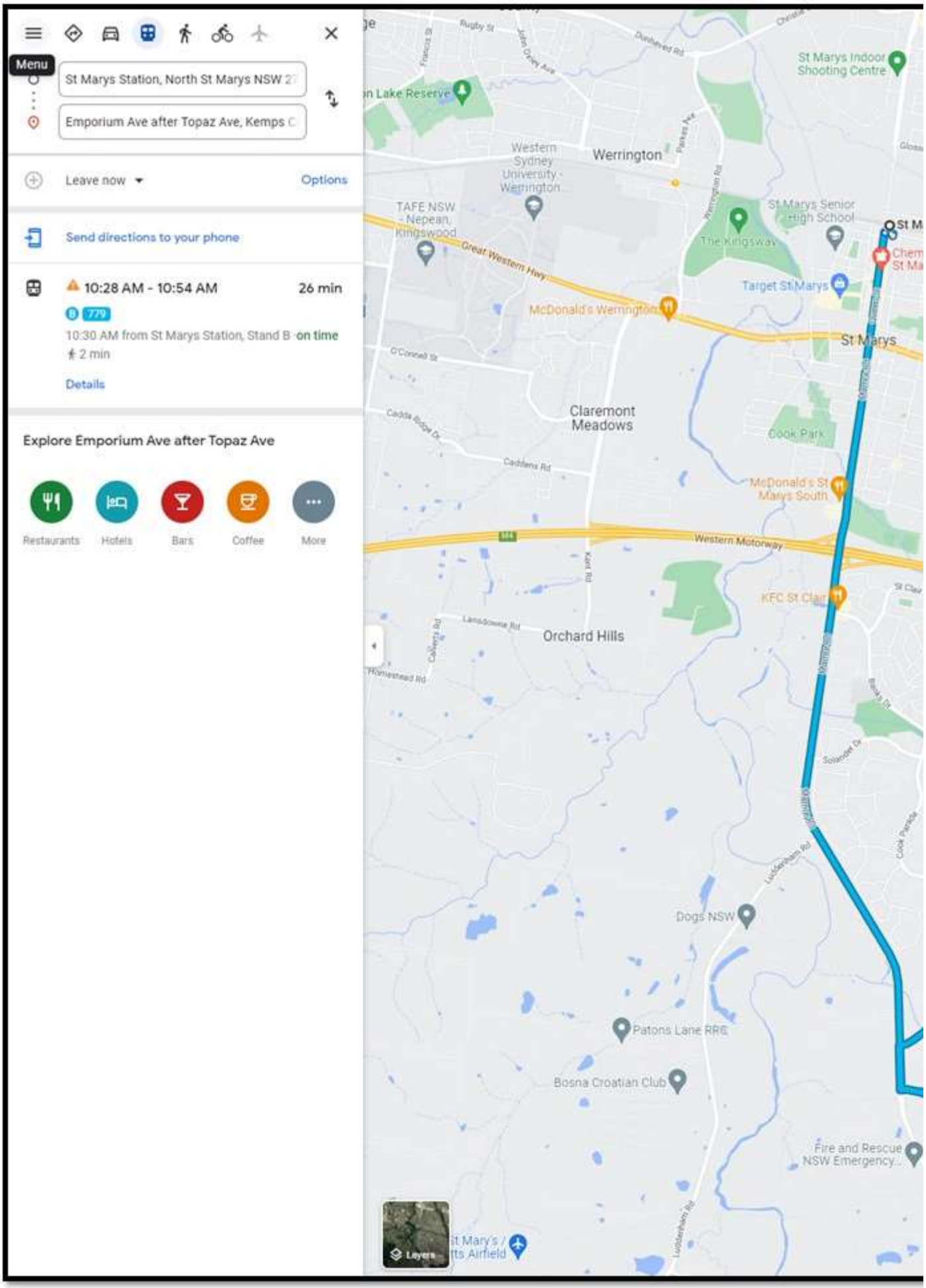
From: Sophia Grieve <Sophia.Grieve@transport.nsw.gov.au>
Sent: Friday, 12 August 2022 9:38 AM
To: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>; Rosie Selby <Rosie.Selby@transport.nsw.gov.au>; David Surplice <David.Surplice@transport.nsw.gov.au>
Cc: Stephanie Partridge <Stephanie.Partridge@goodman.com>; Ben Milner <Ben.Milner@goodman.com>; Luke Ridley <Luke.Ridley@goodman.com>; Alasdair Cameron <Alasdair.Cameron@goodman.com>
Subject: FW: Lot 2A, Oakdale Industrial Estate - SSD 9794683

Hi Lachlan
Please find our comment and recommendations for you below.

Comment: TfNSW have reviewed the Green Travel Plan (GTP) included in the SSD 9794683 for Lot 2A, Oakdale Industrial Estate. Noted and thankyou. We appreciate the prompt response.

Recommendations: TfNSW make the following recommendations for the applicant to update their GTP.

Shuttle bus: TfNSW recommend that a shuttle bus have a mode share allocated to the mode share table (Section 3.6.2), the applicant should strongly re-consider privately funding a shuttle bus on a 24/7 basis to move workers to and from the train station. This will be an essential way to move workers more sustainably. TfNSW noted that this is included in Table 5, Strategy 2.5 Lobby for Precinct wide shuttle service if practical. Goodman note TfNSW comment, however deem the implementation of a privately funded shuttle bus from train station not viable. Goodman note that the Bus Service 779 from St Marys Station is currently approved and operational. (Refer to below snippet of 1 route time for example). As such, Goodman would not consider it viable to create a private 24/7 shuttle bus to transport works, where an existing service already is in place.


Menu
St Marys Station, North St Marys NSW 2
Emporium Ave after Topaz Ave, Kemps C
Leave now
Options
Send directions to your phone
10:28 AM - 10:54 AM
26 min
779
10:30 AM from St Marys Station, Stand B · on time
2 min
Details
Explore Emporium Ave after Topaz Ave
Restaurants
Hotels
Bars
Coffee
More
Werrington
Western Sydney University - Werrington
TAFE NSW - Nepean, Kingswood
Great Western Hwy
St Marys Indoor Shooting Centre
St Marys Senior High School
The Kingsway
Target St Marys
McDonald's Werrington
St Marys
Claremont Meadows
Cook Park
McDonald's St Marys South
Western Motorway
KFC St Clair
Orchard Hills
Dogs NSW
Patons Lane RRG
Bosna Croatian Club
Fire and Rescue NSW Emergency...
Layers

Notwithstanding the above, Goodman refer to R. Selby comments on the Building 4E Sustainable Traffic Plan, and refer to the comments around Public Transport from Mount Druitt Station also to the estate. Noting that Mt Druitt Station is 1 stop away from St Marys, a Station with an existing bus route servicing Oakdale West Industrial Estate (779) Goodman consider this transportation method met.
TfNSW - To note that this is included in the Goodman report as a Strategy item (Strategy 2.5 Lobby to Precinct wide shuttle bus) – closed. Noted – Closed.
TfNSW - Closed

Car parking: TfNSW recommends that the amount of car parking at the site, set at 255 spaces, is significantly reduced and managed, as this encourages private car use over other more sustainable modes such as public transport. This is consistent with Future Transport 2056 in which Travel Demand Management (TDM) is one of TfNSW top priorities to provide incentives to harness more sustainable modes.

Goodman appreciate the comment, however based on the occupancy and use of the building (approved 24 Hours operation / split shift roster), in order to comply with Condition B3 of SSD 9794683 consent conditions, the parking numbers implemented at the site have been developed in order to meet the condition, and ensure that the development does note "utilise public and residential streets or public parking facilities".

Notwithstanding the above, Goodman note that TFNSW had the opportunity to comment on the DA as part of the exhibition phase and raise the above concern, and given the stage of works onsite we are unable to meet the recommendation.
TfNSW – Noted, closed Noted – Closed.
TfNSW - Closed

Parking management: TfNSW request that you consider providing charging stations for Electric Vehicles (EV), and a parking management plan that prioritises use by staff on a needs basis to further reduce car use – this could include providing dedicated spaces for those who are carpooling / car sharing to encourage carpooling. This should also be included in Table 5 (Implementation Plan) in Section 3 Promoting Car Pooling and Elective Vehicle Use.

As noted within Table 2 and Figure 5 of the Sustainable Traffic Plan, Goodman note that we are providing Electric Vehicle (EV) charging spaces for building users to utilise. Goodman note that we are installing 7 x 7kW Dual Ocular IQ Charging Stations, capable of charging 14 Electric Vehicles (EV). As such we consider this comment addressed already within.
TfNSW – Noted, closed Noted – Closed.
TfNSW - Closed

Travel Access Guide: TfNSW appreciate the TAG provided in the GTP. We would ask that you provide staff and visitors additional information about service routes and timetables for buses and trains being available on Trip Planner at transportnsw.info/. The TAG should also include the following:

- Provide information on shuttle including proposed times for pick up and drop off at St Mary's train station.
- Provide information on car share, car-pooling and priority parking for people that car pool.
- Once longer term pedestrian active and public transport infrastructure is in place, the TAG can promote these connections.
- Provide promotion of end of trip facilities, including any new cycling infrastructure available, and update number and location of bike parking facilities and End of Trip facilities, and locate on TAG.
- For further helpful information – please check this link How to Create a Travel Access Guide doc **here**.
- We also would also discourage you from promoting car park areas on the TAG.

Goodman note the response and will monitor as/when applicable.
TfNSW – TfNSW ask that the Travel Access Guide:

- Provides information on car share, car-pooling and priority parking for people that car pool.
  - Goodman have included 10 Fuel Efficient car spaces within the TAG. Refer to the Key identified within the TAG. Note – In accordance with Strategy 3 (pg 23 of the GTP), ongoing monitoring of the

spaces will be undertake to review the utilisation at the first GTP review, and updates made if required.

TfNSW – Closed

- Does not promote car park areas on the TAG.
  - Goodman have updated the TAG to include details on the respective number of spaces / facilities available. Refer to the Key identified within the TAG.

TfNSW - Closed

- Provides additional information about service routes and timetables for buses and trains – as well as the Trip Planner at transportnsw.info/.
  - Goodman have updated the TAG to include details for Transport for NSW info and Trip Planner. Refer to the Key identified within the TAG.

TfNSW - Closed

End of Trip (EoT) facilities: TfNSW appreciates that there will be provision of fully serviced end of trip facilities such as showers and lockers however, it is recommended that the provision of bicycle spaces and EoT is monitored over time to ensure there is sufficient provision to further encourage cycling as a mode – for employees and visitors. The following link provides a good reference for **end of trip facilities.**

Goodman note the response and will monitor as/when applicable. As per the comment above, Goodman note the facility currently has adequate EoT and Bicycle spaces to accommodate the mode of transport.

TfNSW – Noted, closed

Travel Survey: TfNSW appreciates the Travel Survey provided and advise the following additional steps.The survey will need to be distributed 3 months post-occupancy (this will need to be included in the proposed action strategies). The survey does not need to be carried out before that time, only the proposed survey needs to be included. Staff and visitors travel surveys should include questions to ask obtain workforce data analysis (including staff residential postcodes) to identify the actual staff travel origin and destination patterns, to inform strategies that help to reduce car parking demand for staff and visitors to get to and from the site. The Travel Survey should be promoted as a strategy in Table 5 Implementation Plan to promote different sustainable transport routes. The Travel Survey should also be promoting any initiatives or strategies that encourage sustainable transport routes.

Goodman note the response and will work with the tenant to distribute the plan to the relevant stakeholders within 3 months of occupancy as noted

TfNSW – Noted, closed

Public Transport Service provision: TfNSW asks that you also consult with the TfNSW service operational planners regarding bus routes and operational requirements also.

Goodman note that TfNSW has been consulted with already in regards to Bus routes, as this is how the implantation of Route 779 arose. As such, Goodman consider this comment closed.

TfNSW - Closed

Submission: TfNSW would ask that you submit your updated GTP with sufficient time to review prior to occupancy.
Goodman consider this STP address TfNSW comments as stands, and thus an update is not required at this time. Goodman note that the plan will be monitored / update in accordance with the above, and if necessary provide to TFNSW for comment.

TfNSW – Our team are responsible for endorsing whether your GTP meets the Condition when we're satisfied that it does so. Our comments are indicative of what we would like to see included in the GTP, in order for us to provide that endorsement. Given there are further requirements for your GTP to be updated, we will require an updated GTP to be sent back to us to review.

TfNSW – Closed

Many thanks
Cheers Sophia Grieve

Sophia Grieve
Travel Demand Project Manager
Customer Journey Planning
Greater Sydney
Transport for NSW

E sophia.grieve@transport.nsw.gov.au
transport.nsw.gov.au

231 Elizabeth Street, Sydney
NSW 2000

Transport for NSW

I acknowledge the Aboriginal people of the country on which I work, their traditions, culture and a shared history and identity. I also pay my respects to Elders past and present and recognise the continued connection to country.

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Alanna Ryan

From: Justin Pinson <Justin.Pinson@rfs.nsw.gov.au>
Sent: Friday, 26 August 2022 1:05 PM
To: Corey Shackleton
Subject: FW: Oakdale West Estate - Bushfire Compliance

Good afternoon Corey,

In regards to the Fire Management Plan for Building 2A Oakdale West, thank you for the phone call

In reference to the below conditions

F. I am happy to confirm that you have consulted with the Cumberland District

Regards

Justin

Justin Pinson |2IC | Macarthur / Cumberland |Operational Officer L3|
Dip V.E.T Dip T.D.D
NSW RURAL FIRE SERVICE
M 0421 095 455 **E**
Justin.Pinson@rfs.nsw.gov.au
www.rfs.nsw.gov.au |
www.facebook.com/nswrfs |
www.twitter.com/nswrfs
PREPARE. ACT. SURVIVE.

As you may be aware, I left the NSW RFS a couple of years ago and went to the 'dark side' as a consultant.

I have been involved with a new industrial development at Kemps Creek which is known as the Oakdale West Industrial Estate. As part of the approvals for the new warehouses, there are several conditions relating to bushfire, all of which are very typical, although there is one which I need your assistance. The condition reads (see extract):

B25. Prior to the commencement of operation, the Applicant must prepare a Fire Management Plan (FMP) for the development. The FMP must:
- (a) be prepared in consultation with the NSW RFS;
- (b) include 24-hour emergency contact details including alternative telephone contact
- (c) include plans of site infrastructure plan, firefighting water supply, site access and internal roads;
- (d) include implementation of asset protection zones (APZ) and on-going maintenance;
- (e) include location of hazards that will impact on firefighting operations and procedures to manage identified hazards during firefighting operations; and
- (f) any additional matters required by the RFS Fire Control Centre (e.g. FMP review and updates)

As part of the approval, I have prepared a *Bushfire Emergency Management and Evacuation Plan* (very standard and typical) and now also prepared a simple *Fire Management Plan* (one-pager).

To satisfy the consent, I need to consult with yourself (or someone from the Cumberland Fire Control Centre). There's nothing requiring your approval, but your review and advice would be great.

What would be the best way to do this? Is it easiest to send you the FMP or is their someone else who would be better placed?

Really sorry to bother you with this, it's a strange condition and somewhat pointless, but we do need to satisfy it. This condition has been applied to several the warehouses in the estate, so if we can get a simple process for this one, it may save us all some pain in the future.

Feel free to give me a buzz if you have any questions, otherwise ill await your advice.

Many thanks

Regards

Corey Shackleton
Principal Bushfire & Resilience | Blackash Bushfire Consulting
FPAA BPAD Level 3 - 34603
M: 0418412118 | E: corey.shackleton@blackash.com.au | W: blackash.com.au

Twitter Instagram Facebook Pinterest

APPENDIX D

Event Notification

EVENT NOTIFICATION REPORT

Plant Vehicle Property	Non work Related Motor Vehicle Accidents	Service Strike	Environmental	Injury	Break-in Theft	Conduct
☐	☐	☐	☐	☐	☐	☐

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 Tile**	**Capacity of involvement (Direct / in-direct witness)**	**Contact No.**	**Statement Taken**
					Y ☐
					Y ☐
					Y ☐
					Y ☐

3. IMMEDIATE ACTION TAKEN Tick items to signify the action taken immediately following the event occurring						
☐	Secure area / isolate	☐	Subcontractor Workers retained on site	☐	Medical Centre Ambulance	Other:
☐	Contacted Emergency services	☐	Photos of scene / area	☐	Spill control	
☐	Notified asset owner	☐	D & A testing	☐	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)	☐		**Subcontractor** PM responsible	☐	
EPA / DPIE (ER responsible)	☐		**Police / Fire / Amb**	☐	
Asset Owner PM responsible	☐		**Police Event No.** (if applicable)	☐	
Client (Org) PM responsible	☐		**Other** (Name)	☐	

7. FACTORS CONTRIBUTING TO THE INCIDENT							
Environment				**Equipment / materials**			
☐	Noise	☐	Surface gradient / conditions	☐	Tampering of plant / equipment	☐	Plant or equipment failure
☐	Lighting	☐	Dust / fume	☐	Inadequate maintenance	☐	Material / equipment too heavy / awkward
☐	Vibration	☐	Slip / trip hazard	☐	Inadequate guarding	☐	Plant or equipment unsuitable
☐	Weather	☐	Time / production pressures	☐	Other:		
Work systems				**People**			
☐	Hazard no identified	☐	No / inadequate risk assessment conducted	☐	No / Not followed Procedure	☐	Drugs / alcohol
☐	Hazard not reported	☐	No / inadequate controls implemented	☐	Fatigue	☐	Stress/ Pressures
☐	No/inadequate safe work procedure	☐	Inadequate training / supervision	☐	Change of routine	☐	Distraction / personal issues / stress
☐	Inadequate planning	☐	Other:	☐	Lack of communication	☐	Other:

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 ☐	No ☐
PM Signature:		ER Signature:			
Date:		Date:			

APPENDIX E

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-v8.0	29 September 2022	Kate McKinnon	Alanna Ryan	Alanna Ryan
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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DOCUMENT REFERENCES

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APPENDICES

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. This CCS will also be updated to address the operational phase of the development during the preparation of the Operational Environmental Plan (OEMP) for the Estate.

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

- C19 & C20 – Community Communication Strategy
- D37 – Landscaping
- D71 – Hours of Work
- D117 – Ongoing Community Engagement
- D118 - Management Plan Requirements
- D127 & D128 – Environmental Representative
- D133 – Document Review
- 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	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 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.	This CCS Document a) Section 4 b) Section 5 c) Sections 5 & 6 d) Section 2.2 e) Section 5.4
C20 – Community Communication Strategy	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.	a) Section 1.2 b) Sections 5 & 6
D37 – Landscaping	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.	Section 2.2.1 Appendix A

Condition Number	Condition Detail	Report Reference
D71 – Hours of Work	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.	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	Management plans required under this consent must be prepared in accordance with relevant guidelines, and include: e) 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; 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: 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: 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. Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.	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	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.	Section 6.2
D128 - Environmental Representative	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).	Section 6.2

Condition Number	Condition Detail	Report Reference
D133 Revision of Strategies, Plans and Programs	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.	Section 6.2
D143 – Access to Information	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 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	Communications and Community Liaison Representative 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. 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. 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: • 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. 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. The CCLR is to facilitate meetings, forums and arranging interviews to address concerns from community. 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. 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. The CCLR must be available for contact by local residents, key stakeholders and community representatives to answer queries and provide more information or feedback.	Section 4

Specification Number	Relevant Specification Detail	Report Reference
3.7 - Communications	Describe in the CEMP the processes for external and internal communication in relation to the environmental aspects of the work under the Contract. 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.	Refer to Project CEMPs (SLR, 2019a & SLR 2019b) Section 5.3
3.7.1 - Liaison with EPA and/ or other Government Agencies	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. 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.	Section 4
3.7.2 - Community Liaison and/or Notification 3.7.2.1 New or Changed Construction Activities	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 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. 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.	Section 5.3.2
3.7.2.2 - Extended Working Hours – No Environmental Protection Licence	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. 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. Refer to Practice Note vii of RMS publication “Environmental Noise Management Manual” when preparing the letter and notifying the affected residents.	Section 5.3.2

Specification Number	Relevant Specification Detail	Report Reference
3.7.3 - Complaints and Enquiries Management	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: 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. 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. Keep a register of all complaints or enquiries, which must include the following details: (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

<table>
<tr><th>Specification Number</th><th>Relevant Specification Detail</th><th>Report Reference</th></tr>
<tr><td>3.7.4 - Notification to communities and stakeholders</td><td>Notify Goodman in advance of the following construction activities:
<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>
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></td><td>Sections 5.3.2</td></tr>
</table>

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 and operations undertaken by Goodman, their engaged contractors and future tenants of the estate.

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**).

For the construction phase of the project, 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 this CCS and also include additional information within the OEMP to ensure Condition C19(e) of SSD 7348 is clearly addressed for each tenancy's 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	A Concept Proposal including: • 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 A Stage 1 Development including: • 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	Amendments to the Concept Proposal: • 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. Amendment to the Stage 1 Development:

Application Number	Development Description
	• 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	Concept Approval • 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. Stage 1 Approval • 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
SSD 7348 MOD 10	Updates to the Concept plan to update Precinct 5 layout and update to Precinct 1 signage plans, including façade signage

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**).

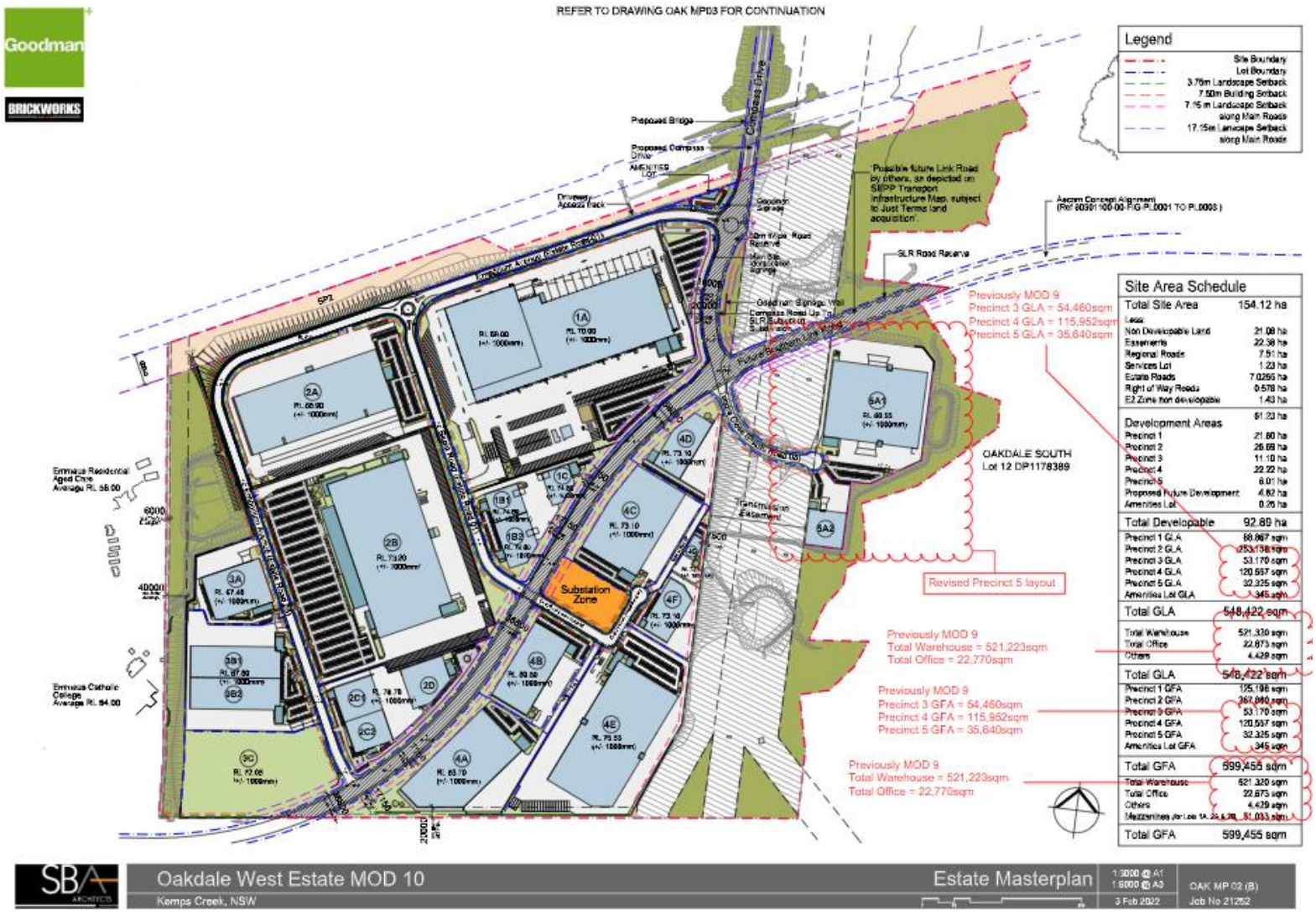

Figure 1 Oakdale West Site Layout

Figure 2 WNSLR Plans

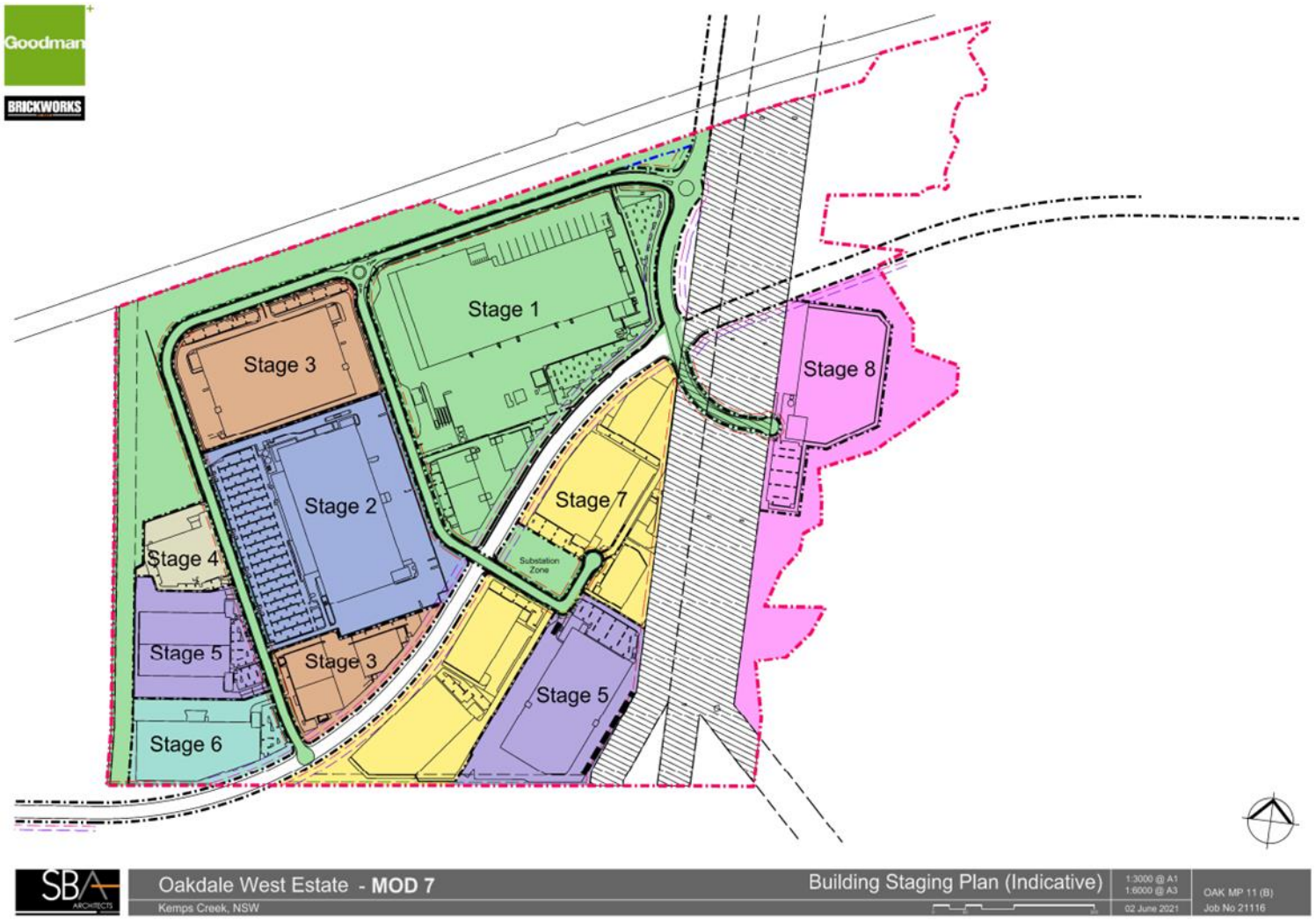

Figure 3 Oakdale West Staging Plan

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	Adjacent and directly affected properties, businesses and schools including: • 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	• Penrith City Council
State Government Departments and Offices	• 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	• TransGrid • Endeavour Energy • WaterNSW • Sydney Water • Jemena • NBN • Telstra
Other Interested Parties	• 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 and operational 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. Operations within the estate have the potential to emit noise and vibration with the potential to impact on nearby sensitive receivers.	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. Up to date information on current and proposed works will be accessible to stakeholders and the wider public on the project web page. 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. 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. The OEMP prepared for the OWE as well as individual OEMPs for each warehouse development will contain environmental management controls to address noise and vibration, as well as monitoring and contingency measures to be implemented.
Stormwater, Sediment Control, Erosion, Water Quality	High rainfall events could result in localised flooding. Construction could result in impacts to local water quality, associated with sediment laden runoff.	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. 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.
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.	Sensitive receivers will be notified prior to actions likely to cause traffic disruption in accordance with Section 5.4.2 of this strategy. The CEMP and supporting Construction Traffic Management Plan and Fill Importation Plan identify specific mechanisms to manage and mitigate these impacts.

Potential Issue	Potential Key Impacts	Mitigation Strategy
Operational Traffic	An increase in traffic movements may be experienced in the broader locality directly related to the operations of the OWE, including light vehicles and transport trucks.	An OEMP has been established for the overall OWE and individual OEMPs will be developed for each warehouse within the estate. All OEMPs will be informed by and will enforce measures prescribed within Operational Traffic Management Plans (OTMPs), which will be developed to ensure operational traffic volumes and behaviours do not adversely impact on the surrounding area. All vehicle operators related to the OWE will comply with a Driver's Code of Conduct, to ensure safety and respect for other road users and the surrounding community is upheld.
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.

Potential Issue	Potential Key Impacts	Mitigation 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. .
Misinformation and Misunderstanding	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. 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.	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. Contact details including the hotline details will be provided on site, the project web page and in all information issued.
Emergency Event	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.	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.

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 the construction phases 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 for the duration of the project 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/Phase	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.	Construction phase. 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/Phase	Specifications
Environmental Review Group Meeting	Meeting of key environmental stakeholders	Environmental Representative	All environmental stakeholders	As required for the construction phase	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 for the project duration.	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/Phase	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 during construction Goodman and Tenant's Representative numbers available during operations	CCLR and Community Consultation Team or Goodman Representative / Tenant Representative	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/Phase	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 construction 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 construction 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 and operational 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.

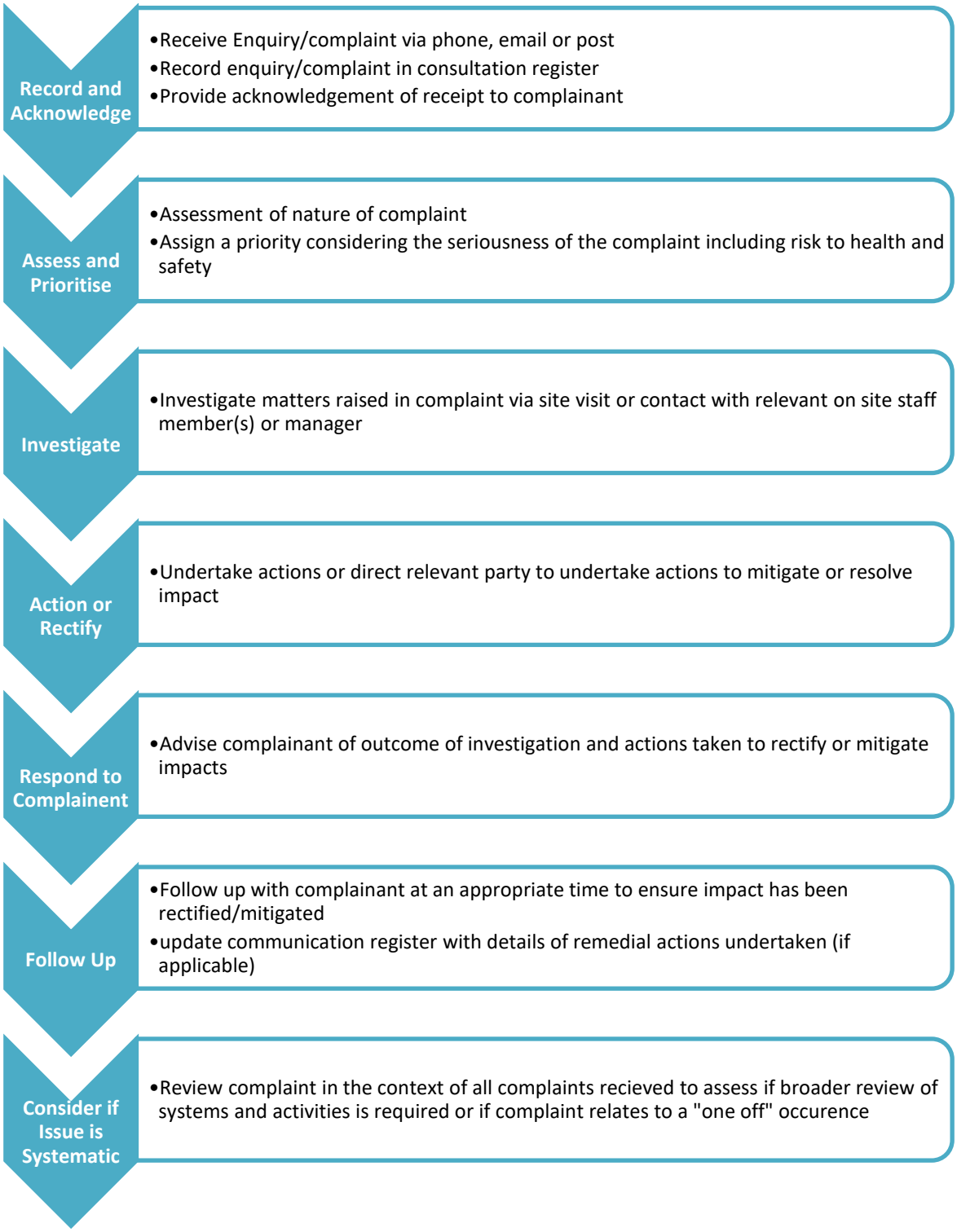

Figure 4 Complaints Handling Procedure

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) has been established. The CCLR and community consultation team will manage the information line from the commencement of the project until the completion of construction. 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. Phone enquiries and complaints received in relation to the operational phase will be received by Goodman's or the Tenant's Representative. 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 (Construction phase)	A contact phone number and associated contact name for questions/enquiries and the lodgement of complaints relating to the construction of the development.	1300 002 887
Goodman's or Tenant's Representative (Operational phase)	Contact phone numbers and associated contact name for questions/enquiries and the lodgement of complaints relating to the operation of the development.	As per Table 2-2 of the OWE OEMP as well as individual OEMPs for each warehouse
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 responsible party (CCLR (construction phase) and Goodman or Tenant's Representative (operational phase)) will attempt to provide an immediate response if possible, via phone or email. Where a complaint or enquiry cannot be responded to immediately the responsible party 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 responsible party 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 or tenant's representative. The responsible party 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 responsible party 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 responsible party will liaise with the project manager or relevant project engineer/tenant's representative 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

Key Element	Trigger/ Response	Condition Green	Condition Amber	Condition Red
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.
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.

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


N1 (north)
N1 (south)
N2
N6
N7
N8
N3
N4
N5
N14
N13
N9
N10
N12
N11
1A
2A
2B
1C
4D
5A
3A
1B1/1B2
4C
4G
3B1/3B2
4F
2D
4B
2C1/2C2
3C
4A
4E
MOD 7 Buildings
Receivers
MOD 3 Barrier 3m
MOD 3 Barrier 5m
Receiver Building

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	baduchts@gmail.com	Mobile: 0476 381 207	
Seli Storer	Biamanga					biamangachts@gmail.com		
Richard Andy	Bidawal CHTS					bidawalchts@gmail.com		
Simalene Cariage	Bilinga					bilingachts@gmail.com		OR Wandai Kirkbright???
Jennifer Beale	Butucarbin Aboriginal Corporation	28 - 30 Pringle Road	Hebersham	NSW	2770	koori@ozemail.com.au	Office: (02) 9832 7167, Mobile: 0409 924 409	Website: http://www.butucarbin.org.au/, postal address: PO Box E18 Emerton NSW 2770
Marylin Carroll-Johnson	Corroborree 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					cullendullachts@gmail.com		
Gordon Morton	Darug Aboriginal Cultural Heritage Assessments	Unit 9, 6 Chapman Ave	Chatswood	NSW	2067		Office: (02) 9410 3665, Mobile: 0422 865 831	
Des Dyer	Darug Aboriginal Landcare	18A Perigee Close	Doonside	NSW	2767	desmond4552@hotmail.com	Mobile: 0408 360 814	Site officer: 0402 942 572
Justine Coplin	Darug Custodian Aboriginal Corporation	PO Box 81	WINDSOR	NSW	2756	justinecoplin@optusnet.com.au	(02) 4577 5181 Office: (02) 4577 5181,	
Leanne Watson	Darug Custodian Aboriginal Corporation	PO Box 81	Windsor	NSW	2758	mulgokiwi@bigpond.com	Mobile: 0415 770 163	
Jamie Workman	Darug Land Observations PTY LTD	PO Box 571	Plumpton	NSW	2761	daruglandobservations@gmail.com	Mobile: 0420 591 138	
Gordon Workman	Darug Land Observations PTY LTD	PO Box 571	Plumpton	NSW	2761	gordow51@bigpond.net.au	Mobile: 0415 663 763	Deceased
John Reilly	Darug Tribal Aboriginal Corporation	PO Box 441	Blacktown	NSW	2148	Jmreilly228@gmail.com	Office: (02) 9622 4081	
Steve Randall	Deerubbin Local Aboriginal Land Council	2/9 Tindale St	Penrith	NSW	2750	SRandall@deerubbin.org.au	Office: (02) 4724 5600	
Andrew Bond	Dharug CHTS					dharugchts@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					djiringanjchts@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	gundungurratectribsevices@gmail.com	Mobile: 0450 124 891	
Larry Hoskins	Gundungurra Tribal Technical Services	2/3 Colville Pl	Rosemeadow	NSW	2560	gundungurratectribsevices@gmail.com	Mobile: 0478 009 879	
Pimmy Johnson Bell	Gundungurra Tribal Technical Services	67 Dickens Rd	Ambarvale	NSW	2560	gundungurratectribsevices@gmail.com	Mobile: 0425 066 100	
Sam Wickman	Gundungurra Tribal Technical Services					gundungurratectribsevices@gmail.com		
Teangi Mereki Foster	Gundungurra Tribal Technical Services	1/6 Central Ave	Oak Flats	NSW	2529	gundungurratectribsevices@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	Gunyuu CHTS					gunyuuchts@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	murrabidgeemullangari@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@bigpond.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
Danny Franks	Tocomwall	PO Box 76	Caringbah	NSW	1495	danny@tocomwall.com.au	Mobile: 0415 226 725	
Hika Te Kowhai	Walbunja					walbunja@gmail.com	Mobile: 0402 730 612	
	Walgalu CHTS					walgaluchts@gmail.com		
William Bond	Wandandian					wandandianchts@gmail.com		
Aaron Slater	Warrigal Cultural Services					Warrigal_c.s@hotmail.com	Mobile: 0421 355 890	Changed William to Aaron
Steven Hickey	Widescope Indigenous Group	73 Russell St	Emu Plains	NSW	2750	widescope.group@live.com	Mobile: 0425 230 693	
Hayley Bell	Wingikara					wingikarachts@gmail.com		
Lee-Roy James Boota	Wullung	54 Blackwood St	Gerringong	NSW	2534	wullunglb@gmail.com	Mobile: 0403 703 942	
Kerrie Slater	Wurrumay Consultant					wurrumay@hotmail.com		
Robert ParsonS	Yerramurra					yerramurra@gmail.com		

APPENDIX D

Complaints Register

Date	Time	Responsible Party	In/Out	Initial Communication Method/Tool	Contact Name/ Organisation	Contact Details	Documentation Location (if applicable)	Communication Type: Complaint/ Enquiry/ Communication	Summary of Issues/ Details	Action Taken	Further Action/ Monitoring to Confirm Resolution

ASIA PACIFIC OFFICES

BRISBANE
Level 2, 15 Astor Terrace
Spring Hill QLD 4000
Australia
T: +61 7 3858 4800
F: +61 7 3858 4801

CANBERRA
GPO 410
Canberra ACT 2600
Australia
T: +61 2 6287 0800
F: +61 2 9427 8200

DARWIN
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Darwin NT 0800
Australia
T: +61 8 8998 0100
F: +61 2 9427 8200

GOLD COAST
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Varsity Lakes QLD 4227
Australia
M: +61 438 763 516

MACKAY
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Mackay QLD 4740
Australia
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MELBOURNE
Suite 2, 2 Domville Avenue
Hawthorn VIC 3122
Australia
T: +61 3 9249 9400
F: +61 3 9249 9499

NEWCASTLE
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New Lambton NSW 2305
Australia
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F: +61 2 4037 3201

PERTH
Ground Floor, 503 Murray Street
Perth WA 6000
Australia
T: +61 8 9422 5900
F: +61 8 9422 5901

SYDNEY
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Lane Cove NSW 2066
Australia
T: +61 2 9427 8100
F: +61 2 9427 8200

TOWNSVILLE
Level 1, 514 Sturt Street
Townsville QLD 4810
Australia
T: +61 7 4722 8000
F: +61 7 4722 8001

TOWNSVILLE SOUTH
12 Cannan Street
Townsville South QLD 4810
Australia
T: +61 7 4772 6500

WOLLONGONG
Level 1, The Central Building
UoW Innovation Campus
North Wollongong NSW 2500
Australia
T: +61 404 939 922

AUCKLAND
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Auckland 1010
New Zealand
T: +64 27 441 7849

NELSON
6/A Cambridge Street
Richmond, Nelson 7020
New Zealand
T: +64 274 898 628

APPENDIX F

Construction and Operational Air Quality Management Plan

OAKDALE WEST INDUSTRIAL ESTATE - LOT 2A

Construction and Operational Air Quality Management Plan

Prepared for:

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

SLR Ref: 630.30081-OWE 2A-R22
Version No: -v1.2
October 2022

PREPARED BY

SLR Consulting Australia Pty Ltd
ABN 29 001 584 612
Tenancy 202 Submarine School, Sub Base Platypus, 120 High Street
North Sydney NSW 2060 Australia

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E: sydney@slrconsulting.com www.slrconsulting.com

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
630.30081-2A-R22-v1.2	11 October 2022	Sahar Bagheri	Kirsten Lawrence	Varun Marwaha
630.30081-2A-R22-v1.1	17 December 2021	Sahar Bagheri	Kirsten Lawrence	Varun Marwaha
630.30081-2A-R22-v1.0	10 December 2021	Sahar Bagheri	Kirsten Lawrence	Varun Marwaha

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DOCUMENT REFERENCES

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APPENDICES

1 Introduction

SLR Consulting Australia Pty Ltd (SLR) has been commissioned by Goodman Property Services (Aust) Pty Ltd (Goodman) to prepare an Air Quality Management Plan (AQMP) for Lot 2A (Development Site) within Precinct 2 of the Oakdale West Estate (OWE) located in the western Sydney area of Erskine Park, New South Wales (NSW).

A construction-phase AQMP for construction for the OWE was finalised by SLR in January 2020 (SLR 2020), which was required under Condition D100 of the Development Consent for State Significant Development 7348 (SSD 7348).

Whilst Development Consent SSD 7348 has been granted for the OWE 'Concept Proposal' and 'Stage 1 Development', this AQMP is specifically for the construction and operation of Lot 2A. The development of Lot 2A was approved under SSD 9794683. The construction sections of this AQMP generally adhere to the requirements stipulated in the overarching OWE AQMP.

1.1 Development Overview

The OWE is a regional warehouse and distribution hub, located at Kemps Creek within the Penrith Local Government Area (LGA) and forms part of the broader Oakdale Industrial Precinct located within the Western Sydney Employment Area (WSEA).

The OWE 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 are located to the west of the site. Other boundaries interface with adjoining rural lands accommodating a mix of rural-residential and agricultural uses (see **Figure 1**).

Development Consent for the OWE was granted for the OWE 'Concept Proposal', 'Stage 1 Development' and all subsequent development stages. The Concept Proposal essentially comprises a Master Plan to guide the staged development of OWE and core development controls that will form the basis for design and assessment of future development applications for the site. It includes:

- Establishing primary site access, road layouts (including internal road network and connections to the external road network), developable and non-developable lands, biodiversity offsets, indicative development stages and development controls for the future development of the site;
- Development of the Estate, including:
  - Estate Works, including 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, including construction, fit out and use of warehouse buildings within Precincts 1-5, detailed earthworks, on lot stormwater, services and utility infrastructure and construction of industrial/warehouse buildings;
  - Construction of a new regional road known as the Western North South Link Road (WNSLR) connecting to Lenore Drive to provide the primary access to the site (now complete); and
  - Western boundary landscaping.

This AQMP has been prepared to cover the construction and operation of Lot 2A. Lot 2A is located in Precinct 2 of the OWE as shown in **Figure 2**. At the time of writing this report, a Construction Contractor has yet to be engaged. Building 2A comprises the following:

- Construction and fit out of a single 44,000 sqm warehouse building with loading bays and dual office facilities;
- Truck delivery access, two car parking areas with dedicated entrances; and one heavy vehicle entrance;
- site landscaping; signage; and
- Lighting.

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.

Figure 1 Regional Locality

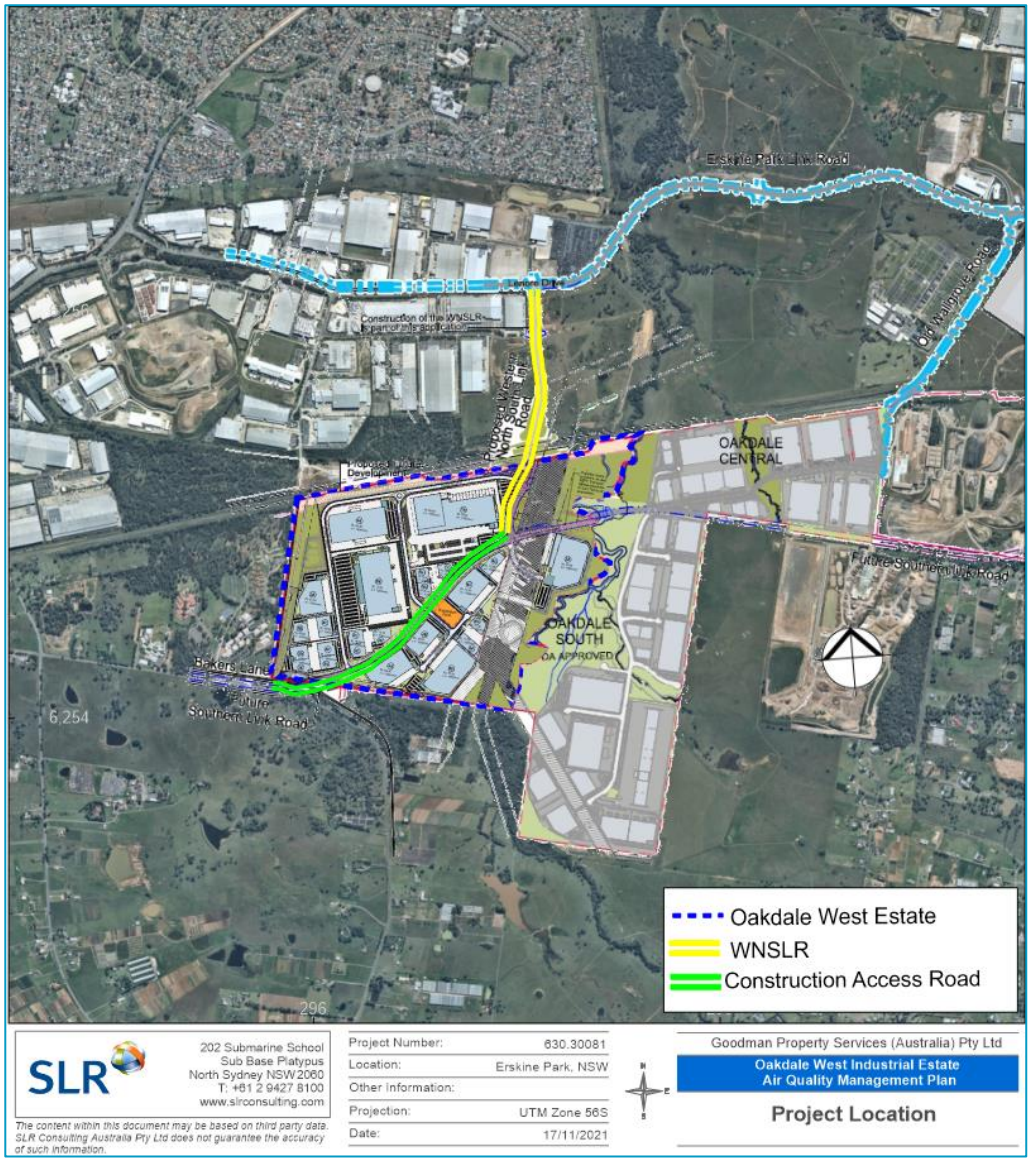
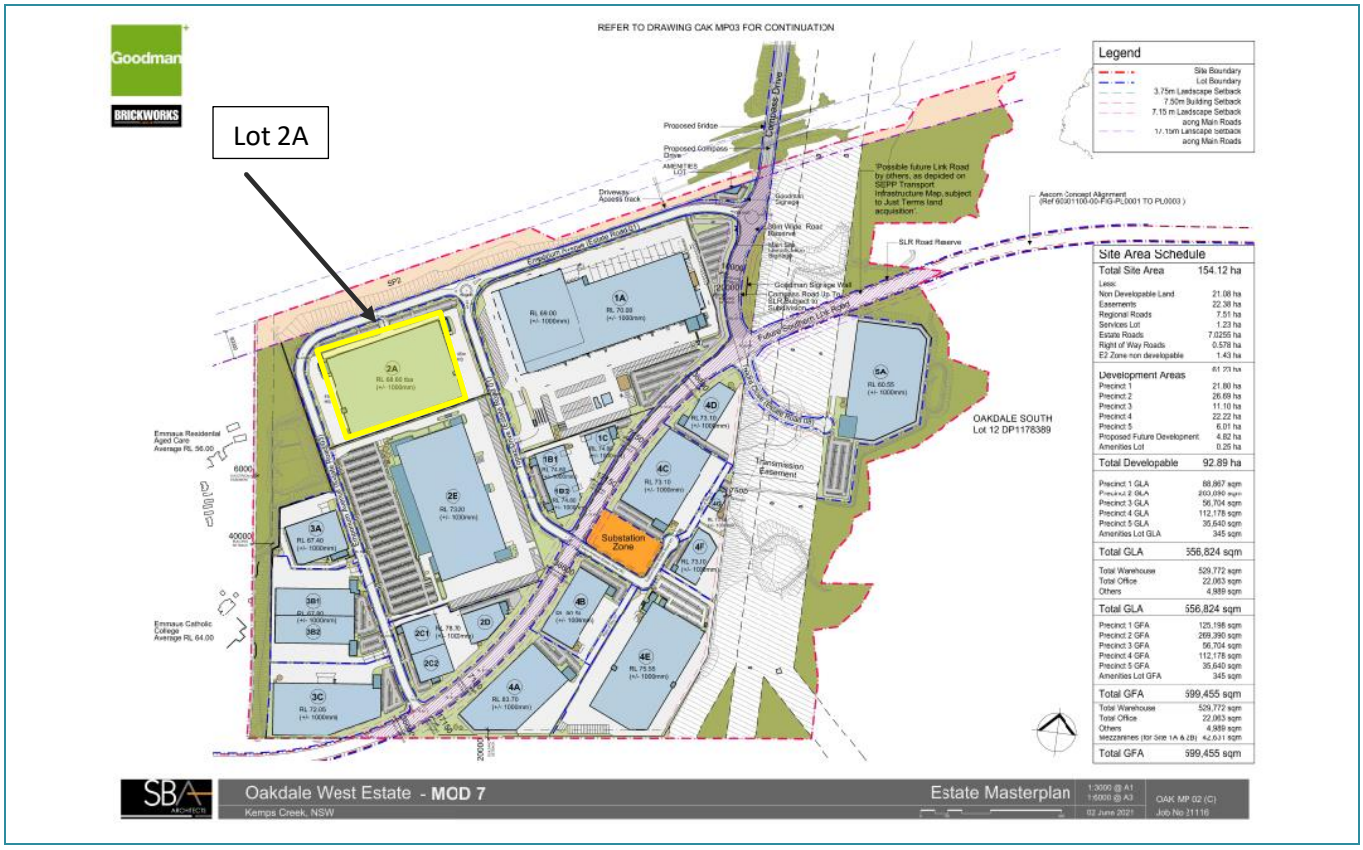


Figure 2 Oakdale West Masterplan



1.2 Objectives of this AQMP

The objectives of this AQMP are as follows:

- Details of all emissions from all construction and operational activities, including fugitive particulate emissions and vehicle emissions;
- A program that is capable of evaluating the performance of air quality management during construction and operation, and determining compliance with key performance indicators (KPIs);
- Identification of control measures that may be suitable for each emission source;
- Relevant regulatory requirements, including development consents, guidelines and air quality limits/criteria;
- Location of sensitive receivers;
- Air Quality management commitments and responsibilities, including air quality compliance monitoring and reporting requirements (where relevant); and
- Potential contingency measures in the event of an air quality criterion exceedance.

2 Statutory Requirements

The Development Consent requirements stipulated for the construction and operation of Lot 2A under SSD 7348 (construction) and SSD 9794683 (construction and operation), and where they have been addressed in this AQMP, are shown in **Table 1** and **Table 2** respectively.

Table 1 SSD 7348 Conditions

Conditions	Response / Section Reference
Condition D98 (Dust Minimisation)	
The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.	**Section 9**
Condition D99 (Dust Minimisation)	
During construction of Stage 1, the Applicant must ensure that: (a) exposed surfaces and stockpiles are suppressed by regular watering and or other dust suppression methods; (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.	**Section 9**
Condition D100 (Construction Air Quality Management Plan)	
(a) be prepared by a suitably qualified and experienced person(s)	2-page CV of the author is attached in **Appendix E**
(b) detail and rank all emissions from all construction activities, including particulate emissions	**Section 4** and **Section 7**
(c) describe a program that is capable of evaluating the performance of the construction and determining compliance with key performance indicators	**Section 11**
(d) identify the control measures that will be implemented for each emission source	**Section 9**
(e) nominate the following for each of the proposed controls: - key performance indicator - monitoring method - location, frequency and duration of monitoring - record keeping - complaints register - response procedures - compliance monitoring	**Section 9** and **Section 11**
Condition D118 (Management Plan Requirements)	
(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;	**Section 5.2**

Conditions	Response / Section Reference
(b) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;	**Section 9**
(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;	**Section 11**
(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 12**
(e) a program to investigate and implement ways to improve the environmental performance of Stage 1 over time;	**Section 11** and **Section 14**
(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	**Section 10** and **Appendix D** See overarching CEMP
(g) a protocol for periodic review of the plan.	**Section 14**

Table 2 SSD 9794683 Conditions

Conditions	Response / Section Reference
Condition B30 (Dust Minimisation)	
The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.	**Section 9**
Condition B31 (Dust Minimisation)	
During construction of the development, the Applicant must comply with the dust minimisation measures detailed in the Construction Environmental Management Plan required by Condition C2.	**Section 9**
Condition B32 (Operational Air Quality)	
(a) be prepared by a suitably qualified and experienced person(s)	2-page CV of the author is attached in **Appendix E**
(b) detail all emission sources from the operation of Lot 2A	**Section 4**
(c) describe a program that is capable of evaluating the performance of the operation and determining compliance with key performance indicators	**Section 12**
(d) identify the control measures that will be implemented for each emission source, including details of extractions systems and rooftop vents	**Section 9**

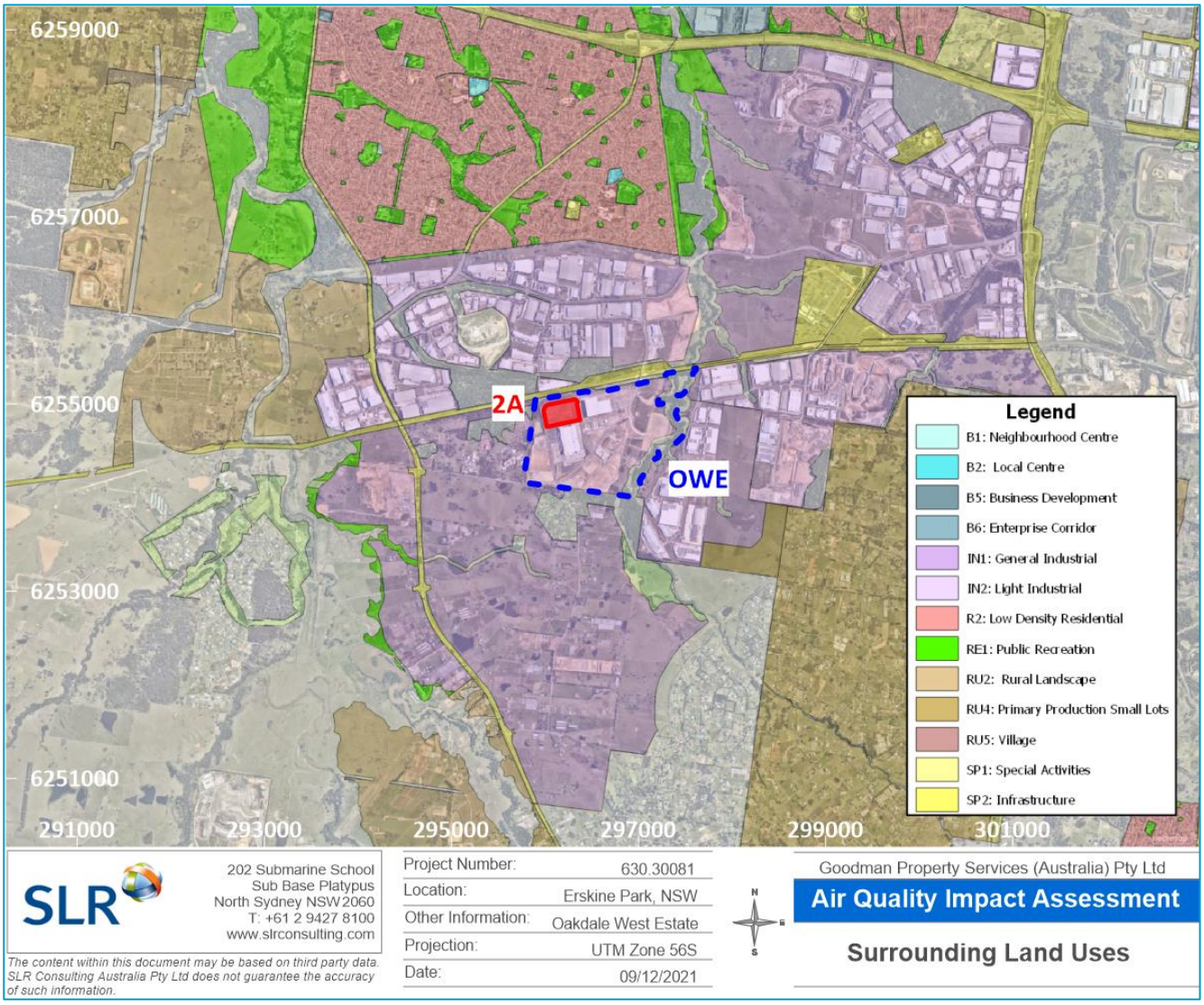
Conditions	Response / Section Reference
(e) nominate the following for each of the proposed controls: i. key performance indicator ii. monitoring method, location, frequency, and duration of monitoring iii. response procedures; and iv. compliance monitoring.	**Section 9** and **Section 11**
(f) Include a complaint register and response procedures	**Section 10** and **Appendix D** See overarching CEMP
Condition B33 (Operational Air Quality)	
The Applicant must implement the AQMP for the duration of operation of Lot 2A.	**As applicable**

3 Project Overview

3.1 Surrounding Land Uses

The area immediately surrounding the OWE is zoned light or general industrial, (see **Figure 3**) and includes land uses such as industrial warehouses and factories, several of which have been identified as having the potential to be considered sources of air emissions. The nearest residential receptors to the OWE boundary are located approximately 50 metres (m) south on Aldington Road, Erskine Park. However, Precinct 2 is located on the north western side of the OWE and is approximately 200 m away from the nearest sensitive receptor (the Emmaus College building).

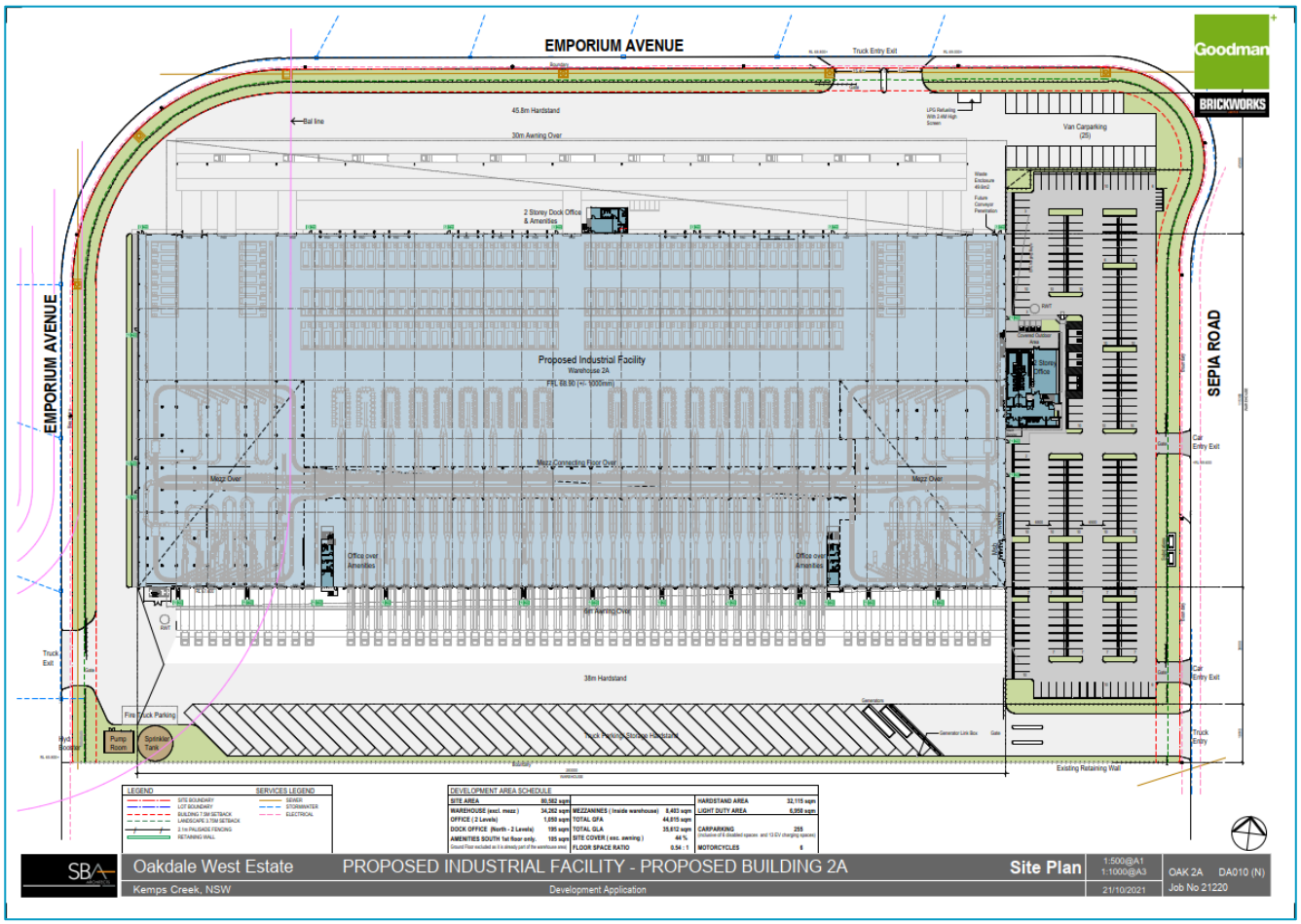
Figure 3 Surrounding Land Use



3.2 Lot 2A Layout

The Lot 2A layout is shown in **Figure 4**.

Figure 4 Lot 2A Layout



3.3 Construction Activities

3.3.1 Proposed Works

This AQMP relates to the construction works to be undertaken on Lot 2A at Precinct 2.

No vegetation clearing, bulk earthworks or supporting infrastructure will be required as part of this Project as this has been approved and undertaken as part of Stage 1 in accordance with SSD 7348.

All works will be undertaken in accordance with the Approved Development Consent SSD 9794683.

The activities to be undertaken include:

- Minor earthworks to prepare foundations/footings for the buildings to be constructed
- Construction of a 44,000 m^2 steel framed and steel-clad warehouse

- Sealing of internal roads and hardstand areas,
- Fit out of warehouse and offices

3.3.2 Construction Hours

Construction hours will be in accordance with Conditions B7 and B8 of Development Consent SSD 9794683, which are reproduced below:

B7. The Applicant must comply with the hours detailed in Table 1, unless otherwise agreed in writing by the Planning Secretary.

Table 2: Hours of Work

Activity	Day	Time
Construction	Monday – Friday Saturday	7 am to 6 pm 8 am to 1 pm
Operation	Monday – Sunday	24 hours

B8. Works outside of the hours identified in Condition B7 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.

The construction hours will be provided to all staff and contractors in the induction. The movements of staff and contractors will be recorded for this project.

3.3.3 Construction Contact Details

Table 3 lists the key contacts during the construction of Lot 2A.

Table 3 Construction Contact List

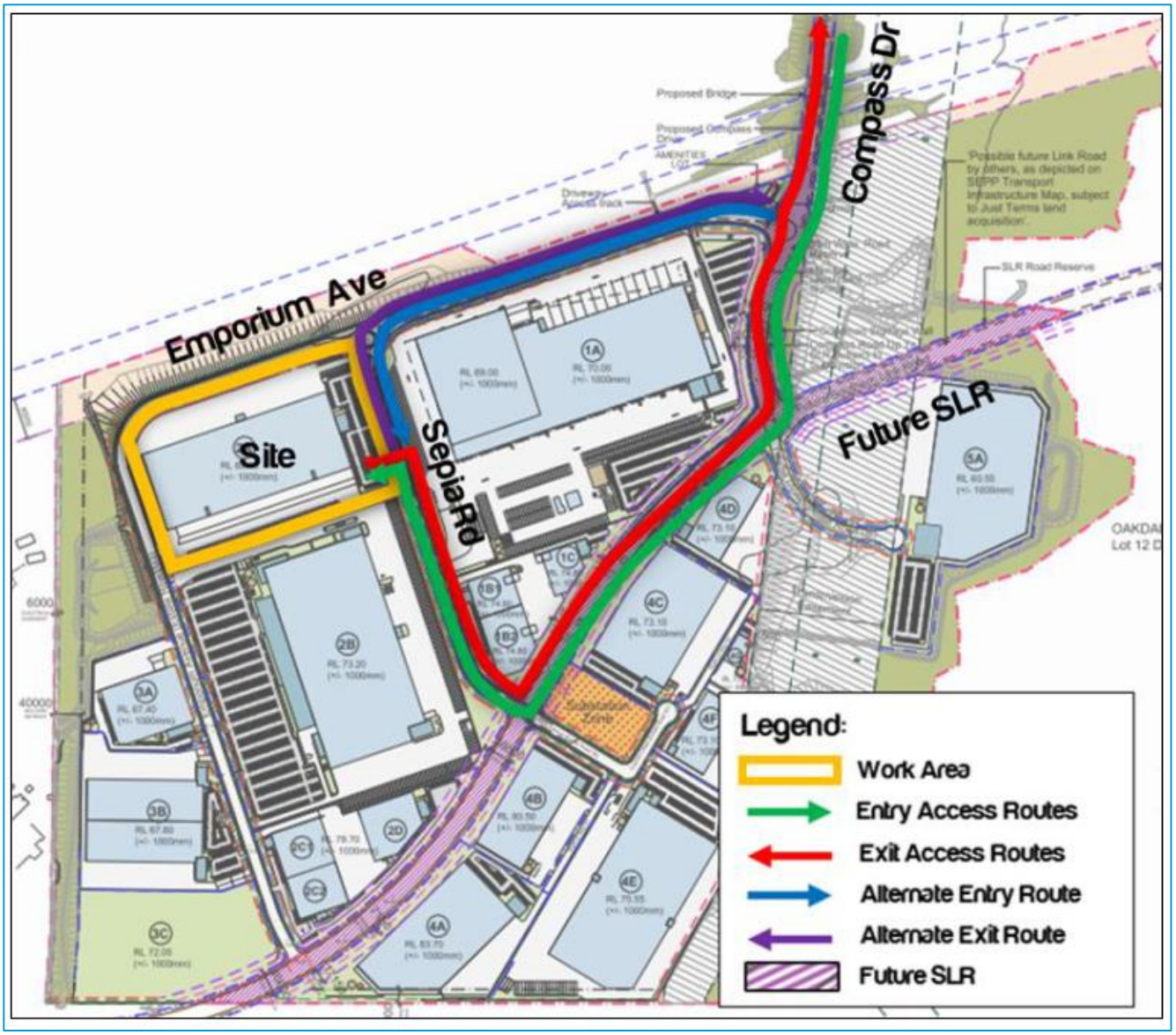
Role	Name	Company	Contact Details
Project Principal/Superintendent	Rob Moody	Goodman	0418 275 745 Rob.moody@goodman.com
Contractor's Project Manager	Mitchell Kay	Richard Crookes Constructions	0413 611 842 kaym@richardcrookes.com.au
Contractor's WHS&E Advisor	Marcello Di Paolo	Richard Crookes Constructions	0418 272 205 dipaolom@richardcrookes.com.au
Environmental Representative	Carl Vincent	ERSED	0424 203 046 carl.vincent@ersed.com.au

Role	Name	Company	Contact Details
Communications and Community Liaison Representative	Dan Thompson	SLR	0428 060 995 dthompson@slrconsulting.com

3.3.4 Construction Site Access

During construction, heavy vehicles will access travel south from the site towards Estate Road 03, then northeast to exit at northern boundary of the OWE precinct. Two car entry/exit points will also be provided directly onto Compass Drive to facilitate access to the proposed car parking areas, as shown in **Figure 5**.

Figure 5 Construction Site Access



Source: CTMP (Ason 2021)

3.4 Operational Activities

The tenant for Lot 2A has proposed operations which will include a number of vehicles (approximately 100 vehicles per hour during peak hours and 900 vehicles per day) entering and existing the building, including parking in the building while loading/unloading goods. It has been notified by Goodman that idling of vehicles will not occur inside the building.

4 Potential Sources of Air Emissions

4.1 Air Emissions During Construction

During the construction works, fugitive dust emissions are considered to be the primary air emission type, which could give rise to nuisance and/or health impacts for the surrounding sensitive areas. The key potential sources of dust associated with construction of Lot 2A have been identified as:

- Dust emissions from earthworks activities (e.g. excavation and loading of soils to trucks);
- Wind-generated dust from disturbed surfaces and stockpiles;
- Wheel-generated dust and particulate matter emissions in diesel exhaust emissions from on-site plant and equipment and construction traffic movements; and
- Particulate matter associated with exhaust emissions from increased/congested traffic emissions on the local road network due to road closures or diversions (if any).

In addition to the construction activities being carried out at any point in time, a number of other environmental factors may also affect the generation and dispersion of dust emissions, including:

- Wind direction - determines whether dust and suspended particles are transported in the direction of the sensitive receptors;
- Wind speed - governs the potential suspension and drift resistance of particles;
- Surface type - more erodible surface material types have an increased soil or dust erosion potential;
- Surface material moisture - increased surface material moisture reduces soil or dust erosion potential;
- Other external factors such as current works being undertaken by others outside of the defined Project boundaries and current climatic (dry) weather conditions;
- Rainfall or dew - rainfall or heavy dew that wets the surface of the soil reduces the risk of dust generation.

The Environmental Impact Statement (EIS) for the construction and operation of the whole OWE was prepared by Urbis in November 2017 (Urbis 2017). Appendix U (Air Quality Impact Assessment) of the EIS states that the main emissions to air during the construction phase will be emissions of suspended particulate matter and nuisance dust from the movement of vehicles and construction equipment, excavation and rehabilitation, demolition, clearing and grading, truck loading and unloading and wind erosion. The same sources, excluding excavation and rehabilitation, demolition, clearing and grading (which related to the Stage 1 works), are also identified for construction of Lot 2A.

The proposed construction activities are broadly divided into three categories i.e. earthworks, construction (building) and trackout. Potential air quality impacts associated with construction of Lot 2A and the relative risk ratings are addressed in **Section 7**.

4.2 Air Emissions During Operation

While idling of vehicles will not occur inside the building, emissions due to fuel combustion are still anticipated to occur inside the building during the vehicle entry and exit through the building. A carbon monoxide (CO) monitoring system will be fitted to ensure that CO concentrations within the building meet indoor air quality criteria.

According to the Air Quality Impact Assessment (AQIA) for OWE, off-site air quality impacts due to the traffic movements from the whole OWE are expected to be well below relevant air quality criteria. Notwithstanding this, a high-level risk assessment has been presented in **Section 8** for the operational phase air quality impacts from Building 2A and relevant mitigation measures are outlined in **Section 9.2**, as required by Condition B32 of SSD 9794683.

5 Relevant Pollutants and Air Quality Criteria

5.1 Pollutants of Concern

The potential air pollutants of interest during construction and operation of Lot 2A are suspended particulate matter, deposited dust and the products of fuel combustion.

The following sections outline the potential health and amenity issues associated with the above pollutants, while **Section 5.2** outlines relevant air quality assessment criteria.

Suspended Particulate Matter

Airborne contaminants that can be inhaled directly into the lungs can be classified on the basis of their physical properties as gases, vapours or particulate matter. In common usage, the terms "dust" and "particulates" are often used interchangeably. The term "particulate matter" refers to a category of airborne particles, typically less than 30 microns (µm) in diameter and ranging down to 0.1 µm and is termed total suspended particulate (TSP).

The annual criterion for TSP recommended by the NSW EPA is 90 micrograms per cubic metre of air (µg/m^3). The TSP criterion was developed before the more recent results of epidemiological studies which suggested a relationship between health impacts and exposure to concentrations of finer particulate matter.

Emissions of particulate matter less than 10 µm and 2.5 µm in diameter (referred to as PM_{10} and $PM_{2.5}$ respectively) are considered important pollutants due to their ability to penetrate into the respiratory system. In the case of the $PM_{2.5}$ category, recent health research has shown that this penetration can occur deep into the lungs. Potential adverse health impacts associated with exposure to PM_{10} and $PM_{2.5}$ include increased mortality from cardiovascular and respiratory diseases, chronic obstructive pulmonary disease and heart disease, and reduced lung capacity in asthmatic children.

Deposited Dust

The above section is concerned in large part with the health impacts of particulate matter. Nuisance impacts need also to be considered, mainly in relation to deposited dust. Dust can cause nuisance by settling on surfaces and possessions, affecting visibility and contaminating tank water supplies. High rates of dust deposition can also adversely affect vegetation by blanketing leaf surfaces.

Oxides of Nitrogen

NO_X is a general term used to describe any mixture of nitrogen oxides formed during combustion. In atmospheric chemistry NO_X generally refers to the total concentration of nitric oxide (NO) and nitrogen dioxide (NO_2). NO will be converted to NO_2 in the atmosphere after leaving a car exhaust.

NO is a colourless and odourless gas that does not significantly affect human health. However, in the presence of oxygen, NO can be oxidised to form NO_2 which can have significant health effects including damage to the respiratory tract and increased susceptibility to respiratory infections and asthma. Long term exposure to NO_2 can lead to lung disease.

Carbon Monoxide

CO is an odourless, colourless gas formed from the incomplete burning of fuels in motor vehicles. CO bonds to the haemoglobin in the blood and reduces the oxygen carrying capacity of red blood cells, thus decreasing the oxygen supply to the tissues and organs, in particular the heart and the brain.

It can be a common pollutant at the roadside and highest concentrations are found at the kerbside with concentrations decreasing rapidly with increasing distance from the road. CO in urban areas results almost entirely from vehicle emissions and its spatial distribution follows that of traffic flow.

Sulphur Dioxide

SO_2 is a colourless, pungent gas with an irritating smell. When present in sufficiently high concentrations, exposure to SO_2 can lead to impacts on the upper airways in humans (i.e. the noise and throat irritation). SO_2 can also mix with water vapour to form sulphuric acid (acid rain) which can damage vegetation, soil quality and corrode materials.

The main sources of SO_2 in the air are industries that process materials containing sulphur (i.e. wood pulping, paper manufacturing, metal refining and smelting, textile bleaching, wineries etc.). SO_2 is also present in motor vehicle emissions, however since Australian fuels are relatively low in sulphur, high ambient concentrations are not common.

Volatile Organic Compounds

VOCs are organic compounds (i.e. contain carbon) that have high vapour pressure at normal room-temperature conditions. Their high vapour pressure leads to evaporation from liquid or solid form and emission release to the atmosphere.

VOCs are emitted by a variety of sources, including motor vehicles, chemical plants, automobile repair services, painting/printing industries, and rubber/plastics industries. VOCs that are often typical of these sources include benzene, toluene, ethylbenzene and xylenes (often referred to as 'BTEX'). Biogenic (natural) sources of VOC emissions (e.g. vegetation) are also significant.

Impacts due to emissions of VOCs can be health or nuisance (odour) related. Benzene is a known carcinogen and a key VOC linked with the combustion of motor vehicle fuels.

5.2 Ambient Air Quality Criteria

There are no air quality criteria specified within Development Consent SSD 9794683, therefore the NSW EPA criteria have been adopted, as discussed below.

Products of Combustion

Section 7.1 of the Approved Methods set out impact assessment criteria for the air pollutants identified in **Section 5.1**. The criteria listed in the Approved Methods are derived from a range of sources (including NHMRC, NEPC, WHO, ANZEEC and DoE). The criteria specified in the Approved Methods are the defining ambient air quality criteria for NSW, and are considered to be appropriate for the setting. The following sections outline the potential health impacts of each of the identified pollutants, and the relevant criteria from the Approved Methods are summarised in **Table 4**.

Table 4 Air Quality Assessment Criteria

Pollutant	Averaging Period	Ambient Air Quality Criterion	
		µg/m³	pphm
Total suspended particulate (TSP)	Annual	90	-
Particulate matter less than 10 microns (PM_{10})	24-Hour	50	-
	Annual	25	-
Particulate matter less than 2.5 microns ($PM_{2.5}$)	24-Hour	25	-
	Annual	8	-
Nitrogen dioxide (NO_2)	1-hour	246	12
	Annual	62	3
Carbon monoxide (CO)	15-minutes	100,000	8,700
	1-hour	30,000	2,500
	8-hour	10,000	900
Sulfur dioxide (SO_2)	10-minutes	712	25
	1-hour	570	20
	24-hour	228	8
	Annual	60	2
Benzene	1-hour	29	0.9
Toluene	1-hour	360	9
Ethylbenzene	1-hour	8,000	180
Xylenes	1-hour	190	4

In relation to the air quality criteria shown in **Table 4**, it is noted that on 18 May 2021, the National Environment Protection Council (NEPC) varied the National Environment Protection (Ambient Air Quality) Measure (hereafter the Ambient Air NEPM) standards for ozone, NO_2 and SO_2 based on the latest scientific understanding of the health risks arising from these pollutants. In addition, the updated Ambient Air NEPM includes a reduced goal for $PM_{2.5}$ by 2025. As the ambient air quality criteria set out in the Approved Methods are based on the standards in the Ambient Air NEPM, and given that this assessment is based on traffic projections out to 2041, an assessment of the proposal's compliance with the new standards set out in the Ambient Air NEPM has also been performed. A summary of the updated standards for NO_2 and $PM_{2.5}$ is provided below in **Table 5**.

Table 5 Recent Changes to National Ambient Air Quality Criteria Relevant to this Assessment

Pollutant	Averaging Period	Previous NEPM Standard (µg/m³)	New NEPM Standard (µg/m³)
NO_2	1-Hour	246	165
	Annual	62	31
$PM_{2.5}$	24-Hour	25	20
	Annual	8	7

Deposited Dust

The relevant criterion for nuisance dust deposition is provided in **Table 6**. The rate of dust deposition is measured by means of a collection gauge, which catches the dust settling over a fixed surface area and over a period of about 30 days.

Table 6 NSW EPA Criterion of Nuisance Dust Deposition

Pollutant	Averaging Period	Assessment Criteria (g/m^2/month)
Deposited dust	Annual	2 (maximum increase in deposited dust level) 4 (maximum total deposited dust level)

5.3 Local Government Air Quality Toolkit

The NSW EPA has developed the Local Government Air Quality Toolkit (EPA 2018), in response to requests from local Council officers for information and guidance on the common air quality issues they manage. Guidance is available under Part 3 of the Local Government Air Quality Toolkit for Construction Sites.

This document lists the common sources of emissions and mitigation and management measures to control airborne dust levels from construction sites and has been consulted in the development of this CAQMP.

6 Existing Environment

6.1 Local Meteorology

The Bureau of Meteorology (BoM) maintains and publishes data from weather stations across Australia. The closest such station recording wind speed and wind direction data is the Horsley Park Automatic Weather Station (AWS) (Station ID 67119), located approximately 5.5 km southeast of the OWE. The long term and short term seasonal wind roses and long term rainfall patterns observed at the Horsley Park AWS indicate that:

- Winds that would blow air emissions from Lot 2A towards the nearest sensitive receptors located to the west and south of the proposed site occur rarely during autumn and winter and are more likely to occur during summer and spring.
- The long-term wind and rainfall patterns suggest that construction activities at the Development Site have the greatest potential to impact on surrounding sensitive receptors during the months of May (autumn), and July to October (mid-winter to spring).

Full analysis of the wind roses and rainfall data can be found in **Appendix A**.

6.2 Background Air Quality

The nearest DPIE-operated air quality monitoring stations (AQMS) to the proposal is located at St Marys. The St Marys AQMS was commissioned in 1992, and is located on a residential property 5.5 km northwest of the proposal at an elevation of 29 m, and monitors the concentration levels of following air pollutants:

- Oxides of nitrogen (NO, NO_2 and NO_X)
- Fine particles ($PM_{2.5}$ and PM_{10})

Due to unavailability of ambient concentrations for CO and SO_2 from St Marys AQMS, data is being sought from Prospect AQMS. The Prospect AQMS is located 21 km to the east of the proposal. It was commissioned in February 2007 and is located at William Lawson Park, Prospect, in a residential area and is at an elevation of 66 m. The Prospect AQMS is also located within 1 km of major road infrastructure (Great Western Highway and M4 Motorway). The Prospect AQMS monitors the concentration levels of following air pollutants:

- Oxides of nitrogen (NO, NO_2 and NO_X)
- Fine particles ($PM_{2.5}$ and PM_{10})
- Sulfur Dioxide (SO_2)
- Ozone (O_3)
- Carbon Monoxide (CO)

Both St Marys and Prospect AQMSs are a part of the Sydney northwest air quality monitoring region.

The available air monitoring data from the St Marys AQMS are summarised in **Table 7** (red font indicates an exceedance of the relevant criterion) and presented graphically in **Figure 6** to **Figure 7**. Air monitoring data from the Prospect AQMS are summarised in **Table 8** and presented graphically in **Figure 8**.

A review of the ambient air quality data presented in the following tables and graphs shows:

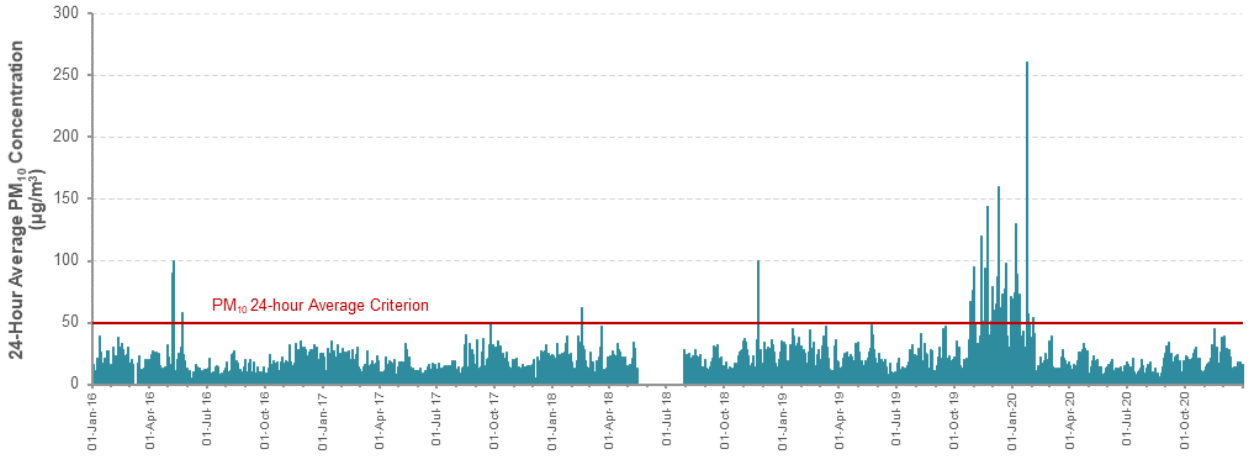
- Generally, the 24-hour average PM_{10} and $PM_{2.5}$ concentrations recorded by the St Marys AQMS are below the relevant 24-hour average guidelines, however isolated exceedances (normally on less than ten days per year) have been recorded in most years. The exception to this was the November 2019 to January 2020 period, when unprecedented and extensive bushfires within NSW resulted in an extended period of very elevated particulate concentrations across Sydney that were significantly above the 24-hour average PM_{10} and $PM_{2.5}$ guidelines. A review of the available compliance monitoring reports indicates that the intermittent exceedance days recorded during the other years were also primarily due to exceptional events such as bushfire emergencies, dust storms and hazard reduction burns.
- No exceedances of the annual average PM_{10} criterion were recorded at St Marys during the five years investigated, however the annual average $PM_{2.5}$ criterion was exceeded in 2019 due to the bushfire event that started in November 2019.
- Ambient concentrations of the gaseous pollutants NO_2, CO and SO_2 were all well below the relevant criteria for all years investigated.

Table 7 Summary of Ambient PM_{10}, $PM_{2.5}$ and NO_2 Data - St Marys AQMS (2016 – 2020)

Pollutant	PM_{10} (µg/m³)			$PM_{2.5}$ (µg/m³)			NO_2 (µg/m³)		
Averaging Period	24-Hours		Annual	24-Hours		Annual	1-hour		Annual
	Maximum	90th %ile		Maximum	90th %ile		Maximum	90th %ile	
2016	100.2 (3)	26.4	16.1	93.2 (7)	11.5	7.9	86	21	7.0
2017	49.8	26.1	16.2	38.2 (3)	10.7	7.0	76	21	8.1
2018	100.5 (2)	29.7	19.4	80.5 (3)	11.3	7.8	76	25	9.6
2019	159.8 (26)	41.9	24.7	88.3 (21)	16.3	9.8	68	21	7.6
2020	260.3 (11)	30.9	18.9	82.5 (9)	11.1	7.6	70	18	7.4
All Years	*260.3 (42)*	*30.8*	*19.1*	*93.2 (43)*	*12.4*	*8.1*	*86*	*21*	*7.9*
Criterion	**50**		**25**	**25**		**8**	**246**		**62**

Notes: %ile = Percentile; ND = No Data; Number in brackets is the number of exceedances

Figure 6 24-Hour Average PM_{10} and $PM_{2.5}$ Concentrations - St Marys AQMS



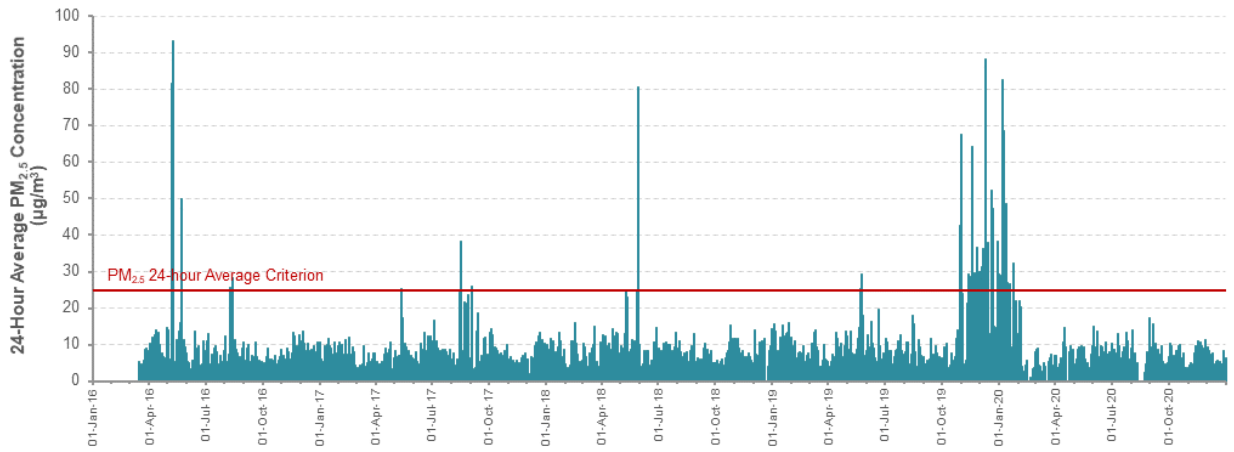


Figure 7 1-Hour Average NO_2 Concentrations - St Marys AQMS

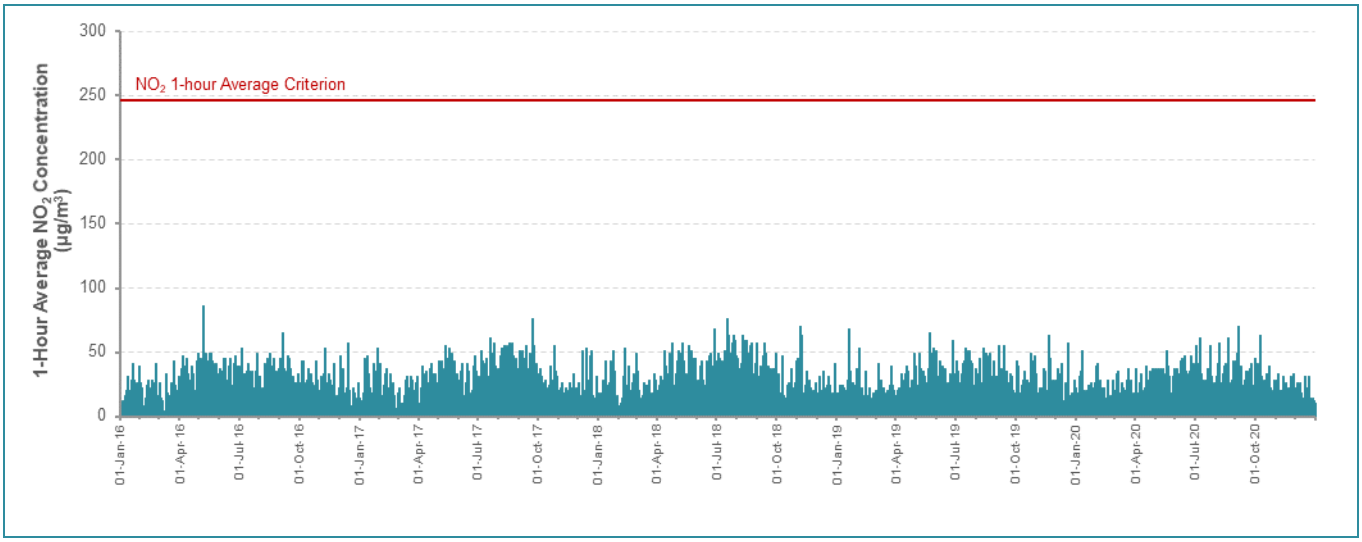


Table 8 Summary of Ambient CO and SO_2 Data - Prospect AQMS (2016 – 2020)

Pollutant	CO (mg/m³)				SO_2 (µg/m³)				
Averaging Period	1-Hour		8-Hours		1-Hour		24-Hours		Annual
	Maximum	90th %ile	Maximum	90th %ile	Maximum	90th %ile	Maximum	90th %ile	
2016	2.0	0.4	1.9	0.4	60.1	5.7	11.4	2.9	1.7
2017	2.0	0.4	1.4	0.4	65.8	5.7	11.4	4.6	1.9
2018	1.6	0.3	1.4	0.3	71.5	5.7	14.3	5.7	1.8
2019	6.9	0.4	3.5	0.4	60.1	5.7	11.4	5.7	2.0
2020	2.6	0.4	2.3	0.4	51.5	2.9	11.4	2.9	1.4
All Years	*6.9*	*0.4*	*3.5*	*0.4*	*71.5*	*5.7*	*14.3*	*5.7*	*1.8*
Criterion	**30**		**10**		**570**		**228**		**60**

Notes: %ile = Percentile

Figure 8 Rolling 8-Hour Average CO and 1-Hour Average SO_2 Concentrations - Prospect AQMS (2016 – 2020)

It has been noted in the latest NSW Annual Air Quality Statement (DPIE 2021) that air quality levels varied across the NSW depending on regions. Daily average PM_{10} levels exceeded the national standard at one or more metropolitan and regional centres on 24% (87 days) of days in 2020, compared to 48% (175 days) of days in 2019. During 2020, days with extreme air pollution were attributed to the following sources:

- 10 days due to smoke from bushfires (January and February)
- 9 days due to a combination of smoke from bushfires and dust storms (January and February)
- 4 days due to dust storms (January, February and August)
- 1 day due to smoke from hazard reductions burns (September).

Air quality in NSW was greatly affected by the unprecedented extensive bushfires between late 2019 and early 2020. In 2020, the air quality in NSW met national standards between 85% and 99% of the time across regions, a significant improvement compared to 2019 (60% to 92%).

In summary, even though the air quality is generally good in the Sydney region, there is potential for short term elevations in background particulate concentrations associated with regional events such as bushfires and dust storms etc to elevate local ambient particulate concentrations at the Development Site. Care needs to be taken to minimise emissions of dust from the construction works during these periods, to avoid exacerbating these particulate pollution events.

7 Assessment of Dust Emissions During Construction

The key potential health and amenity issues associated with construction of Lot 2A are:

- Elevated suspended particulate concentrations (PM_{10}); and
- Nuisance due to dust deposition (soiling of surfaces) and visible dust plumes that may potentially be observed to be leaving the site.

7.1 Construction Impact Assessment Methodology

Quantitatively assessing impacts of fugitive dust emissions from construction projects using predictive modelling is seldom considered appropriate, primarily due to the uncertainty in the details of the construction activities, including equipment type, number, location and scheduling, which are unlikely to be available at the time of the assessment. Furthermore, they are also likely to change as construction progresses. In comparison, the equipment and operations of a mine or quarry are determined during the planning stages and more likely to remain consistent for long periods (several months or years).

Instead, it is considered appropriate to conduct a qualitative assessment. Potential impacts of dust emissions associated with proposed demolition and construction activities at the Development Site have been performed based on the methodology outlined in the Institute of Air Quality Management (UK) (IAQM) document, "*Assessment of dust from demolition and construction*" (Holman et al 2014). This guidance document provides a structured approach for classifying construction sites according to the risk of air quality impacts, to identify relevant mitigation measures appropriate to the risk (see **Appendix B** for full methodology).

The IAQM approach has been used widely in Australia for the assessment of air quality impacts from construction projects and the identification of appropriate mitigation measures, which has been accepted by regulators across all states and territories for a variety of construction projects.

The IAQM method uses a four-step process for assessing dust impacts from construction activities:

- **Step 1**: Screening based on distance to the nearest sensitive receptor; whereby the sensitivity to dust deposition and human health impacts of the identified sensitive receptors is determined.
- **Step 2**: Assess risk of dust effects from activities based on:
  - the scale and nature of the works, which determines the potential dust emission magnitude; and
  - the sensitivity of the area surrounding dust-generating activities.
- **Step 3**: Determine site-specific mitigation for remaining activities with greater than negligible effects.
- **Step 4**: Assess significance of remaining activities after management measures have been considered.

7.2 Risk Assessment

Table 9 presents the preliminary risk of air quality impacts from uncontrolled construction activities at the OWE derived using the risk matrix provided in **Table B4** in **Appendix B**, based on the identified receptor sensitivity and sensitivity of the area. It is noted that these risks are for the whole OWE construction project, not for the construction of Lot 2A in isolation.

Table 9 Preliminary Risk of Air Quality Impacts from OWE Construction Activities (Uncontrolled)

Impact	Sensitivity of Area	Dust Emission Magnitude				Preliminary Risk			
		Demolition	Earthworks	Construction	Trackout	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Low	Small	Large	Large	Medium	Negligible	Low Risk	Low Risk	Low Risk
Human Health	Low					Negligible	Low Risk	Low Risk	Low Risk

NOTE: Assessed risks are for the whole OWE construction project, not for the construction of Lot 2A in isolation

The results indicate that there is a low risk of adverse dust soiling and a low risk of human health impacts occurring at the off-site sensitive receptor locations if no mitigation measures were to be applied to control emissions during the works.

Based on the dust emission magnitudes and the preliminary risk from these activities, the activities are ranked as (highest risk to lowest risk):

1. Earthworks
2. Construction
3. Track out
4. Demolition

For almost all construction activity, the IAQM Methods notes that the aim should be to prevent significant effects on receptors through the use of effective mitigation, and experience shows that this is generally possible.

8 Assessment of Air Emissions During Operations

An AQIA was completed by SLR (SLR 2016) for the whole OWE in June 2016. In addition, a semi-quantitative assessment was completed to assess the impacts from operations of Lot 2A (SLR 2021). A summary of the assessment completed for Lot 2A is presented in this section, with full methodology presented in **Appendix C.**

The nearest sensitive receptors (ie residential aged care buildings) to the Lot 2A are located approximately 200 m southwest from the closest boundary. With regard to the methodology outlined in **Appendix C**, the sensitivity of the surrounding college and aged care residential areas to air pollutant emissions generated by Lot 2A has been classified as ***very high***.

Given the scale of on-site vehicle parking and delivery van and truck operations it is considered that the emissions generated due to the combustion of fuel in light and heavy vehicles generated by the Lot 2A are small compared to the emissions generated by traffic by the new Estate Roads (SLR, 2021) ie 5.5% of the peak hour traffic, and 7.3% of the total daily traffic.

Given the above considerations, the magnitude for nearby sensitive receptors is predicted to be **slight** (i.e. predicted impact may be tolerated, **Table**).

Given the **very high sensitivity** of the potentially affected receptors and the **slight magnitude** of the potential impacts from products of combustion from operational phase traffic activities, the potential impact significance for the local receptors is concluded to be of ***intermediate significance*** for the closest receptors.

Table 10 Risk Assessment of Impacts from Products of Combustion – Operational Phase Traffic

Sensitivity		Impact Magnitude [Defined by Table A2]			
		Substantial Magnitude	Moderate Magnitude	Slight Magnitude	Negligible Magnitude
[Defined by Table A1]	**Very High Sensitivity**	Major Significance	Major/ Intermediate Significance	Intermediate Significance	Neutral Significance
	High Sensitivity	Major/ Intermediate Significance	Intermediate Significance	Intermediate/Minor Significance	Neutral Significance
	Medium Sensitivity	Intermediate Significance	Intermediate/Minor Significance	Minor Significance	Neutral Significance
	Low Sensitivity	Intermediate/Minor Significance	Minor Significance	Minor/Neutral Significance	Neutral Significance

In order to further reduce the impact significance, additional mitigation can be put in place to reduce or remove these impacts (refer to **Section 9.2**). It is expected that the residual risk of air quality impacts could be reduced to **neutral significance** if additional mitigation measures (such as the controls listed in **Section 9.2**) are put in place.

9 Mitigation Measures

9.1 Construction Mitigation Measures

The potential for dust emissions during construction of Lot 2A and the potential air quality impacts (as discussed in **Section 4**) on surrounding sensitive receptors are anticipated to be largely controllable through a range of mitigation measures, including good site management, good housekeeping measures, appropriate vehicle maintenance and applying appropriate dust mitigation measures where required. The dust mitigation measures to be implemented during construction of Lot 2A are detailed in **Table 11**, which are consistent with those stipulated in the CAQMP for the OWE (SLR 2020). The dust mitigation measures specific to the key emission activities (ie earthworks, construction, track out and demolition) are also provided in **Table 11.**

Table 11 Dust Mitigation Measures

Environmental Management Control	Person Responsible	Timing / Frequency	Reference / Notes
Communications			
The Community Communications Strategy will be implemented.	Communications and Community Liaison Representative	Prior to commencing construction and ongoing	Best practice
The name and contact details of person(s) accountable for air quality and dust issues will be displayed on the site boundary. This may be the Contractor's Project Manager.	Construction Contractor's Representative		
The head or regional office contact information will be displayed on site signage.			
Site Management			
All dust and air quality incidents will be undertaken as per Section 3.5 of the CEMP.	Construction Contractor's Representative	Ongoing	CEMP Section 3.5
All dust and air quality complaints will be undertaken as per Section 3.6 of the CEMP.			CEMP Section 3.6
Where excessive dust events occur (i.e. prolonged visual dust in a particular area), additional watering of dust producing activities will be undertaken or activities temporarily halted until such times that the dust source is under control.		During excessive dust events	Best practice
Horsley Park Bureau of Meteorology station weather forecast will be reviewed daily (i.e. wind, rain) to inform site dust management procedures for the day.		Daily	
Preparing and Maintaining the Site			
All reasonable steps to minimise dust generated will be undertaken during construction.	Construction Contractor's Representative	Ongoing	SSD 7348 Condition D98 SSD 9794683 Condition 34
Exposed surfaces and stockpile will be suppressed by regular watering or use of approved dust suppressants.			SSD 7348 Condition D99a

Environmental Management Control	Person Responsible	Timing / Frequency	Reference / Notes
Land stabilisation works will be carried out in such a way on site to minimise exposed surfaces.			SSD 7348 Condition D99e
Construction of Lot 2A will not cause or permit the emission of any offensive odour, as defined in the POEO Act.	Construction Contractor's Representative	Ongoing	SSD 7348 Condition D102
Dust generating activities in areas close to receptors will be closely monitored and additional mitigation applied as required to best manage potential dust emissions			Best practice
Stockpiles that will be in place for more than 20 days and are not actively used as well as any stockpiles that are susceptible to wind or water erosion will be suitably protected from erosion within 10 days of the establishment of each stockpile. Temporary stabilisation of disturbed surfaces will be undertaken within two weeks of the stockpile being established.			
Site fencing and barriers will be kept clean using wet methods.			
Operating Vehicle/Machinery and Sustainable Travel			
Trucks associated with Stage 1 will not track dirt off site and onto the public road network.	Construction Contractor's Representative	Ongoing	SSD 7348 Condition D99c
Project access roads used by delivery trucks will be kept clean.			SSD 7348 Condition D99d
All on-road vehicles will comply with relevant vehicle emission standards (prescribed by the NSW RMS), where applicable, and will be maintained in good condition, in accordance with manufacturer's specifications and POEO Act.			Best practice
Delivery trucks will switch off engines whilst undertaking a delivery on-site, if idling time is likely to exceed 5 minutes.			
Vehicle speed limit restrictions are implemented on site, including: • General - 20km/h • High risk area - 10km/h • Haul routes – 50 km/h			
Truck queuing and unnecessary trips will be minimised through logistical planning and by the identification and use of specific park up/hold areas away from the Project.			
Operations			
Only cutting, grinding or sawing equipment fitted with suitable dust suppression systems, such as water sprays will be used.	Construction Contractor's Representative	Ongoing	Best practice

Environmental Management Control	Person Responsible	Timing / Frequency	Reference / Notes
Adequate water supply will be available on the site for effective dust/particulate matter suppression/ mitigation using a combination of potable and non-potable water sources.			
Water carts will be used on all denuded or exposed surfaces and unsealed roads to minimise dust emissions.	Construction Contractor's Representative	Ongoing	Best practice
Equipment, inclusive of, but not limited to Environmental spill kits will be readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.			
Works will be assessed during strong winds or in weather conditions where high levels of airborne particulates may potentially impact the sensitive receivers. Continual monitoring of wind speed and direction will be undertaken to guide this decision and ensure that adequate mitigation measures are undertaken		Continuously and during high winds	
Waste Management			
All trucks entering or leaving the Site will have their loads covered.	Construction Contractor's Representative	Ongoing	SSD 7348 Condition D99b
No waste materials, timbers or any other combustible materials will be burnt on site.			Best practice
Earthworks			
Scopes of work will be planned in such a way to assist in minimising the duration that surfaces are left denuded.	Construction Contractor's Representative	Ongoing	Best practice
Rehabilitation of disturbed surfaces will be undertaken within 20 days of final construction levels.		Within 20 days of final construction levels	
If unanticipated strong odours or significant visual dust emissions are noted or observed on site, an investigation will be undertaken by the Construction Contractor Project Manager to identify the scope of work or source of the emission prior to undertaking and applying any additional mitigation measures.		Ongoing	
Construction			
Sand and other aggregates will not be allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.	Construction Contractor's Representative	Ongoing	Best practice
Trackout			
Water-assisted road sweeper(s) will be used on an as required basis should any material be tracked out of the site.	Construction Contractor's Representative	Ongoing	Best practice
Record all regular inspections and maintenance undertaken of site haul routes and project related access roads in a site log book.			

Environmental Management Control	Person Responsible	Timing / Frequency	Reference / Notes
A wheel washing system and/or cattle grid system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site) will be implemented.			
Demolition			
Ensure effective water suppression of dust is used during demolition operations.	Construction Contractor's Representative	Ongoing	Best practice
Bag and remove any biological debris or damp down such material before demolition.			

As required by condition D100 (e), **Table 12** summarises the parameters identified to assess the effectiveness of the control measures shown in **The potential for dust emissions during construction of Lot 2A and the potential air quality impacts (as discussed in Section 4) on surrounding sensitive receptors are anticipated to be largely controllable through a range of mitigation measures, including good site management, good housekeeping measures, appropriate vehicle maintenance and applying appropriate dust mitigation measures where required. The dust mitigation measures to be implemented during construction of Lot 2A are detailed in Table 11, which are consistent with those stipulated in the CAQMP for the OWE (SLR 2020). The dust mitigation measures specific to the key emission activities (ie earthworks, construction, track out and demolition) are also provided in Table 11.**

Table 11.

Table 12 Summary of the Parameters to Assess the Effectiveness of Control Measures

Parameter	Visible Dust	Dust Deposition	Complaints	PM_{10}
Key performance indicator	No visible dust leaving the site boundary	<4 g/m^2/month	No complaints related to nuisance dust	<50 $\mu g/m^3$ as a 24-hour average
Monitoring method	Visual inspection / observations	Dust deposition gauges	-	See note
Location, frequency and duration of monitoring	Daily onsite inspection	Section 10	-	See note
Record keeping	Section 10	Section 10	Section 9	See note
Response procedures	Section 11	Section 11	Section 9	See note
Compliance monitoring	-	Section 10	-	See note

Note: Real-time suspended particulate monitors are installed at the site to assist with dust management (see **Section 10**). The monitoring system used however, does not meet the requirements of a compliance instrument. Should compliance-level monitoring be required as per **Table 13**, then this table will be updated to reflect the expanded monitoring programme.

9.2 Operational Mitigation Measures

A number of mitigation measures are proposed for Lot 2A. These include the following:

No Refuelling Onsite

- No refuelling is to occur inside the building.

Minimisation of Onsite Vehicles Idling Times

Vehicle idling times around the Site are to be managed using best management practices, including:

- Vehicle engines must be turned off when loading/unloading;
- Vehicle engines must be turned off when drivers are on a break, or waiting to get administrative clearances, etc; and
- Appropriate signage is required at multiple locations within the warehouse encouraging drivers to switch off engines when not in use.

Onsite Vehicle Movements

The movement of vehicles around the site is to be managed using best management practices, including:

- Clearly marked lanes; and
- A one-way traffic system, where possible.

The use of a clearly marked, one-way traffic lane system for onsite vehicle movements will assist in minimising traffic congestion, which in turn reduces the exhaust air emissions due to fuel combustion.

Fugitive Dust

Vehicles movements are to be limited to designated areas of the Site only, whenever possible.

If the movement of vehicles on unsealed areas is unavoidable, and dust emissions are visible, the following mitigation actions should be considered for the Site:

- Use of water hose to suppress the visible dust emissions;
- Laying gravel or grassing the unsealed area to minimise the exposed soil surface; and
- Sweeping up or washing away of dust from sealed areas if trackout is observed.

Exhaust Air Discharge

- Discharges of pollutants to the air from the building will be captured by a Building Code of Australia (BCA) and Australian Standard (AS1668.2-2012) "*The use of ventilation and air conditioning in building, Part 2: Ventilation design for indoor air contaminant control*" compliant extractions system and directed to rooftop vents.

Section 5 of the AS 1668.2-2012 states the following:

- 5.2.2 Exhaust locations: As far as practicable, exhaust-air intakes used for general exhaust-air collection shall be located on the opposite sides of the enclosure from the sources of make-up air, to ensure that the effluents are effectively removed from all parts of the enclosure.
- 5.3.2.1 General requirements: The effluent shall be collected as it is being produced, as close as practicable to the source of generation.
- 5.10.1 Air discharges: Where discharges are deemed to be objectionable (i.e. nuisance related), discharges shall:
    - Be emitted vertically with discharge velocities not less than 5 m/s.

- Be situated at least 3 m above the roof at point of discharge.
- Treated to reduce the concentration of contaminants where required.
- Be emitted to the outside at velocities and in a direction that will ensure, to the extent practicable, a danger to health or a nuisance will not occur.
- Be situated a minimum separation distance of 6 m (where the airflow rate is ≥ 1,000 L/s) from any outdoor) air intake opening, natural ventilation device or opening, and boundary to an adjacent allotment, except that where the dimensions of the allotment make this impossible, then the greatest possible distance shall apply.

Staff Awareness and Training

In addition to general environmental awareness training, specific training is to be provided to relevant staff, which is to include:

- Familiarisation with the contents and requirements of this AQMP;
- Familiarisation with the best management practices to be implemented by staff, including minimising onsite vehicle movements and idling times, avoiding driving on unsealed areas and watering of dusty areas etc.
- A review of potential air quality impacts that could potentially occur as a result of normal and abnormal operations on site;
- Training in the use of spill kits and where they are located on site;
- Appropriate reporting channels if air quality issues (or potential for air quality impacts) are identified on site (e.g. smoky vehicles, unsafe storage of volatile chemicals, excessive wind-generated dust); and
- Procedures for complaint handling.

Staff responsible for maintenance activities on the vehicles are to have appropriate training regarding the tuning and maintenance of engines to minimise exhaust fumes and in the installation and maintenance of exhaust system requirements.

10 Complaints Handling and Response Procedure

All complaints will be handled in accordance with the sections below and the OWE *Community Communication Strategy* (CCS) (SLR 2021).

10.1 Construction

10.1.1 Performance Objectives

To ensure that all environmental complaints in relation to air emissions from construction of Lot 2A are promptly and effectively received, handled and addressed.

10.1.2 Responsibility

The Communications and Community Liaison Representative is responsible for ensuring that the appropriate management response and handling procedures are instigated and carried through in the event of an environmental complaint. The induction and toolbox talks outlined in the CEMP will be used to ensure all site employees are aware of and understand their obligations for complaints response.

All employees who take receipt of a complaint, either verbal or written, are to immediately notify the Contractor's Project Manager, who will then contact the Communications and Community Liaison Representative.

10.1.3 Complaints Handling Procedure

Upon becoming aware of a complaint, the protocol outlined below will be followed.

1. Record and Acknowledge

Any employee who takes receipt of a complaint, either verbal or written, is to immediately notify the Contractor's Project Manager who will then contact the Communications and Community Liaison Representative. The Contractor's Project Manager will be available 24 hours a day, seven days a week and have the authority to stop or direct works.

In the normal course of events, the first contact for complaints will usually be made in person or by telephone.

The complainant's name, address and contact details, along with the nature of the complaint, must be requested. If the complainant refuses to supply the requested information, a note will be made on the form and complainant advised of this.

2. Assess and Prioritise

The Communications and Community Liaison Representative will prioritise all complaints by considering the seriousness of the complaint including risk to health and safety and will attempt to provide an immediate response via phone or email. This will be undertaken in accordance with the CCS (SLR 2021).

3. Investigate

A field investigation will be initiated in an attempt to confirm details relevant to the complaint and the cause of the problem. Any air quality monitoring information and/or site records at and around the time of the complaint will be reviewed for any abnormality or incident that may have resulted in the complaint.

If the complaint is due to an incident, the notification requirements and handling procedures outlined in CEMP will be followed.

4. Action or Rectify

Once the cause of the complaint has been established, every possible effort will be made to undertake appropriate action to rectify the cause of the complaint and mitigate any further impact. The Communications and Community Liaison Representative will assess whether the complaint is founded or unfounded and delegate the remediation of the issue to the Contractor's Project Manager for action, as required.

As outlined in **Section 12**, if a complaint regarding air quality impacts is concluded to be substantiated, the need for any changes to the air quality mitigation measures identified for the Project in **Section 9** and/or the air quality monitoring programme outlined in **Section 11** is to be reviewed and, the AQMP updated as appropriate.

5. Respond to Complainant

The Communications and Community Liaison Representative and the Contract Superintendent will oversee the rectification of the issue. The Communications and Community Liaison representative will then respond to the complainant once the issue has been resolved. The complainant will be provided with a follow up verbal response on what action is proposed within two hours during night-time works (between the hours of 6:00 pm and 10:00 pm) and 24 hours at other times. Where a complaint cannot be resolved by the initial or follow-up verbal response, a written response will be provided to the complainant within ten days.

6. Record

It is imperative that an investigation of the situation is carried out and proposed improvements documented in order to minimise the potential for similar complaints in the future. On this basis, every complaint received is to be recorded in the Complaint Enquiry Form. A copy of the completed form will be maintained for at least five years. The complaint will also be recorded in the Complaints Register.

7. Preventative Action

Once the complaint has been suitably handled, proposed improvements will be investigated and implemented to minimise the potential of re-occurrence. The Complaint Enquiry Form will not be closed out until the preventative actions are completed and recorded on the form.

10.1.4 Complaints Register

A Complaints Register will be maintained during construction and will contain the following:

- A copy of the environmental complaint handling procedure;
- A separate reference sheet containing the contact details;

- Blank hard copies of the Complaint Enquiry Form; and
- Copies of all completed Complaint Enquiry Forms, which are to be maintained for at least five years after the event to which they relate.

10.2 Operational

A complaints register is to be maintained and kept on Site. The complaints register is to include prompts to note down the following details:

- the date/time of the complaint;
- details of the staff member logging the complaint;
- the contact details of the complainant;
- detailed description of the incident;
- nature of the complaint (e.g. in case of a smoky vehicle, the registration number, the road being travelled on, date and time it was observed);
- activities occurring on Site at the time of the complaint (if relevant);
- perceived or assumed source of the emissions giving rise to the complaint (if known);
- weather conditions (i.e. wind, rainfall, temperature) experienced on the day of the complaint (if relevant).

An investigation is to be carried out in the event of a complaint being received to identify whether it is related to Site activities. In the case of a smoky vehicle report, the relevant vehicle is to be scheduled for a maintenance service as a priority and (where possible) removed from service until it has been serviced. If the Site operations are identified as the source of the emissions, the actions taken to rectify the situation and prevent a reoccurrence are to be documented alongside the complaint record.

If a substantiated air pollution complaint is made to the Penrith Council that cannot be rectified through the above procedures, a suitably qualified person will be engaged to develop mitigation measures and ongoing management strategies to prevent such impacts occurring in future. The developed mitigation measures and ongoing management strategies will be submitted to the Council's Health and Building Unit for review and to the Secretary for approval. Until suitable remedial control measures are in place, activities at the Site will be managed to the satisfaction of an authorised officer of the Council in order to reduce emissions to a level that does not cause a continuation of unacceptable nuisance.

11 Air Quality Monitoring Program

11.1 Construction

As discussed in **Section 7**, the risk of OWE construction dust emissions causing nuisance impacts at off-site sensitive receptor locations is concluded to be low. It is also noted that any impacts will be temporary and managed through the implementation of appropriate mitigation measures (see **Section 9**).

An air quality monitoring program has been implemented by Goodman as part of the management of air emissions during construction of the OWE. The data from ongoing monitoring program for OWE will be utilised to inform the management measures and contingency response for the construction of Lot 2A.

The data from ongoing monitoring program for OWE will be utilised to inform the management measures and contingency response for the construction of Lot 2A.

A summary of the on-site air quality monitoring programme at the OWE is shown in **Table 13**. The locations of these monitors are shown in **Figure 9**. Further details are provided in the OWE AQMP.

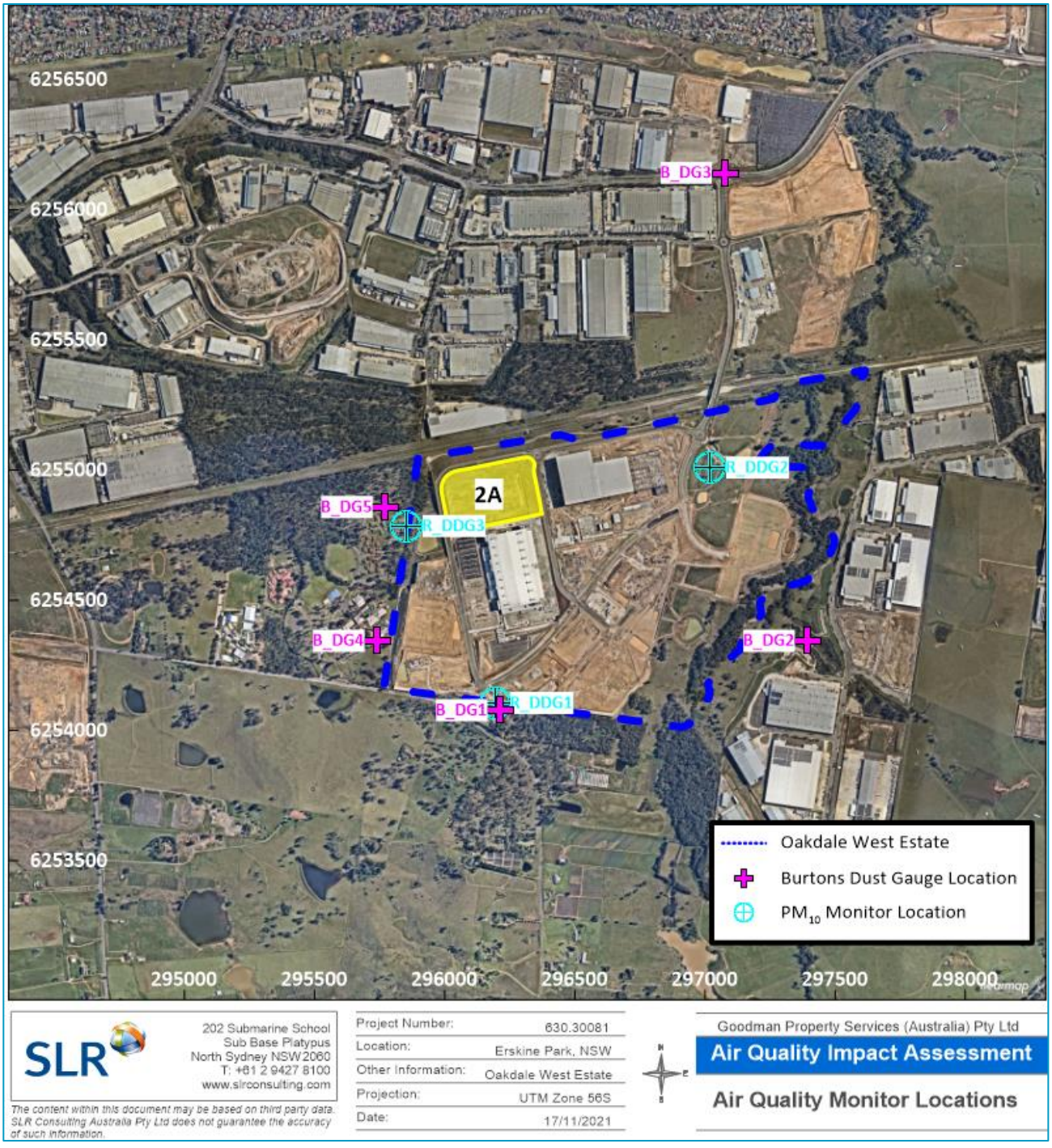
Table 13 Summary of On-Site Monitoring Programme

Pollutant	Equipment Used	Number of Monitoring Sites	Criterion (Averaging Period)
PM_{10}	Dust Pro 7000[a] (with telemetric capacity managed by Sentinex systems)	3	50 µg/m^3 (24-hour average)
Deposited dust	Dust Deposition Gauges (DDGs) - Burtons[b]	7	4 g/m^2/month (annual average)

[a] The Dust Pro 7000 system is non-compliant with the *Approved Methods for Sampling and Analysis of Air Pollutants in NSW* (December 2006), and is used as a management tool to proactively manage the onsite operations to reduce dust impacts.

[b] The dust gauges were installed and maintained by construction contractor (Burtons). It has not been confirmed by SLR if the installation of these dust gauges was undertaken in compliance with the AS/NZS 3580.1.1:2016.

Figure 9 Air Quality Monitoring Locations for the OWE Construction Project



Note: The yellow highlighted area represents approximate area covered by Lot 2A.

11.2 Operations

Given that the operations within Lot 2A include vehicles entering/exiting the warehouse, and possibly idling while loading/unloading, there is potential for fuel combustion pollutants to accumulate within the building. To monitor the vehicle exhaust emissions inside the building, a monitoring program capable of maintaining safe pollutant levels for workers inside the building is proposed, as shown in **Table 14**.

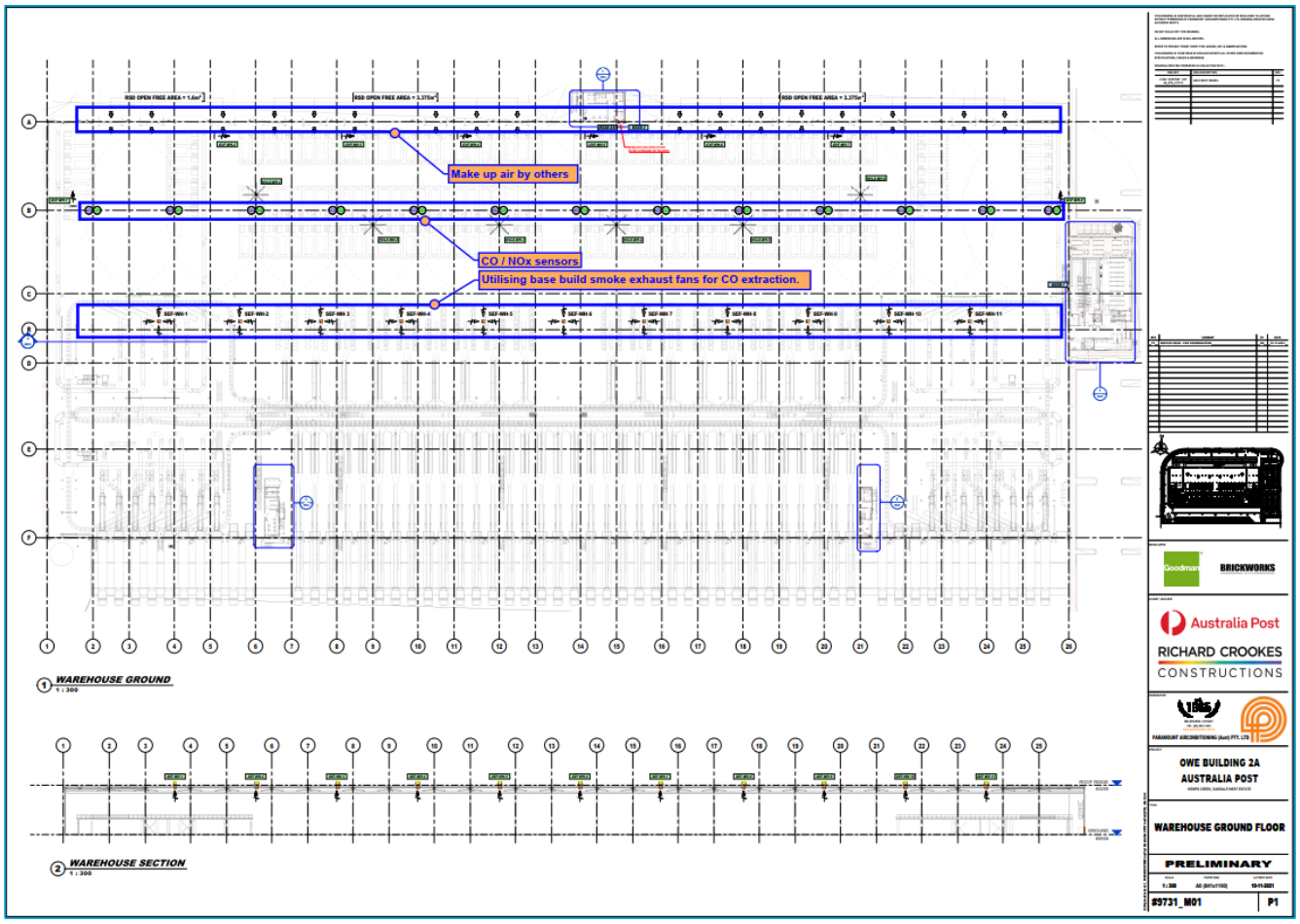
No ambient air quality monitoring in external outdoor areas is proposed.

Table 14 Proposed Operational Air Quality Monitoring Program

Parameter	Description
Location	Refer to **Figure 10** (shown as grey and green dots)
Types and numbers of monitors	13 x continuous real-time CO and NO_2 monitors
	11 x smoke exhaust fans (linked to the CO and NO_2 monitors)
Responsibility	Site Manager
Frequency of measurements	Continuous
CO criteria*	60 ppm average over one peak hour
	90 ppm sustained for 15 minutes
	100 ppm at any instant
	30 ppm average for those areas where 8 hours occupancy is foreseeable
NO_2 criteria*	0.0197 ppm over one year
	0.0987 ppm over an hour
Mitigation measures	Refer to **Section 9.2** If the above CO or NO_2 criteria are triggered, all vehicles inside the building will be required to switch off engines or immediately exit the building, the smoke exhaust fans will operate to improve ventilation, and no new vehicles will be allowed to enter the building until the CO and NO_2 concentrations in the building have reduced to below 75% of the criteria.
Monitoring of effectiveness of controls	Monthly review of monitoring data and analysis of effectiveness of controls
	Continuous air quality monitoring and alerts for exceedances of trigger values

*Set by National Occupational Health and Safety Commission (NOHSC)

Figure 10 Indoor Air Quality Monitoring Locations - Warehouse 2A



12 Contingency Management Plan

12.1 Construction

The air quality contingency management plan for the construction of Lot 2A is shown in **Table 15**. As noted in **Section 11**, data from the ongoing construction-phase monitoring program for the OWE will be utilised to inform the appropriate contingency response for the construction of Lot 2A.

12.2 Operations

At the time of preparing this AQMP, a contingency management plan is not anticipated to be necessary for the operational phase. This will be reassessed at the completion of the construction works, prior to occupancy of the building, and during the subsequently quarterly reviews of this AQMP, and a contingency plan developed if deemed appropriate.

Table 15 Air Quality Contingency Management Plan for the Construction of Lot 2A

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
Visible dust leaving the site	Trigger	Daily inspections show that there is no visible dust leaving the site.	Daily inspections show that there is visible dust leaving the site.	Daily inspections show that there is visible dust leaving the site multiple times during a day OR from multiple locations within the site.
	Response	Continue monitoring program as normal.	Review and investigate construction activities and respective control measures. Where appropriate, implement additional remedial measures, such as: • *Deployment of additional water sprays, water trucks etc*	Undertake an investigation of the dust generating activities, and if necessary, temporarily halt the dust generating activities
Dust deposition reading of >4g/m^2/month	Trigger	Dust deposition rates are less than 4 g/m^2/month at all the dust gauges.	Dust deposition rate greater than 4 g/m^2/month is recorded by any of the dust gauges	Dust deposition rates greater than 4 g/m^2/month are recorded by two or more dust gauges for two months in a row.
	Response	Continue monitoring program as normal.	• OWE Project Manager to analyse data to try to identify the source(s) of dust. • Construction Contractor to review operations to reduce dust emissions from the identified key source(s). Implement any additional mitigation measures as required, such as additional watering.	• OWE Project Manager to review and investigate construction activities and respective control measures for the monitoring period. • If it is concluded that construction activities at Lot 2A were directly responsible for the exceedance (i.e. the exceedance event was not caused due to high regional dust levels or local non-project dust source), Construction Contractor to submit an incident report to government agencies.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
Complaints received regarding nuisance dust	Trigger	There are no complaints received during the construction	An air-quality related complaint is received from a nearby resident	Further complaints are received from the same complainant after the additional mitigation measures have been implemented
	Response	Continue monitoring program as normal.	• Report the complaint to the regulator, in line with complaints handling procedure (See **Section 10**). • Review and investigate construction activities and increase dust suppression measures (additional watering, covering stockpiles etc), where appropriate.	• Review real-time monitoring data at the existing continuous monitors to investigate the likelihood of onsite activities contributing.
Real-time suspended particulate matter monitoring (TSP and PM_{10})	Trigger	Running 24-hour average PM_{10} concentrations < 40 µg/m^3	Running 24-hour average PM_{10} concentrations >40 µg/m^3 but <50 µg/m^3	Running 24-hour average PM_{10} concentrations >50 µg/m^3
	Response	Continue monitoring program as normal.	OWE Project Manager to review and investigate construction activities and respective control measures. Where appropriate, implement additional remedial measures, such as: • Deployment of additional water sprays, water trucks etc • Relocation or modification of dust-generating sources • Record findings of investigations and actions taken to reduce dust levels • Continue to closely monitor dust levels to ensure they are decreasing If elevated dust levels are due to regional dust event (fire, dust storm etc) – still take action to minimise dust from the Lot 2A site to minimise cumulative impacts, but also record details of the cause of the elevated background levels.	• OWE Project Manager to review and investigate construction activities and respective control measures for the monitoring period, in an air pollution incident report. • If it is concluded that construction activities at Lot 2A were directly responsible for the exceedance (ie the exceedance event was not caused due to high regional dust levels or local non-project dust source), Construction Contractor to submit an incident report to government agencies.

13 Roles and Responsibilities

13.1 Construction

Overall roles and responsibilities relating to the project are outlined in Section 3.2 of the overarching CEMP. The key responsibilities specifically for dust management are as follows:

Contractor's Project Manager

- Ensuring appropriate resources/plant/personnel are available for the implementation of this CAQMP;
- Assessing data from inspections and providing project-wide advice to ensure consistent approach and outcomes are achieved;
- Providing necessary training for project personnel to cover air quality management;
- Reviewing and update of this CAQMP;
- Ensuring that the Environmental Coordinator monitors the PM_{10} data being supplied by the onsite Senitex system, and any other dust monitoring systems identified as being required;
- Assessing and engaging (as required) additional mitigation controls to best manage the risks of elevated dust levels before commencing works each day and ensuring that the appropriate controls are implemented and effective;
- Reviewing weather forecasts daily and current observations of meteorological conditions (as recorded at Horsley Park AWS);
- Throughout the day, visually assessing the dust levels and the effectiveness of any dust controls that have been implemented, which may include engaging additional resources to reduce or mitigate the risk of dust leaving the site;
- Ceasing particular scopes of works as required in the event of excessive dust generation due to extreme weather conditions or inadequately controlled construction activities (eg high winds, surface dirt accumulation, etc.); and
- In the event that an air quality complaint is received, the procedure in Section 3.6 of the CEMP will be implemented (see **Section 10**).

Environmental Coordinator

- Undertaking dust monitoring program; and
- Review that control measures are working in accordance with the CAQMP.

All Workers on Site

- Observing any dust emission control instructions and procedures that apply to their work;
- Taking action to prevent or minimise dust emission incidents; and
- Identifying and reporting dust emission incidents.

13.2 Operations

The key responsibilities in regards to effective noise management at the Site are as follows:

Site Manager

The Site Manager is responsible for the following:

- Ensuring appropriate resources are available for the implementation of this NMP.
- Providing assistance and advice to all employees to fulfil the requirements of this NMP, reviewing data from regular inspections and providing site-wide advice to ensure consistent approaches and outcomes are achieved.
- Ensuring the required checks and approvals are obtained for all vehicles using the Site to confirm their compliance with the automatic engine turn-off system requirements.
- Maintaining a complaints register and liaising with relevant regulatory agencies (if required) in the event of complaints being received.
- Ensuring that site inductions include familiarisation for all staff on the requirements and responsibilities of this NMP.
- A review and update (if required) of this NMP following any significant site and/or operational changes.

Vehicle Drivers

Vehicles drivers using the Site will be responsible for:

- Reporting to the Site Manager if any vehicle is found to not be fitted with an automatic engine turnoff system or the system appears to be faulty.
- Ensuring that the engines are turned off when refuelling and minimise general idling times.
- Observing any noise emission control instructions and procedures that apply to their work.
- Taking action to prevent or minimise noise generating activities.
- Identifying and reporting abnormally noisy plant and equipment to the Site Manager.
- Informing the Site Manager of any noise complaints received during vehicle trips or while on Site.

Vehicle Maintenance Staff/Mechanics

Staff responsible for performing maintenance checks and servicing of vehicles at the Site is responsible for:

- Testing the integrity of the automatic engine turnoff system as part of the routine vehicle maintenance schedule and documenting the results of the test in each vehicle's maintenance record.
- Reporting vehicles that do not have a functioning automatic engine turnoff system to the Site Manager (if it is unable to be repaired), to arrange replacement or maintenance by a specialist.
- Appropriate tuning and maintenance of engines to minimise noise.

14 Review and Improvement of the AQMP

Reviews of the AQMP will be undertaken at least quarterly and will include participation by Goodman. The review will comprise, as a minimum, the following:

- Identification of areas of opportunity for ongoing improved environmental performance;
- Analysis of the causes of any recorded 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.

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

- Where there is any change to the scope of the construction/operational activities;
- Where it is identified that the environmental performance is not meeting the objectives of the AQMP;
- In the event of a substantiated complaint being received regarding air quality impacts; and/or
- At the request of a relevant regulatory authority.

15 References

- DEC 2006, Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales, Department of Environment and Conservation NSW, December 2006.
- DPIE 2021, NSW Air Quality Statement 2020, available online at https://www.environment.nsw.gov.au/topics/air/nsw-air-quality-statements/annual-air-quality-statement-2020, accessed 15 February 2021.
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APPENDIX A

WIND ROSES AND RAINFALL DATA ANALYSIS

Wind Conditions

Local wind speed and direction influence the dispersion of air pollutants. Wind speed determines both the distance of downwind transport and the rate of dilution as a result of 'plume' stretching. Wind direction, and the variability in wind direction, determines the general path pollutants will follow and the extent of crosswind spreading. Surface roughness (characterised by features such as the topography of the land and the presence of buildings, structures and trees) will also influence dispersion.

The Bureau of Meteorology (BoM) maintains and publishes data from weather stations across Australia. The closest such station recording wind speed and wind direction data is the Horsley Park Automatic Weather Station (AWS) (Station ID 67119), located approximately 5.5 kilometres (km) southeast of the Oakdale West. Considering the relatively flat terrain between Oakdale West and Horsley Park AWS, it is considered reasonable to assume that the wind conditions recorded at the Horsley Park AWS are representative of the wind conditions experienced at the Oakdale West.

Annual and seasonal wind roses for the years 2016 to 2020 compiled from data recorded by the Horsley Park AWS are presented in **Figure A1**. Wind roses show the frequency of occurrence of winds by direction and strength. The bars correspond to the 16 compass points (degrees from North). The bar at the top of each wind rose diagram represents winds blowing from the north (i.e. northerly winds), and so on. The length of the bar represents the frequency of occurrence of winds from that direction, and the widths of the bar sections correspond to wind speed categories, the narrowest representing the lightest winds. Thus it is possible to visualise how often winds of a certain direction and strength occur over a long period, either for all hours of the day, or for particular periods during the day.

The 'Beaufort Wind Scale' (consistent with terminology used by the BoM) presented in **Table A1** was used to describe the wind speeds experienced at Oakdale West.

Table A1 Beaufort Wind Scale

Beaufort Scale #	Description	m/s	Description on land
0	Calm	0-0.5	Smoke rises vertically
1	Light air	0.5-1.5	Smoke drift indicates wind direction
2-3	Light/gentle breeze	1.5-5.3	Wind felt on face, leaves rustle, light flags extended, ordinary vanes moved by wind
4	Moderate winds	5.3-8.0	Raises dust and loose paper, small branches are moved
5	Fresh winds	8.0-10.8	Small trees in leaf begin to sway, crested wavelets form on inland waters
6	Strong winds	>10.8	Large branches in motion, whistling heard in telephone wires; umbrellas used with difficulty

Source: http://www.bom.gov.au/lam/glossary/beaufort.shtml

The annual wind roses for the years 2016 to 2020 (**Figure A1**) indicate that predominant wind directions in the area are consistently from the southwest quadrant. Very low frequencies of winds from the north-eastern quadrant were recorded across all years. The annual frequency of calm wind conditions was recorded to be approximately 14% for all the years between 2016 and 2020. Also, a review of the annual wind roses (**Figure A1**) indicates that:

- Winds that would blow fugitive dust emissions from the demolition/construction works towards the nearest sensitive receptors located to the north and northwest of the proposed construction activities occur approximately 15-20% of the time.

The seasonal wind roses for the years 2016 and 2020 (**Figure A1**) indicate that:

- In summer, wind speeds ranged from calm to fresh winds (between 0.5 m/s and 9.8 m/s). The majority of winds originated from eastern and south eastern quadrants, with very few winds from western directions. Calm wind conditions were recorded approximately 12% of the time during summer.
- In autumn, wind speeds ranged from calm to fresh winds (between 0.5 m/s and 8.9 m/s). The majority of winds originated from southwest quadrant, with very few winds from other directions. Calm wind conditions were observed to occur approximately 15% of the time during autumn.
- In winter, wind speeds ranged from calm to fresh winds (between 0.5 m/s and 8.6 m/s). The majority of winds originated from southwest quadrant, with very few winds from other directions. Calm wind conditions were observed to occur approximately 13% of the time during winter.
- In spring, wind speeds ranged from calm to fresh winds (between 0.5 m/s and 9.8 m/s). The frequency of winds are generally even in each direction, except for a relatively low frequency of winds originating from southern quadrant. Calm wind conditions were observed to occur approximately 12% of the time during spring.

Wind erosion of dust from exposed surfaces (ie, during the construction phase of the development) is usually initiated when wind speeds exceed the threshold friction velocity for a given surface or material, however a general rule of thumb is that wind erosion can be expected to occur above 5 m/s (USEPA 2006). The frequency of wind speeds for the period of 2016-2020 is presented in **Figure A2**. The plot showed that the frequency of wind speeds exceeding 5 m/s for the period 2016-2020 at Horsley Park AWS was approximately 6%.

Figure A1 Annual Wind Roses for Horsley Park (2016 to 2020)

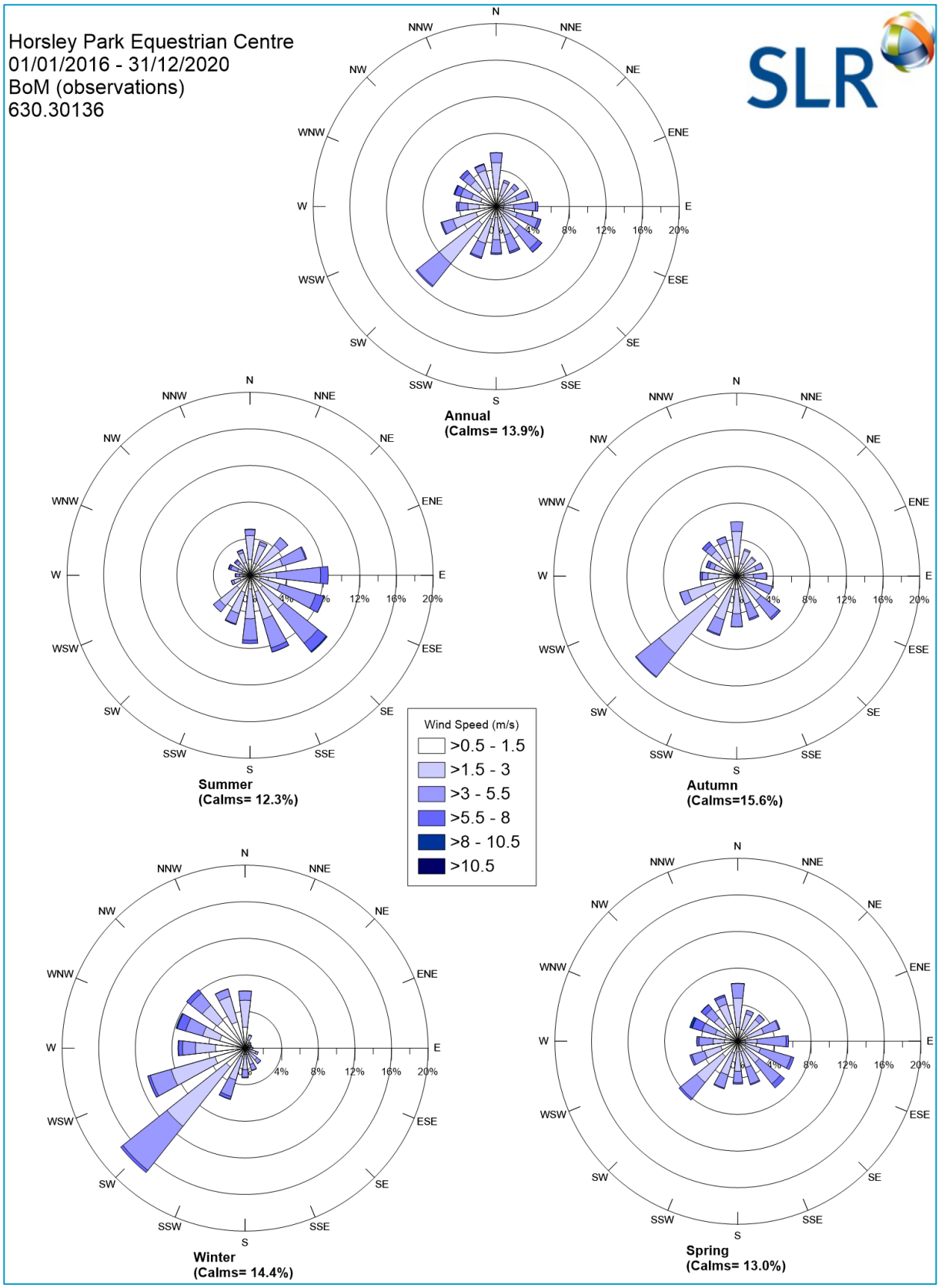
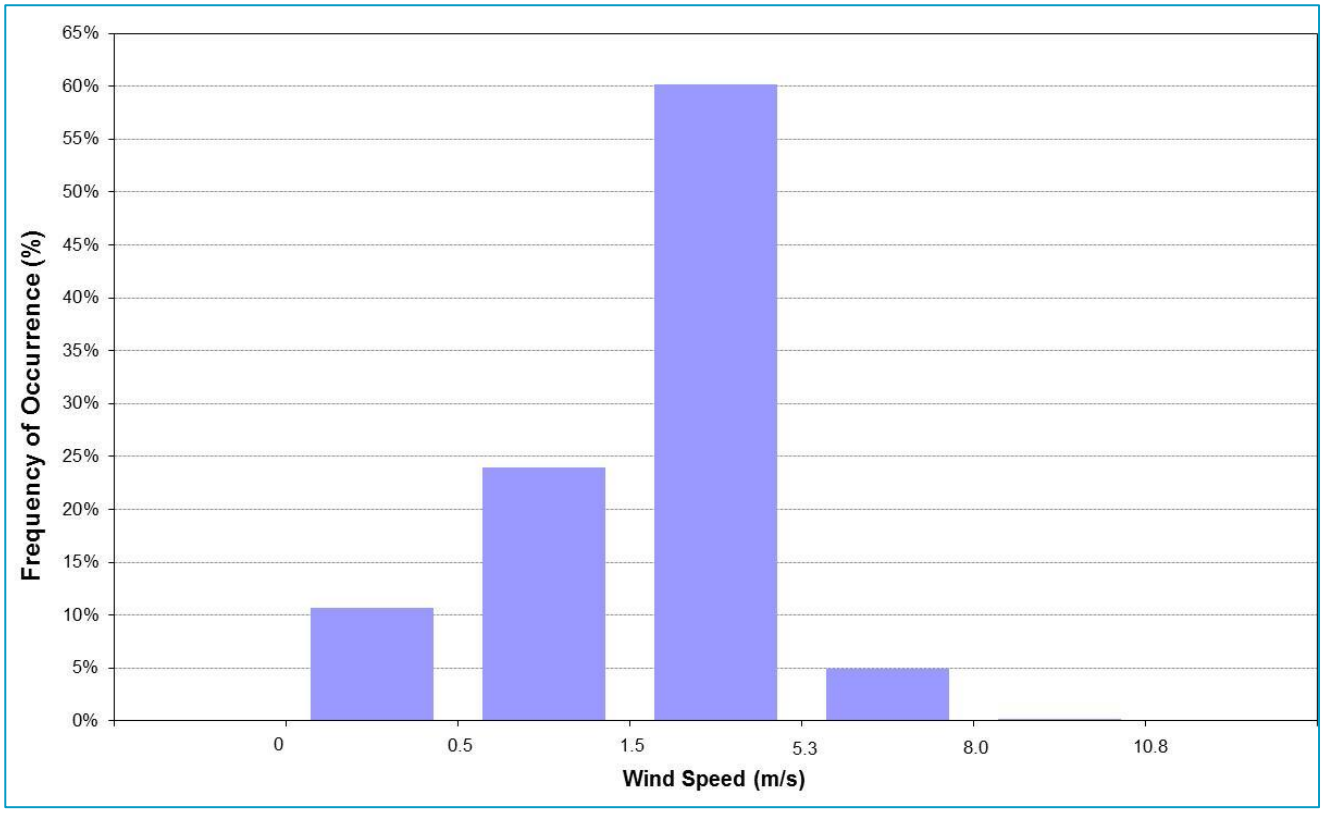


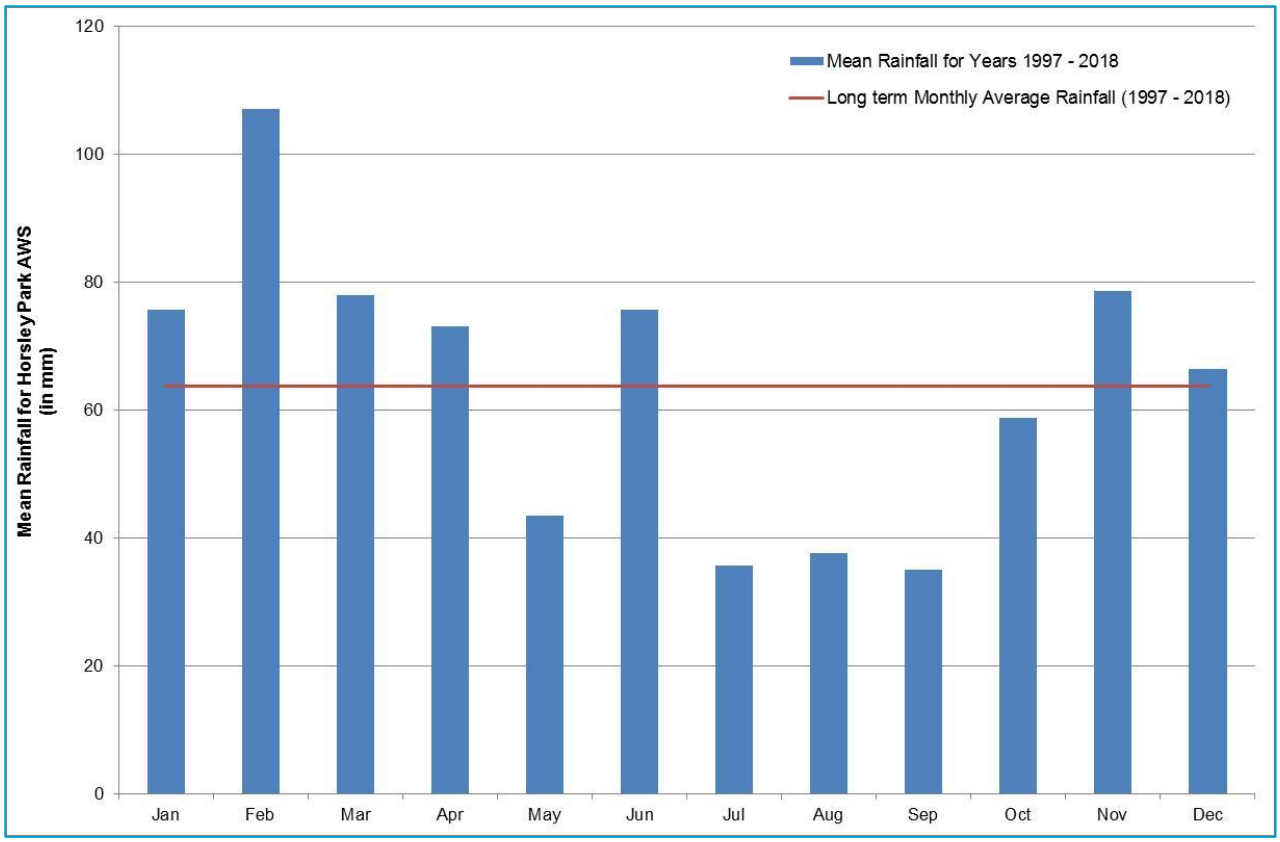
Figure A2 Wind Speed Frequency Chart for Horsley Park AWS – 2016-2020



Rainfall

Dry periods (no rainfall) have the greatest potential for fugitive dust emissions during construction. The long term monthly rainfall averages recorded at Horsley Park AWS rain gauge are shown in **Figure A4**. It is noted that generally rainfall is relatively low in mid-winter to mid spring periods. This rainfall pattern suggests that dust emissions from the demolition/construction activities at Oakdale West have the greatest potential to impact on receptors for the period of late autumn to early spring.

Figure A3 Long term Mean Rainfall for Horsley Park AWS – 1997 to 2018



APPENDIX B

CONSTRUCTION PHASE RISK ASSESSMENT METHODOLOGY

Step 1 – Screening Based on Separation Distance

The Step 1 screening criteria provided by the IAQM guidance suggests screening out any assessment of impacts from construction activities where sensitive receptors are located more than 350 m from the boundary of the site, more than 50 m from the route used by construction vehicles on public roads and more than 500 m from the site entrance. This step is noted as having deliberately been chosen to be conservative and will require assessments for most projects.

The nearest sensitive receptor is located approximately 100 m from the nearest OWE boundary.

The screening criteria for detailed assessment are:

- a 'human receptor' within:
  - 350 m of the boundary of the site; or
  - 50 m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s).
- an 'ecological receptor' within:
  - 50 m of the boundary of the site; or
  - 50 m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s).

Sensitive receptors (residences) are located within 350 m of the OWE boundary, therefore further assessment is required.

Step 2a – Assessment of Scale and Nature of the Works

Step 2a of the assessment provides "dust emissions magnitudes" for each of four dust generating activities; demolition, earthworks, construction, and track-out (the movement of site material onto public roads by vehicles). The magnitudes are: *Large*; *Medium*; or *Small*, with suggested definitions for each category. The definitions given in the IAQM guidance for earthworks, construction activities and track-out, which are most relevant to this Development, are as follows:

Demolition *(Any activity involved with the removal of an existing structure [or structures]. This may also be referred to as de-construction, specifically when a building is to be removed a small part at a time)*:

- ***Large***: Total building volume >50,000 m^3, potentially dusty construction material (e.g. concrete), on-site crushing and screening, demolition activities >20 m above ground level;
- ***Medium***: Total building volume 20,000 m^3 – 50,000 m^3, potentially dusty construction material, demolition activities 10-20 m above ground level; and
- ***Small***: Total building volume <20,000 m^3, construction material with low potential for dust release (e.g. metal cladding or timber), demolition activities <10m above ground, demolition during wetter months.

Earthworks *(Covers the processes of soil-stripping, ground-levelling, excavation and landscaping)*:

- ***Large***: Total site area greater than 10,000 m^2, potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size), more than 10 heavy earth moving vehicles active at any one time, formation of bunds greater than 8 m in height, total material moved more than 100,000 t.
- ***Medium***: Total site area 2,500 m^2 to 10,000 m^2, moderately dusty soil type (e.g. silt), 5 to 10 heavy earth moving vehicles active at any one time, formation of bunds 4 m to 8 m in height, total material moved 20,000 t to 100,000 t.
- ***Small***: Total site area less than 2,500 m^2, soil type with large grain size (e.g. sand), less than five heavy earth moving vehicles active at any one time, formation of bunds less than 4 m in height, total material moved less than 20,000 t, earthworks during wetter months.

Construction *(Any activity involved with the provision of a new structure (or structures), its modification or refurbishment. A structure will include a residential dwelling, office building, retail outlet, road, etc)*:

- ***Large***: Total building volume greater than 100,000 m^3, piling, on site concrete batching; sandblasting.
- ***Medium***: Total building volume 25,000 m^3 to 100,000 m^3, potentially dusty construction material (e.g. concrete), piling, on site concrete batching.
- ***Small***: Total building volume less than 25,000 m^3, construction material with low potential for dust release (e.g. metal cladding or timber).

Track-out *(The transport of dust and dirt from the construction / demolition site onto the public road network, where it may be deposited and then re-suspended by vehicles using the network)*:

- ***Large***: More than 50 heavy vehicle movements per day, surface materials with a high potential for dust generation, greater than 100 m of unpaved road length.
- ***Medium***: Between 10 and 50 heavy vehicle movements per day, surface materials with a moderate potential for dust generation, between 50 m and 100 m of unpaved road length.
- ***Small***: Less than 10 heavy vehicle movements per day, surface materials with a low potential for dust generation, less than 50 m of unpaved road length.

In order to provide a conservative assessment of potential impacts, it has been assumed that if at least one of the parameters specified in the 'large' definition is satisfied, the works are classified as large, and so on.

Based on the above, dust emission magnitudes have been categorised as presented in **Table B1**.

Table B1 Categorisation of Dust Emission Magnitude

Activity	Dust Emission Magnitude	Basis
Demolition	Small	**IAQM Definition:** Total building volume <20,000 m^3, construction material with low potential for dust release (e.g. metal cladding or timber), demolition activities <10m above ground, demolition during wetter months. **Relevance to this Project:** Demolition activities will predominantly be limited to removal of any old structures (if any) within Lot 2A site boundary.
Earthworks	Large	**IAQM Definition:** Total site area greater than 10,000 m^2, potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size), more than 10 heavy earth moving vehicles active at any one time, formation of bunds greater than 8 m in height, total material moved more than 100,000 t. **Relevance to this Project:** The footprint of Lot 2A is approximately 21,500 m^2 and involves construction of two new buildings (total volume of approximately 46,000 m^3).
Construction	Large	**IAQM Definition:** Total building volume greater than 100,000 m^3, piling, on site concrete batching; sandblasting. **Relevance to this Project:** The footprint of Lot 2A is approximately 21,500 m^2 and involves construction of two new buildings (total volume of approximately 215,000 m^3).
Trackout	Medium	**IAQM Definition:** Between 10 and 50 heavy vehicle movements per day, surface materials with a moderate potential for dust generation, between 50 m and 100 m of unpaved road length. **Relevance to this Project:** *The peak traffic volume during construction is estimated to be 20 vehicle movements per hour.*

Step 2b – Risk Assessment

Assessment of the Sensitivity of the Area

Step 2b of the assessment process requires the sensitivity of the area to be defined. The sensitivity of the area takes into account:

- The specific sensitivities that identified sensitive receptors have to dust deposition and human health impacts;
- The proximity and number of those receptors;
- In the case of PM_{10}, the local background concentration; and
- Other site-specific factors, such as whether there are natural shelters such as trees to reduce the risk of wind-blown dust.

Individual receptors are classified as having *high*, *medium* or *low* sensitivity to dust deposition and human health impacts (ecological receptors are not addressed using this approach). The IAQM method provides guidance on the sensitivity of different receptor types to dust soiling and health effects as summarised in **Table B1**. It is noted that user expectations of amenity levels (dust soiling) is dependent on existing deposition levels.

Table B2 IAQM Guidance for Categorising Receptor Sensitivity

Value	High Sensitivity Receptor	Medium Sensitivity Receptor	Low Sensitivity Receptor
Dust soiling	Users can reasonably expect a high level of amenity; or The appearance, aesthetics or value of their property would be diminished by soiling, and the people or property would reasonably be expected to be present continuously, or at least regularly for extended periods as part of the normal pattern of use of the land.	Users would expect to enjoy a reasonable level of amenity, but would not reasonably expect to enjoy the same level of amenity as in their home; or The appearance, aesthetics or value of their property could be diminished by soiling; or The people or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land.	The enjoyment of amenity would not reasonably be expected; or Property would not reasonably be expected to be diminished in appearance, aesthetics or value by soiling; or There is transient exposure, where the people or property would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use of the land.
	Examples: Dwellings, museums, medium and long term car parks and car showrooms.	*Examples: Parks and places of work.*	*Examples: Playing fields, farmland (unless commercially-sensitive horticultural), footpaths, short term car parks and roads.*
Health effects	Locations where the public are exposed over a time period relevant to the air quality objective for PM_{10} (in the case of the 24-hour objectives, a relevant location would be one where individuals may be exposed for eight hours or more in a day).	Locations where the people exposed are workers, and exposure is over a time period relevant to the air quality objective for PM_{10} (in the case of the 24-hour objectives, a relevant location would be one where individuals may be exposed for eight hours or more in a day).	Locations where human exposure is transient.
	Examples: Residential properties, hospitals, schools and residential care homes.	*Examples: Office and shop workers, but will generally not include workers occupationally exposed to PM10.*	*Examples: Public footpaths, playing fields, parks and shopping street.*

According to the IAQM methods, the sensitivity of the identified individual receptors (as described above) is then used to assess the *sensitivity of the area* surrounding the active construction area, taking into account the proximity and number of those receptors, and the local background PM_{10} concentration (in the case of potential health impacts) and other site-specific factors. Additional factors to consider when determining the sensitivity of the area include:

- any history of dust generating activities in the area;
- the likelihood of concurrent dust generating activity on nearby sites;
- any pre-existing screening between the source and the receptors;
- any conclusions drawn from analysing local meteorological data which accurately represent the area and if relevant, the season during which the works will take place;
- any conclusions drawn from local topography;
- the duration of the potential impact (as a receptor may be willing to accept elevated dust levels for a known short duration, or may become more sensitive or less sensitive (acclimatised) over time for long-term impacts); and
- any known specific receptor sensitivities which go beyond the classifications given in the IAQM document.

Based on the criteria listed in **Table B2**, the sensitivity of the identified receptors in this study is concluded to be *high* for health impacts and *high* for dust soiling, as they include residential areas where people may be reasonably expected to be present continuously as part of the normal pattern of land use.

The IAQM guidance for assessing the sensitivity of an area to dust soiling is shown in **Table B3**. The sensitivity of the area should be derived for each of activity relevant to the project (ie construction and earthworks).

Table B3 IAQM Guidance for Categorising the Sensitivity of an Area to Dust Soiling Effects

Receptor Sensitivity	Number of receptors	Distance from the source (m)			
		<20	<50	<100	<350
High	>100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

Note: Estimate the total number of receptors within the stated distance. Only the *highest level* of area sensitivity from the table needs to be considered. For example, if there are 7 high sensitivity receptors < 20m of the source and 95 high sensitivity receptors between 20 and 50 m, then the total of number of receptors < 50 m is 102. The sensitivity of the area in this case would be high.

A modified version of the IAQM guidance for assessing the *sensitivity of an area* to health impacts is shown in **Table B4**. For high sensitivity receptors, the IAQM methods takes the existing background concentrations of PM_{10} (as an annual average) experienced in the area of interest into account and is based on the air quality objectives for PM_{10} in the UK. As these objectives differ from the ambient air quality criteria adopted for use in this assessment (i.e. an annual average of 19.1 $\mu g/m^3$ for PM_{10}) the IAQM method has been modified slightly.

This approach is consistent with the IAQM guidance, which notes that in using the tables to define the *sensitivity of an area*, professional judgement may be used to determine alternative sensitivity categories, taking into account the following factors:

- any history of dust generating activities in the area;

- the likelihood of concurrent dust generating activity on nearby sites;
- any pre-existing screening between the source and the receptors;
- any conclusions drawn from analysing local meteorological data which accurately represent the area, and if relevant the season during which the works will take place;
- any conclusions drawn from local topography;
- duration of the potential impact; and
- any known specific receptor sensitivities which go beyond the classifications given in this document.

Table B4 IAQM Guidance for Categorising the Sensitivity of an Area to Dust Health Effects

Receptor sensitivity	Annual mean PM_{10} conc.	Number of receptors [a,b]	Distance from the source (m)				
			<20	<50	<100	<200	<350
High	>25 µg/m^3	>100	High	High	High	Medium	Low
		10-100	High	High	Medium	Low	Low
		1-10	High	Medium	Low	Low	Low
	21-25 µg/m^3	>100	High	High	Medium	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	High	Medium	Low	Low	Low
	17-21 µg/m^3	>100	High	Medium	Low	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	<17 µg/m^3	>100	Medium	Low	Low	Low	Low
		10-100	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
Medium	>25 µg/m^3	>10	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	21-25 µg/m^3	>10	Medium	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
	17-21 µg/m^3	>10	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
	<17 µg/m^3	>10	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
Low	-	>1	Low	Low	Low	Low	Low

Notes:

(a) Estimate the total within the stated distance (e.g. the total within 350 m and not the number between 200 and 350 m); noting that only the highest level of area sensitivity from the table needs to be considered.

(b) In the case of high sensitivity receptors with high occupancy (such as schools or hospitals) approximate the number of people likely to be present. In the case of residential dwellings, just include the number of properties.

The nearest sensitive receptor is located within 350 m from the nearest OWE boundary. Based on the classifications shown in **Table B3** and **Table B4**, the sensitivity of the area to dust soiling and to health effects may both be classified as '*low*'. This categorisation has been made considering the individual receptor sensitivities derived above, the annual mean background PM_{10} concentration of 19.4 µg/m^3 recorded at St Marys AQMS (see **Section 6.2**) and the anticipated number of sensitive receptors present in the vicinity of the OWE.

Risk Assessment

The dust emission magnitude from Step 2a and the receptor sensitivity from Step 2b are then used in the matrices shown in **Table B5** (earthworks and construction), **Table B6** (track-out) and **Table B7** (demolition) to determine the risk category with no mitigation applied.

Table B5 Risk Category from Earthworks and Construction Activities

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Table B6 Risk Category from Track-out Activities

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Low Risk	Negligible
Low	Low Risk	Low Risk	Negligible

Table B7 Risk Category from Demolition Activities

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible

APPENDIX C

Operational PHASE RISK ASSESSMENT METHODOLOGY

The risk-based assessment takes account of a range of impact descriptors, including the following:

- **Nature of Impact**: does the impact result in an adverse or beneficial environment?
- **Sensitivity**: how sensitive is the receiving environment to the anticipated impacts? This may be applied to the sensitivity of the environment in a regional context or specific receptor locations.
- **Magnitude**: what is the anticipated scale of the impact?

The integration of receptor sensitivity with impact magnitude is used to derive the predicted **significance** of that change.

Nature of Impact

Predicted impacts may be described in terms of the overall effect upon the environment:

- **Beneficial**: the predicted impact will cause a beneficial effect on the receiving environment.
- **Neutral**: the predicted impact will cause neither a beneficial nor adverse effect.
- **Adverse**: the predicted impact will cause an adverse effect on the receiving environment.

Receptor Sensitivity

Sensitivity may vary with the anticipated impact or effect. A receptor may be determined to have varying sensitivity to different environmental changes, for example, a high sensitivity to changes in air quality, but low sensitivity to noise impacts. Sensitivity may also be derived from statutory designation which is designed to protect the receptor from such impacts.

Sensitivity terminology may vary depending upon the environmental effect, but generally this may be described in accordance with the broad categories outlined in **Table** , which has been used in this assessment to define the sensitivity of receptors to air quality impacts.

Table C1 Methodology for Assessing Sensitivity of a Receptor to Air Quality Impacts

Sensitivity	Criteria
Very High	Receptors of very high sensitivity to air pollution (eg dust or odour) such as: hospitals and clinics, retirement homes, painting and furnishing businesses, hi-tech industries and food processing.
High	Receptors of high sensitivity to air pollution, such as: schools, residential areas, food retailers, glasshouses and nurseries, horticultural land and offices.
Medium	Receptors of medium sensitivity to air pollution, such as: farms, outdoor storage, light and heavy industry.
Low	All other air quality sensitive receptors not identified above.

Magnitude of Impact

Magnitude describes the anticipated scale of the anticipated environmental change in terms of how that impact may cause a change to baseline conditions. **Table** outlines the methodology used in this assessment to define the magnitude of the identified potential air quality impacts.

Table C2 Methodology for Assessing Magnitude of Impacts

Magnitude	Description
Substantial	Impact is predicted to cause significant consequences on the receiving environment (may be adverse or beneficial)
Moderate	Impact is predicted to possibly cause statutory objectives/standards to be exceeded (may be adverse)
Slight	Predicted impact may be tolerated.
Negligible	Impact is predicted to cause no significant consequences.

Significance of Impact

The risk-based matrix provided below illustrates how the definition of the sensitivity and magnitude interact to produce impact significance.

Table C3 Impact Significance Matrix

Sensitivity \ Magnitude		[Defined by Table A2]			
		Substantial Magnitude	Moderate Magnitude	Slight Magnitude	Negligible Magnitude
[Defined by Table A1]	**Very High Sensitivity**	Major Significance	Major/ Intermediate Significance	Intermediate Significance	Neutral Significance
	High Sensitivity	Major/ Intermediate Significance	Intermediate Significance	Intermediate/Minor Significance	Neutral Significance
	Medium Sensitivity	Intermediate Significance	Intermediate/Minor Significance	Minor Significance	Neutral Significance
	Low Sensitivity	Intermediate/Minor Significance	Minor Significance	Minor/Neutral Significance	Neutral Significance

APPENDIX D

AIR QUALITY NOTIFICATION FORM

APPENDIX E - CURRICULUM VITAE OF AUTHOR

CURRICULUM VITAE

VARUN MARWAHA

ASSOCIATE

Air Quality, Asia-Pacific

QUALIFICATIONS

BEng	2006	Bachelor of Engineering - Chemical, University of Sydney

EXPERTISE

- Air Quality Dispersion modelling using a variety of software applications
- Meteorological and Ambient air quality monitoring & assessment for legislative compliance
- Australian state and federal regulatory compliance – Air Quality
- Opportunities and constraints reporting
- Detailed knowledge of air quality/meteorological interactions

Varun is an Associate Air Quality Consultant working within the Air Quality team. He has over 10 years of environmental and process engineering experience.

Varun has acquired a broad environmental experience including air quality (including odour) impact assessments, emission inventories (including National Pollutant Inventory), air quality dispersion modelling (including Ausplume, CALPUFF and CAL3QHCR), air quality monitoring (including odour), meteorological monitoring, meteorological modelling (The Air Pollution Model [TAPM] & CALMET), greenhouse gas assessments and overall project management.

Varun has conducted numerous environmental audits and prepared NPI reports for a range of industries including power stations throughout Australia.

Varun is a Certified Air Quality Professional (CAQP) and a Certified Practicing Project Manager (CPPM), and is respected for his contribution to the air quality industry.

PROJECTS

Sentosa Gateway Project, Singapore	The project involved the assessment of air impacts due to road traffic tunnel from Sentosa Island to mainland Singapore. The project proposed to build a tunnel for the outbound traffic from Sentosa with tunnel exits located on Lower Delta Road and Keppel Road. The emissions were quantified and modelled using CAL3QHCR and CALPUFF modelling suites to predict the roadside impacts. The project also included assessment of other sources of pollutants in the region for the cumulative assessment
Sydney Harbour Bridge, Sydney, NSW, Australia	Compliance Monitoring (Lead, PM_{10} and TSP). The project involves repainting the iconic Sydney Harbour Bridge. The process includes stripping the old paint (containing lead), preparation of the surface and repainting. The monitoring was conducted for lead concentration in the air along with the concentration of particulate (PM_{10} and TSP) was required. For lead monitoring, membrane filters were used and for particulate monitoring High Volume air samplers (HVAS) were employed.

CURRICULUM VITAE — VARUN MARWAHA

Capital Metro Project, Canberra, ACT, Australia (2018-2019)	The project involved preparation of Air Quality Impact Assessment (AQIA) for the proposed ACT Light Rail Stage 1 – Gungahlin to Civic Project, a 12 kilometre light rail service linking the fast- developing area of Gungahlin in the north, to the City. The emissions due to the operation of light rail network were quantified and compared to the existing regional air emissions levels. It was demonstrated that the regional emissions were likely to decrease significantly when compared with the current situation.
Proposed Residential Development, RMS	Road Traffic Impact Assessment. The project involved assessment of roadside impacts on the proposed residential development due to road traffic on a busy motorway. The aim of the project was to determine the maximum impacts and validating against the monitored roadside data. The emissions were quantified and modelled using CAL3QHCR modelling suite to predict the roadside impacts. The project also included assessment of other sources of pollutants in the region for the cumulative assessment. The modelling skills were put to test when integrating predicted results from several modelling suites (CAL3QHCR and CALPUFF)
Proposed Haul Roads (Fortescue Metals Group), WA, Australia	The project involved assessment of two possible options for building haul roads in separate directions. The aim of the project was to determine mine access route from the nearest transport facility. The emissions were quantified and modelled using CALPUFF modelling suite to predict the roadside impacts on the nearest receptors on each haul road route.
Confidential Highway Project, QLD, Australia	Emissions estimation and modelling for an air quality impact assessment for a proposed new highway in Queensland. Work included the estimation of vehicle emissions for the operational phase using the COPERT-Australia emissions modelling software and dispersion modelling of the road and tunnel emissions using CAL3QHCR and CALPUFF dispersion models.
MEMBERSHIPS	Clean Air Society of Australia and New Zealand (CASANZ)
	Member of Engineers Australia (EA)
	Institute of Chemical Engineers (IChemE)
ACCREDITATION	Certified Air Quality Professional (CAQP), CASANZ
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APPENDIX G

Operational Traffic Management Plan

Operational Traffic Management Plan

Lot 2A – Oakdale West Industrial Estate

19/08/2022
1518r06v3

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Document Control

Project No	1518
Project	Lot 2A – Operational Traffic Management Plan
Client	Goodman Property Services (Aust) Pty Ltd
File Reference	P1518r06v3 OTMP_OWE Lot 2A, Kemps Creek

Revision History

Revision No.	Date	Details	Author	Approved by
-	03/08/2022	Draft	M. Dizon	J. Laidler
Issue I	04/08/2022	Issue I	M. Dizon	J. Laidler
Issue II	18/08/2022	Issue II	M. Dizon	J. Laidler
Issue III	19/08/2022	Issue II	M. Dizon	J. Laidler

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APPENDICES

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
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 2A 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 9794683[1] was approved on the 16 December 2021, and as such the OTMP has been prepared accordingly. Warehouse 2A details are summarised in **Table 1.**

TABLE 1 WAREHOUSE 2A DETAILS

Component	Warehouse 2A
Warehouse GFA (m^2)	42,665[1]
Office GFA (m^2)	1,350
Total GFA (m^2)	**44,015**
Loading Dock Provision	56[1]
Car Parking Provision (Spaces)	255[2]
Bicycle Parking Provision (Spaces)	24

Note: 1) Includes 8,403 m^2 of mezzanine GFA
2) Includes 6 accessible spaces.
3) Includes bays recessed docks only.

[1] https://www.planningportal.nsw.gov.au/major-projects/projects/oakdale-west-estate-stage-3-development

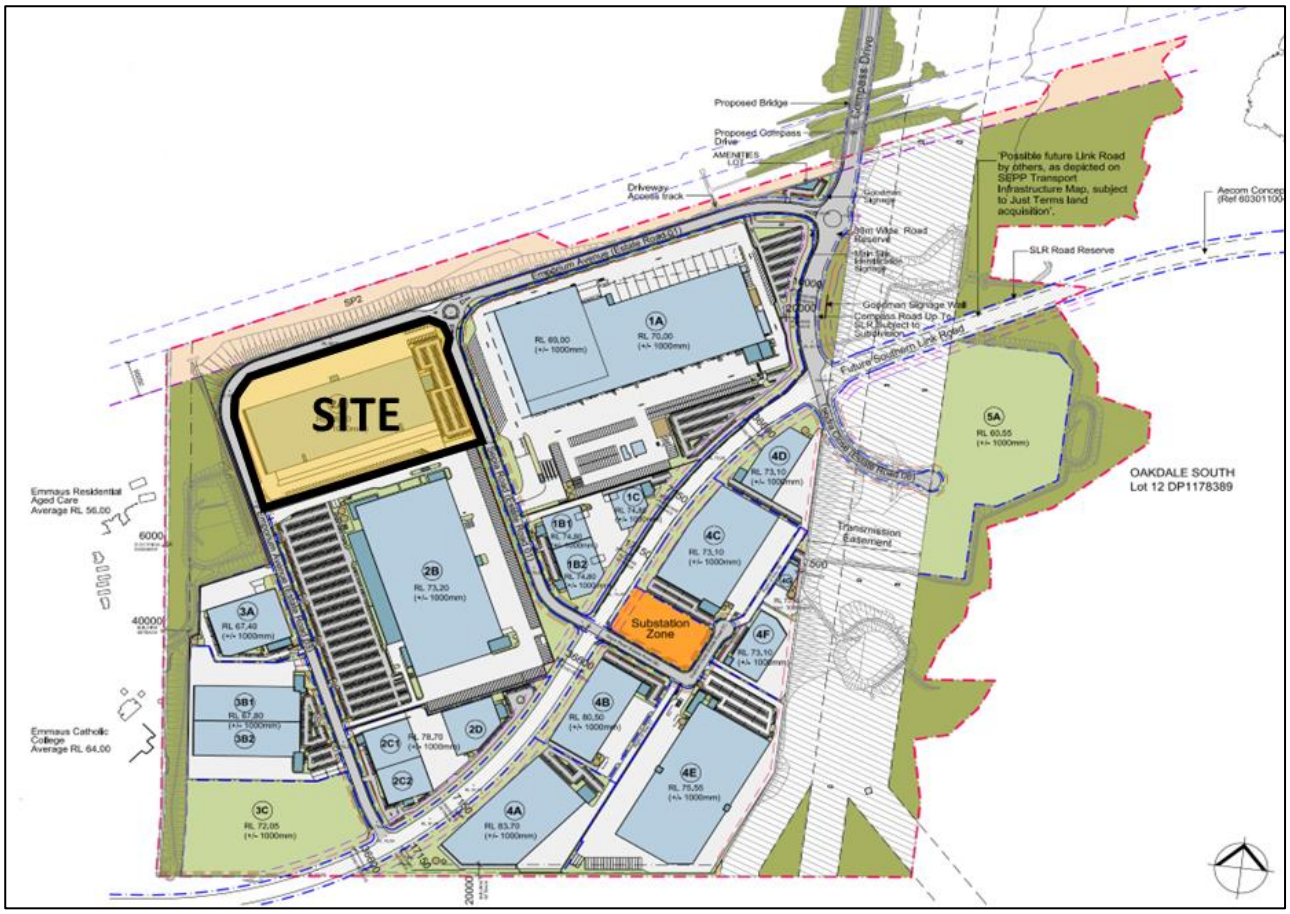


Figure 1: OWE Context Showing Warehouse 2A (MOD 10)

This OTMP is in response to Condition B4, B5 and B6 of the Oakdale West Estate Stage 3 Development (SSD 9794683) dated 16 December 2021 which are outlined in **Table 2**. Additionally, this OTMP is in response to D69A of the Oakdale West Estate Stage 3 Development (SSD 7348 Mod-9), dated 08 December 2021. **Table 3** outlines these conditions.

TABLE 2 CONDITIONS OF CONSENT (SSD 9794683)

Condition		Response
B4	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) associated with the development are constructed and maintained in accordance with the latest version of AS 2890.1:2004 Parking facilities Off-street car parking (Standards Australia, 2004), AS 2890.2:2018 Parking facilities Off-street commercial vehicle facilities (Standards Australia, 2018) and AS 2890.6.2009 Parking facilities Off-street parking for people with disabilities (Standards Australia, 2009)	Noted. Review of the SSD vehicular access, hardstand area and parking facilities against the relevant Australian Standards has been undertaken and summarised in Section 8 of the Transport Assessment (TA) prepared by Ason Group on 01 November 2021 (*AG ref: P1518r01v6 SSD TA_Lots 2A, 2C & 2D, Oakdale West Estate*). Swept path analysis for 30.0m Super B-Doubles (assumed design vehicle) has also been included in Appendix B of the TA for reference.

(b)	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;	Section 4.2 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 30m Super B-doubles. 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.
(c)	the development does not result in any vehicles queuing on the public road network;	Noted. Heavy vehicles associated with this SSD shall also not park on local roads. Refer to Section 5.2 of this OTMP.
(d)	heavy vehicles and bins associated with the development are not parked on local roads or footpaths in the vicinity of the site;	Noted. Service vehicles associated with this SSD shall also not park on local roads. Refer to Section 4.5 of this OTMP.
(e)	all vehicles are wholly contained on site before being required to stop;	Noted. Refer to Section 4.4 of this OTMP.
(f)	all loading and unloading of materials is carried out on-site;	Noted. Refer to Section 4.4 of this OTMP.
(g)	all trucks entering or leaving the site with loads have their loads covered and do not track dirt onto the public road network; and	Noted. Refer to Section 4.4 of this OTMP.
(h)	the proposed turning areas in the car park are kept clear of any obstacles, including parked cars, at all times.	As per response to B4 (a), parking facilities have been reviewed against the relevant Australian Standards and are largely compliant.
B5	Prior to the commencement of operation of any part of the development, the Applicant must prepare a Sustainable Travel Plan. The Sustainable Travel Plan must:	Noted. A Green Travel Plan (equivalent to a STP) has been prepared as part of this OTMP (see **Appendix DAppendix C)** and addresses points a to c.
(a)	be prepared in consultation with TfNSW;	
(b)	outline facilities and measures to promote public transport usage, such as car share schemes and employee incentives; and	
(c)	describe pedestrian and bicycle linkages and end of trip facilities available on-site	
B6	The Applicant must implement the Sustainable Travel Plan throughout operation of the development	Noted.

In line with the approved overarching Operational Environmental Management Plan (OEMP) for Oakdale West Industrial Estate, the Applicant has prepared this OTMP with SSD condition D69A in mind. Although it is not a requirement of SSD 9794683, the following conditions have been considered and commented on:

TABLE 3 CONDITIONS OF CONSENT (SSD 7348-MOD9)

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;	Hours of operation – refer Section 2.3. Warehouse 2A will operate 24/7. Section 4.2 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 30m Super B-doubles. 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.
(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;	Requirements within the Driver Code of Conduct (Appendix B) mandate that drivers are to be cognisant of the noise and emissions requirements. Additionally, Section 6.2 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) 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.	A Driver Code of Conduct can be found in Section 4.8. 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. Applicable to Stage 1.

(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 approved OTMP shall be implemented at all times, once operational. Any updates to this OTMP shall be communicated to relevant stakeholders, including Council, TfNSW, DP&E and building tenants.

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 2A and relates to the operation of this warehouse within the Oakdale West Estate which was granted approval on 16 December 2021 as part of Stage 3 development.

Further background can be found online, either via the Major Projects website or Goodman's Oakdale West Planning[2] page.

1.3 Purpose of this Report

The purpose of this OTMP is in response to condition B4, B5, and B6 of SSD-9794683, and D69A of SSD-7348-Mod-9 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.
- Site specific Green Travel Plan (equivalent to a Sustainable Travel Plan).

[2] 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 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.

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, Stage 3 Development Application – SSD 9794683, dated 01 November 2021. (AG ref: P1518r01v6)
- Department of Planning & Environment, Assessment Report – Oakdale West Stage 3 Development, State Significant Development Application (SSD 9794683), December 2021
- Department of Planning & Environment, Development Consent (SSD 9794683), 16 December 2021
- Department of Planning & Environment, Development Consent (SSD 7348 Mod-9), 08 December 2021
- 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 599,455m^2 is to be provided by the industrial buildings within the Estate, as outlined by the Concept Plan (SSD 7348 MOD 10). It is noted that MOD 10 is currently under review.

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

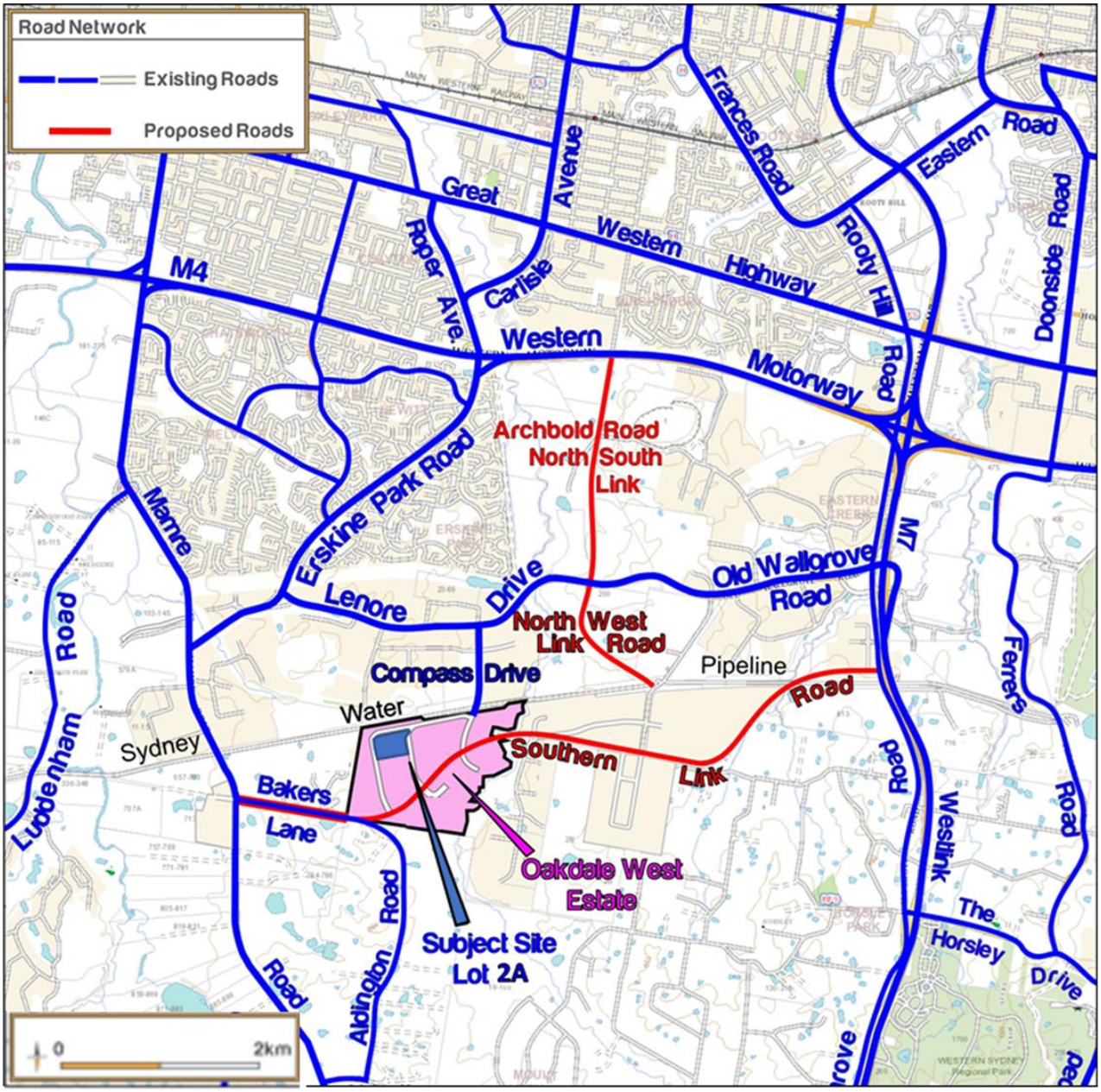


Figure 2: Site Appreciation and Road Hierarchy

All access to the Estate is provided via Compass Drive. 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.

2.2 Site Overview

Warehouse 2A is an industrial warehouse development with ancillary office. **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.

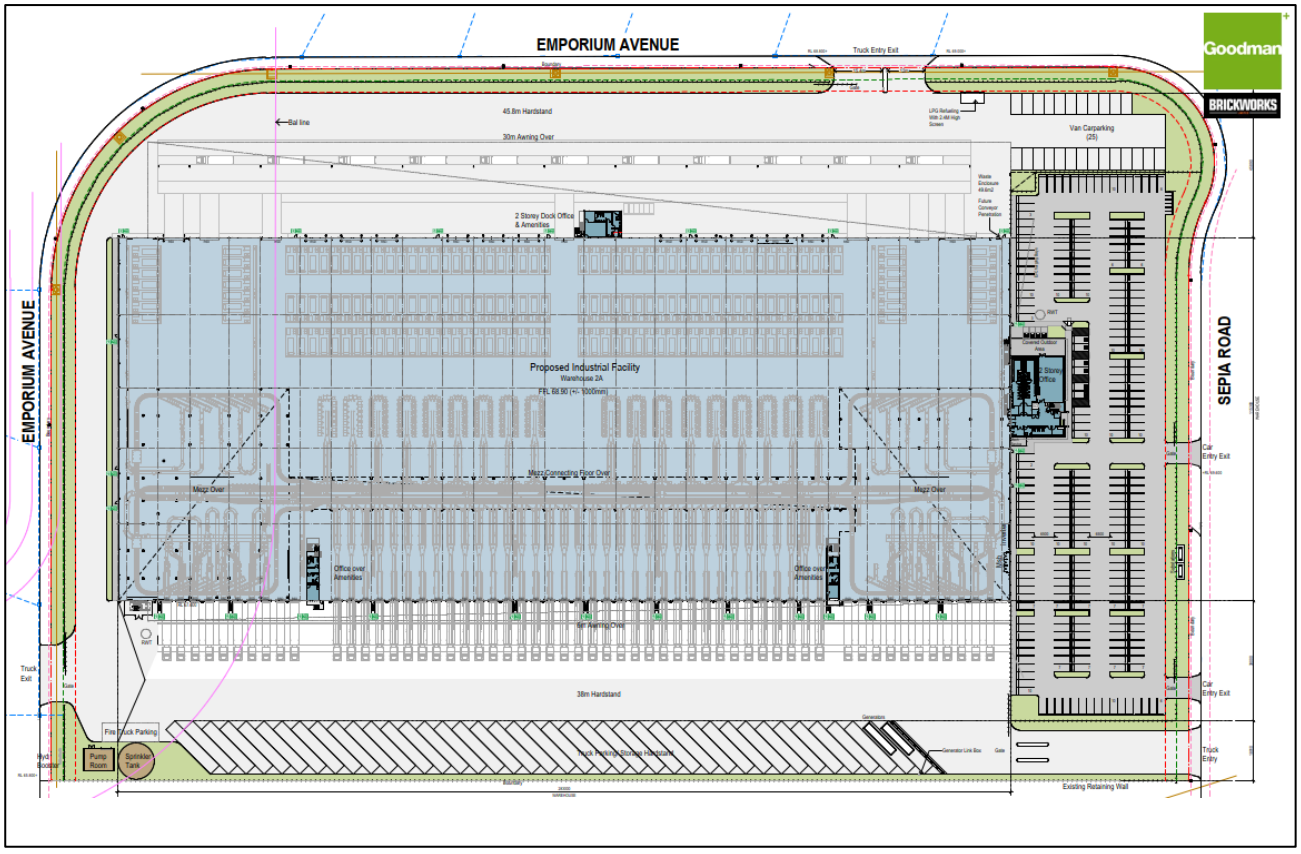


Figure 3: Warehouse 2A Site Plan

2.3 Hours of Operation

The broader Estate will be operational 24 hours a day, 7 days a week. In this respect, Warehouse 2A 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.

2.5 Approved Estate Vehicle Movements

The approved volumes for Warehouse 2A have been outlined below, and underpin the transport and traffic projections of the Site:

- AM Peak: 8 veh/hr
- PM Peak: 48 veh/hr
- Daily: 1,530 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 2A movements will be facilitated via an access onto Emporium Avenue to northern boundary of the OWE precinct, and a truck entry is provided from Sepia Road on the eastern boundary and a truck exit is provided onto Emporium Avenue to the north and Sepia Road to the east. 2 car entry/exit points will be provided directly onto Emporium Avenue and Sepia Road to facilitate access to the proposed car parking areas

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

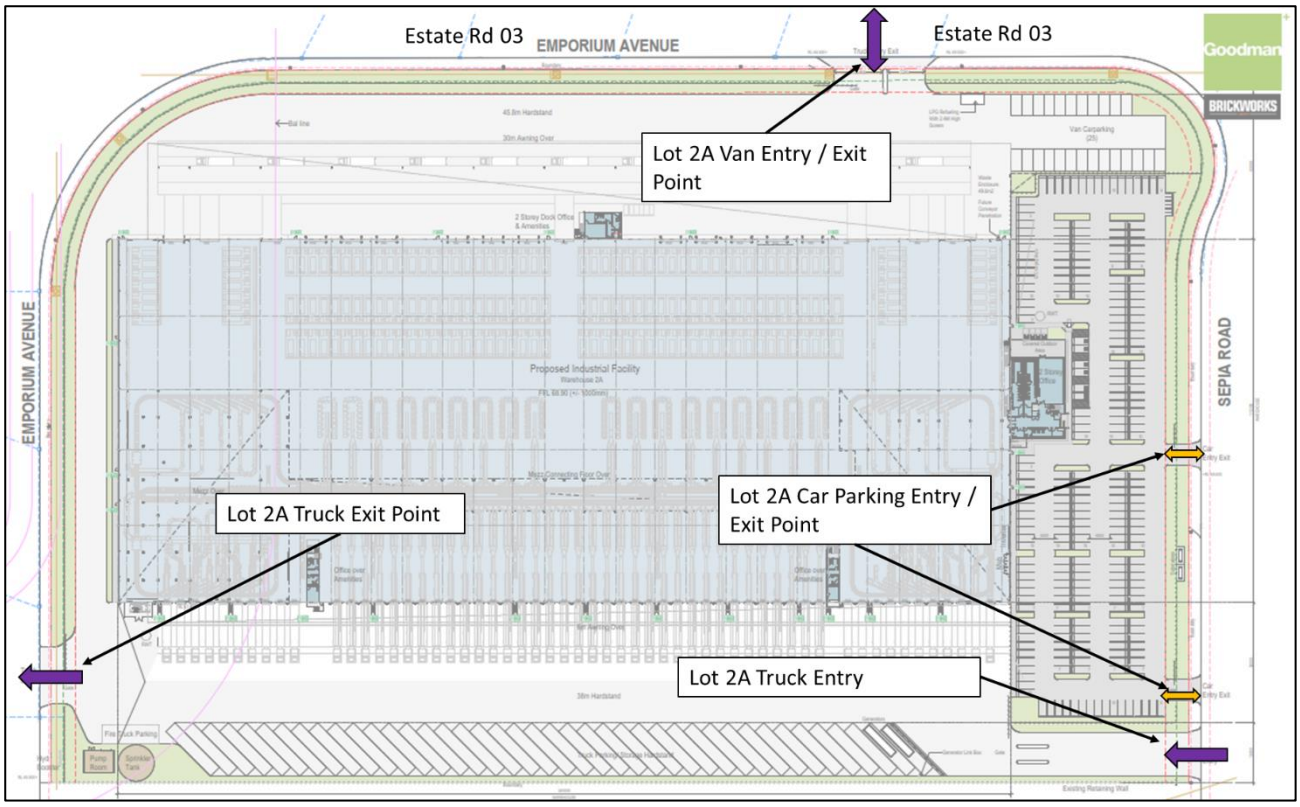


Figure 4: Warehouse 2A Plans & Access

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 4 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-9)
The Applicant shall ensure the Concept Proposal provides car parking in accordance with the following rates; a) 1 space per 300m^2 of warehouse GFA. b) 1 space per 40m^2 of Office GFA, and. i) 2 spaces for disability parking for every 100 car parking spaces	B13 (SSD 7348-Mod-9)
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).	B14 (SSD 7348-Mod-9)
The Applicant must prepare an Operational Traffic Management Plan (OTMP) for the development. The OTMP must form part of the OEMP required by condition C5 and must: 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: (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-9)
The Applicant must ensure: (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-9)

<table>
<tr><td>(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.</td><td></td></tr>
<tr><td>The Applicant must comply with the hours detailed in Table 5, unless otherwise agreed in writing by the Planning Secretary.

<table><tr><th>Activity</th><th>Day</th><th>Time</th></tr><tr><td>Construction</td><td>Monday – Sunday
Saturday</td><td>7 am 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></td><td>D70 (SSD 7348-Mod-9)</td></tr>
<tr><td>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.</td><td>D71 (SSD 7348-Mod-9)</td></tr>
<tr><td colspan="2">ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING</td></tr>
<tr><td>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.</td><td>D130 (SSD 7348-Mod-9)</td></tr>
<tr><td>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;</td><td>D131 (SSD 7348-Mod-9)</td></tr>
<tr><td>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</td><td>D132 (SSD 7348-Mod-9)</td></tr>
</table>

The Planning Secretary 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 4	D135 (SSD 7348-Mod-9)
The Planning Secretary 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-9)
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-9)
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-9)
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-9)
Compliance Reports of the development must be carried out in accordance with the Compliance Reporting Post Approval Requirements (Department 2018).	D140 (SSD 7348-Mod-9)
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-9)

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 TfNSW

Consultation with TfNSW has been undertaken on 15 August 2022, with TfNSW 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.

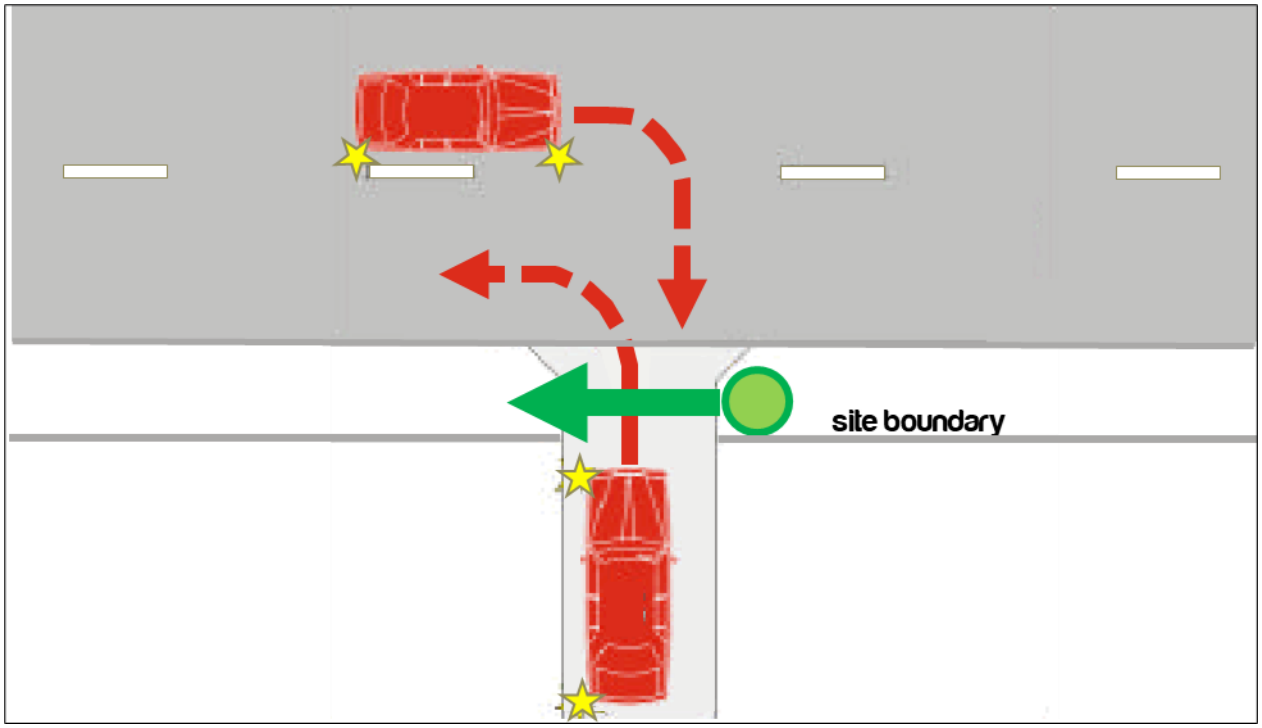


Figure 5: Pedestrian/Cyclist Priority of Movement at Site Access

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 Drivers 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 2A is a 30.0 metre Super B-double. 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 Emporium Avenue and 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.

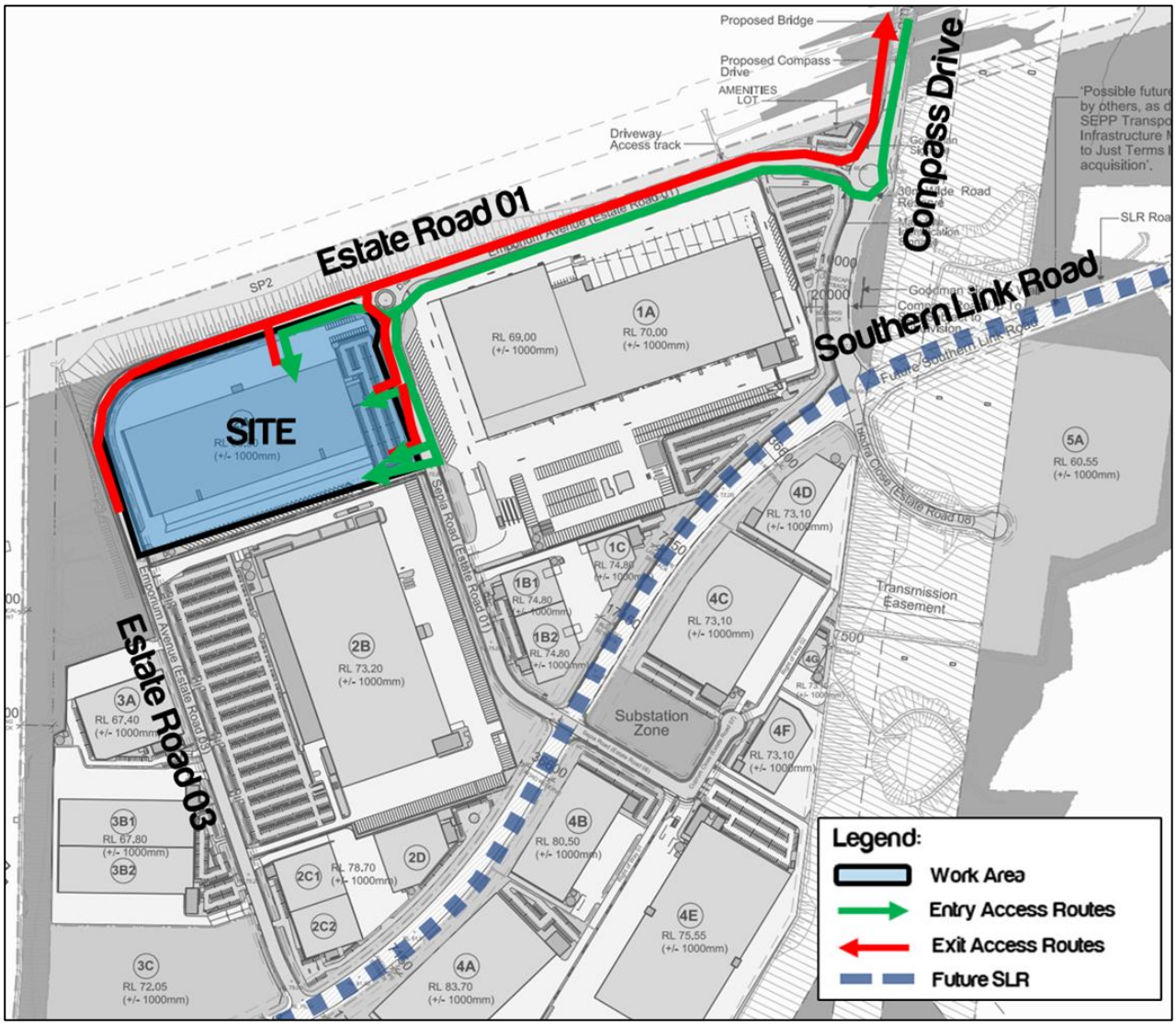


Figure 6: Warehouse 2A Access Routes.

Further to the above, the on-site circulation within Warehouse 2A shall provide access for Fire trucks, Side loading and dedicated unhitching areas as outlined below in **Figure 7**.

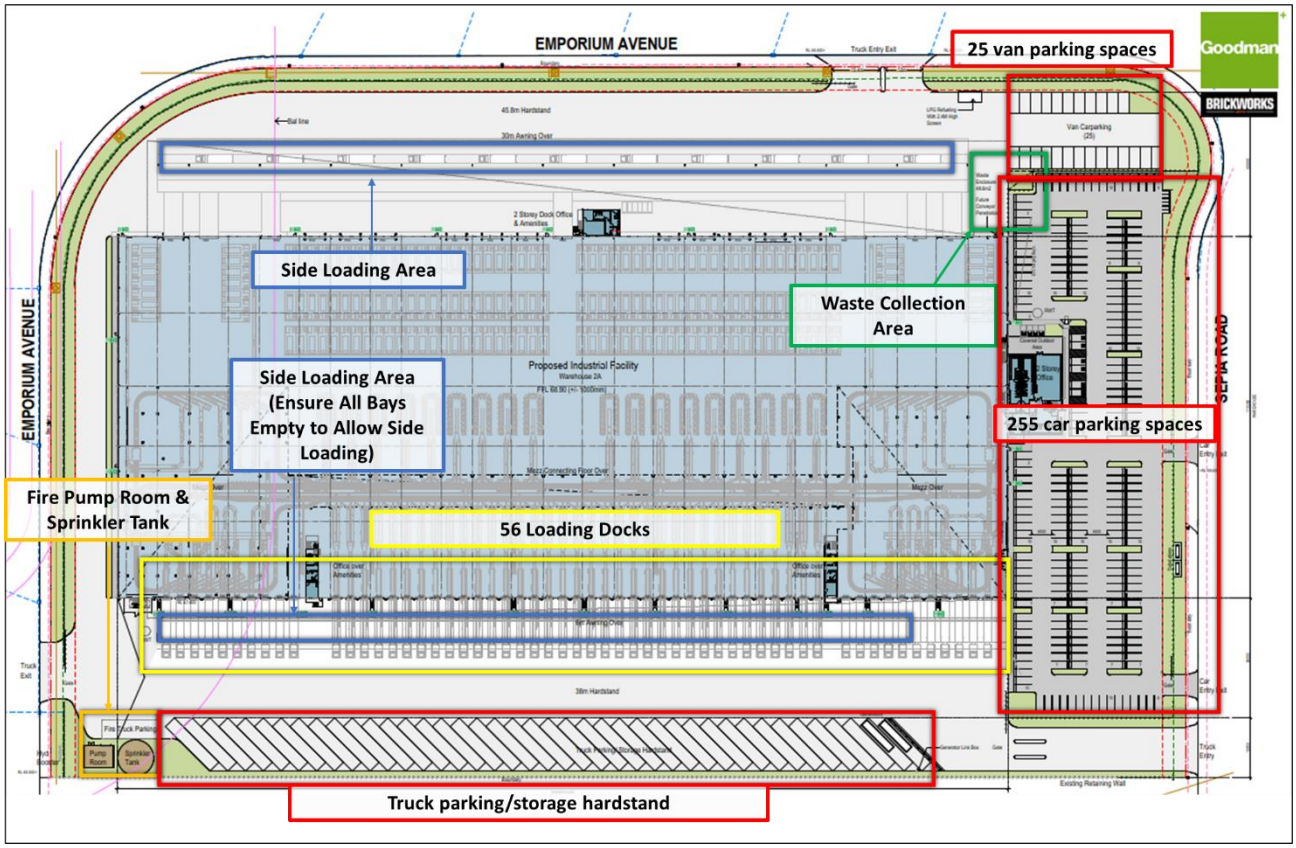


Figure 7: Light and Heavy Vehicle Parking and Loading Areas

4.3 Vehicle Queuing

As outlined in Section 2.5, the development has a threshold of 1,530 commercial vehicle movements per day, and AM and PM peak hour traffic generation of 8 and 48 vehicles per hour respectively.

The access driveway from Emporium Avenue (Estate Road 03), as well as on 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 areas 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 possible 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 9 approval. The rates are as follows:

- 1 space per 300 m^2 for Warehouse;
- 1 space per 40 m^2 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 5 WAREHOUSE 2A PARKING REQUIREMENTS

Land Use	GFA (m^2)	Requirement	Total Requirement	Total Provision
Warehouse	42,665	142	176	255
Office	1,350	34		

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 2A 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 6 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.	• 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; • 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.	• 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; • 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: • Undertake additional parking reviews to determine cause of higher limit parking space issues in more detail.	Condition Amber responses, plus the following additional responses; • Temporary halting of activities and resuming when conditions have improved. • Provide incentives for carpooling and utilising active transport measures.

			• 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	• 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; • 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: • 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; • 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;

			implement additional remediation measures such as: • 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.	• 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	No response required. Continue monitoring program	Review and investigate operational activities, and where appropriate, implement additional remediation measures such as: • 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; • 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	No response required. Continue monitoring program	• 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.	Condition Amber responses, plus the following additional responses; • 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	Queuing identified at the Site access	Queuing 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. • 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; • 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; • 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; • Undertake additional noise surveys to review cause in more detail.

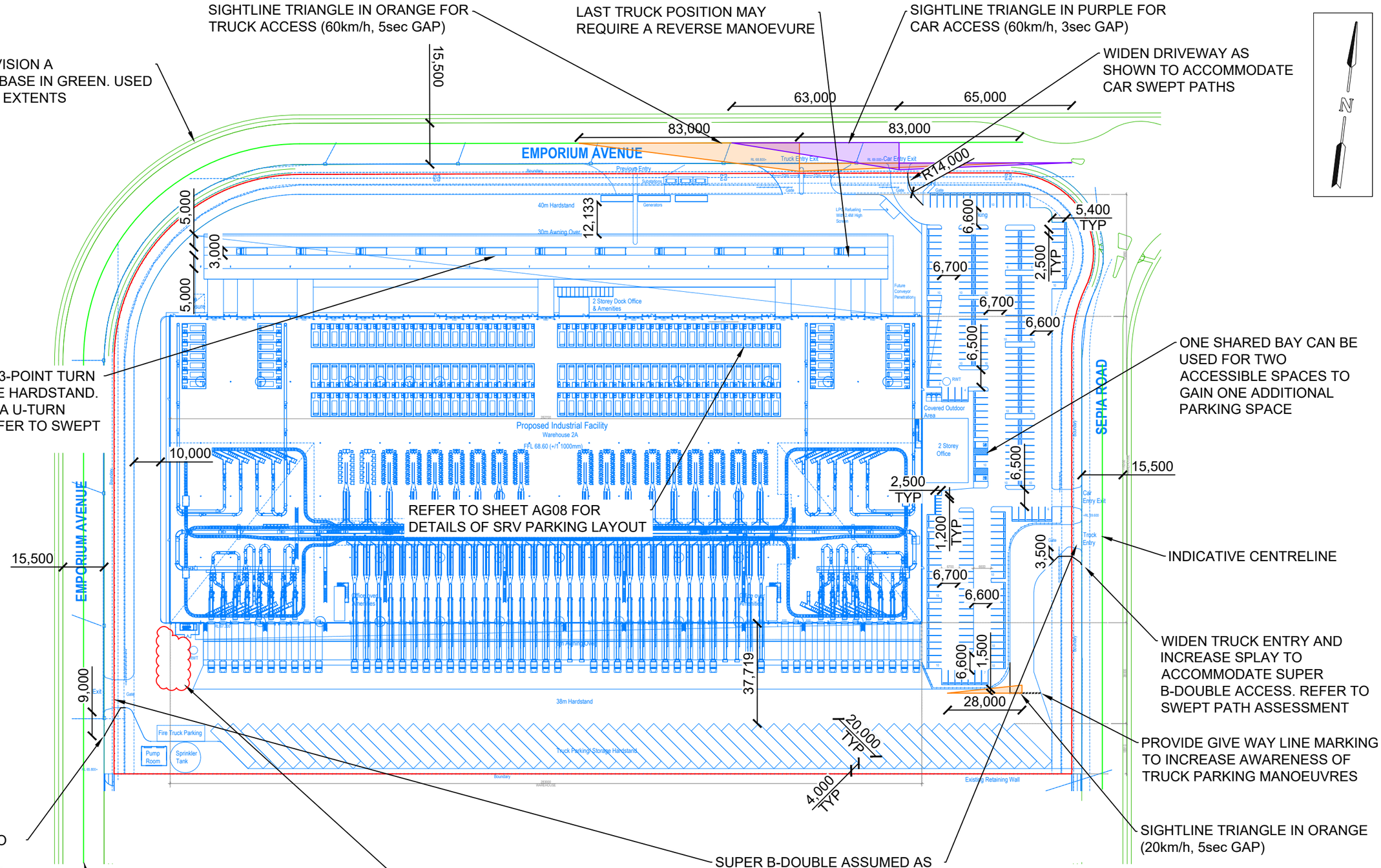
			• Undertake additional noise reviews to determine cause of higher limit noise issues in more detail. • Review OTMP (and other sub-plans) and update where necessary. • Provide additional training to tenants to provide information on lowering noise emissions.	• Surveys of each tenancy shall be required 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.

6.3 Key Responsibilities

Management of Warehouse 2A 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



GENERAL NOTES

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Base Plan (Job No 21220, drawing OAK 2A DA 10, revision D,dated 27.09.21) prepared by SBA Architects, received 29.09.21.
Emporium Avenue and Sepia Road planned for a posted speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 300mm clearance.

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SCALE: Custom	NTS	KEMPS CREEK, NSW	FILE NAME: AG1518-03-v01.dwg / SHEET: AG01

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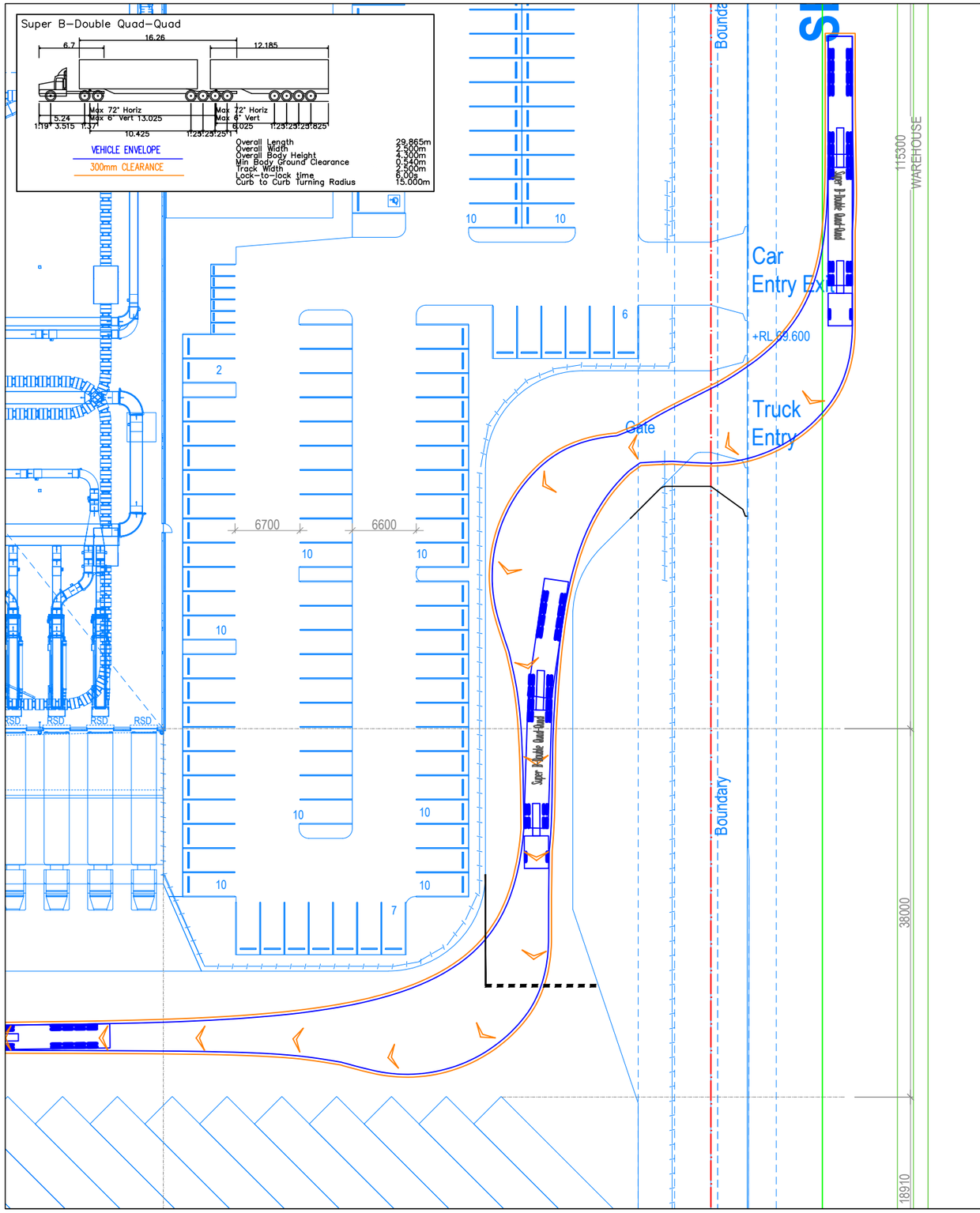

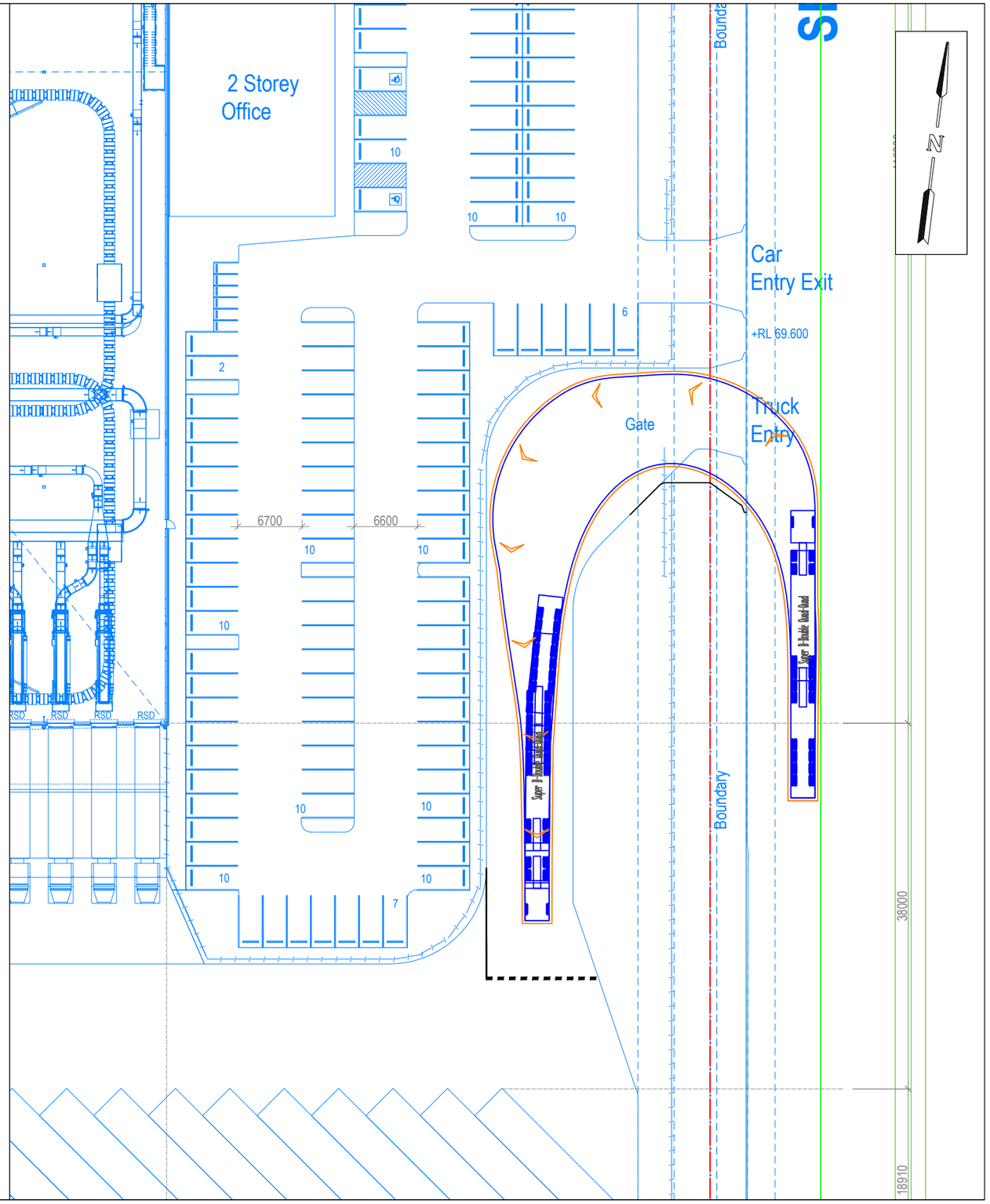

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DATE	30.09.2021
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PROJECT
1518
KEMPS CREEK, NSW

DOCUMENT INFORMATION
TRANSPORT ASSESSMENT
WAREHOUSE 2A SWEPT PATH ASSESSMENT

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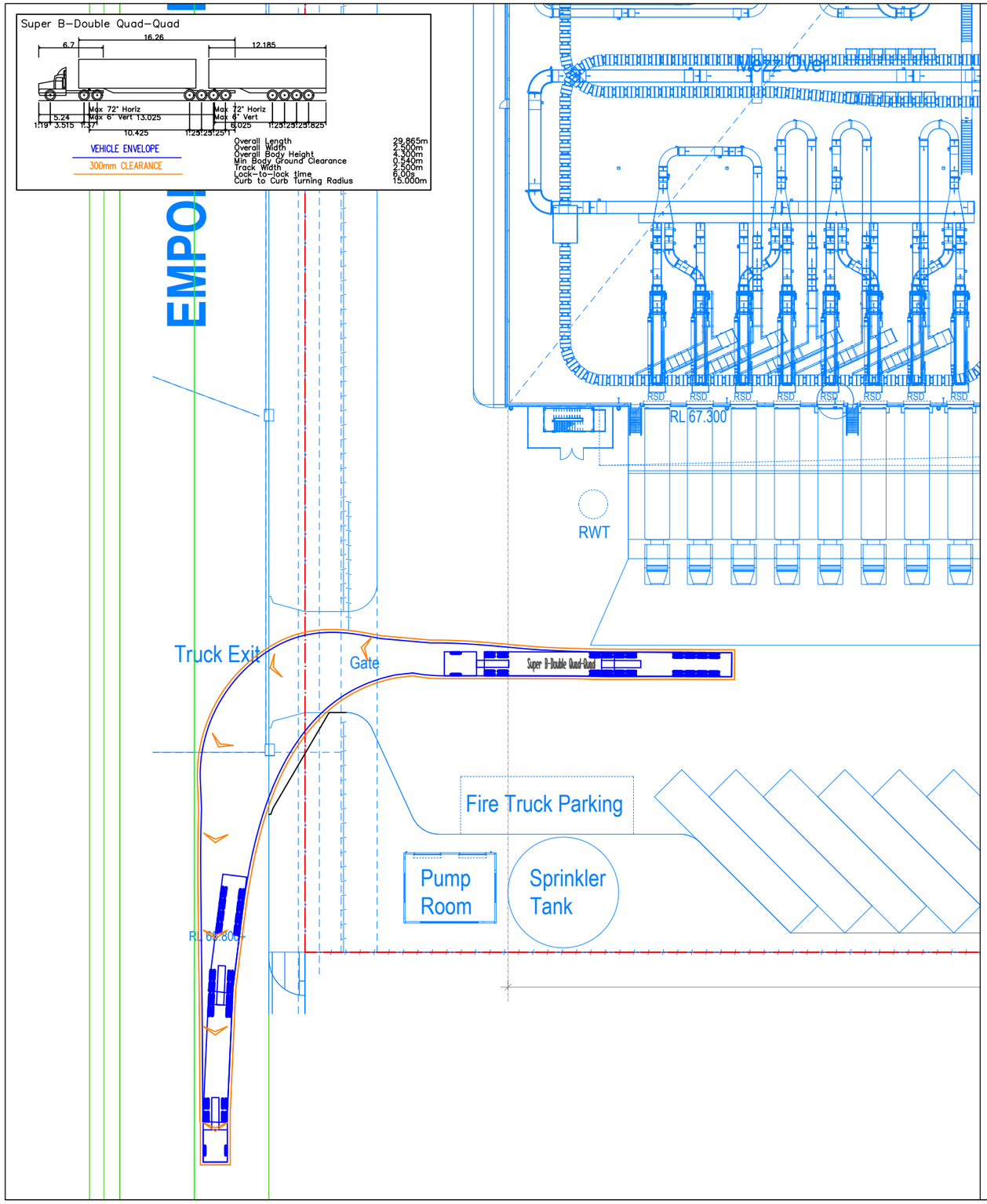

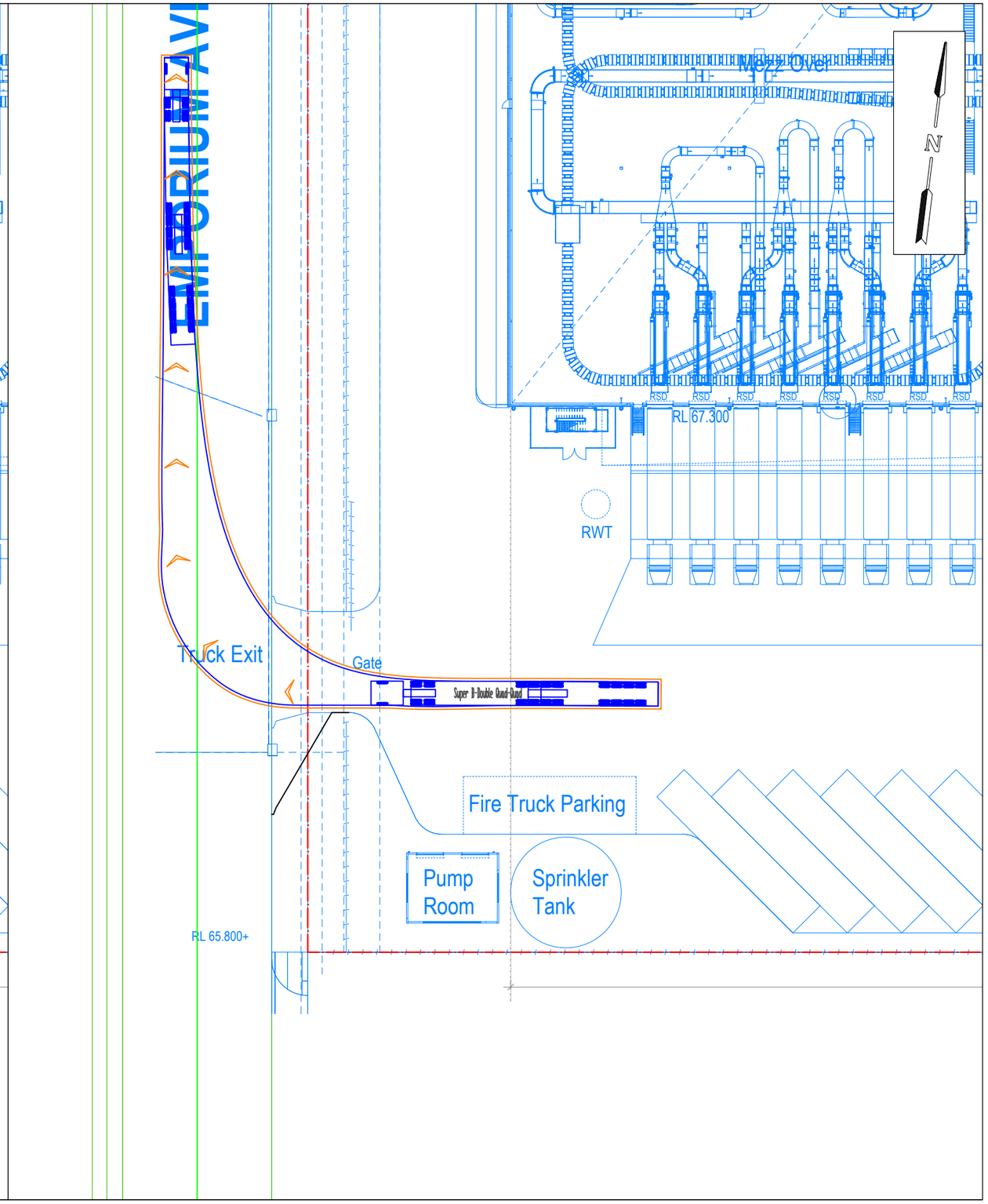

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PROJECT: 1518, KEMPS CREEK, NSW

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WAREHOUSE 2A SWEPT PATH ASSESSMENT

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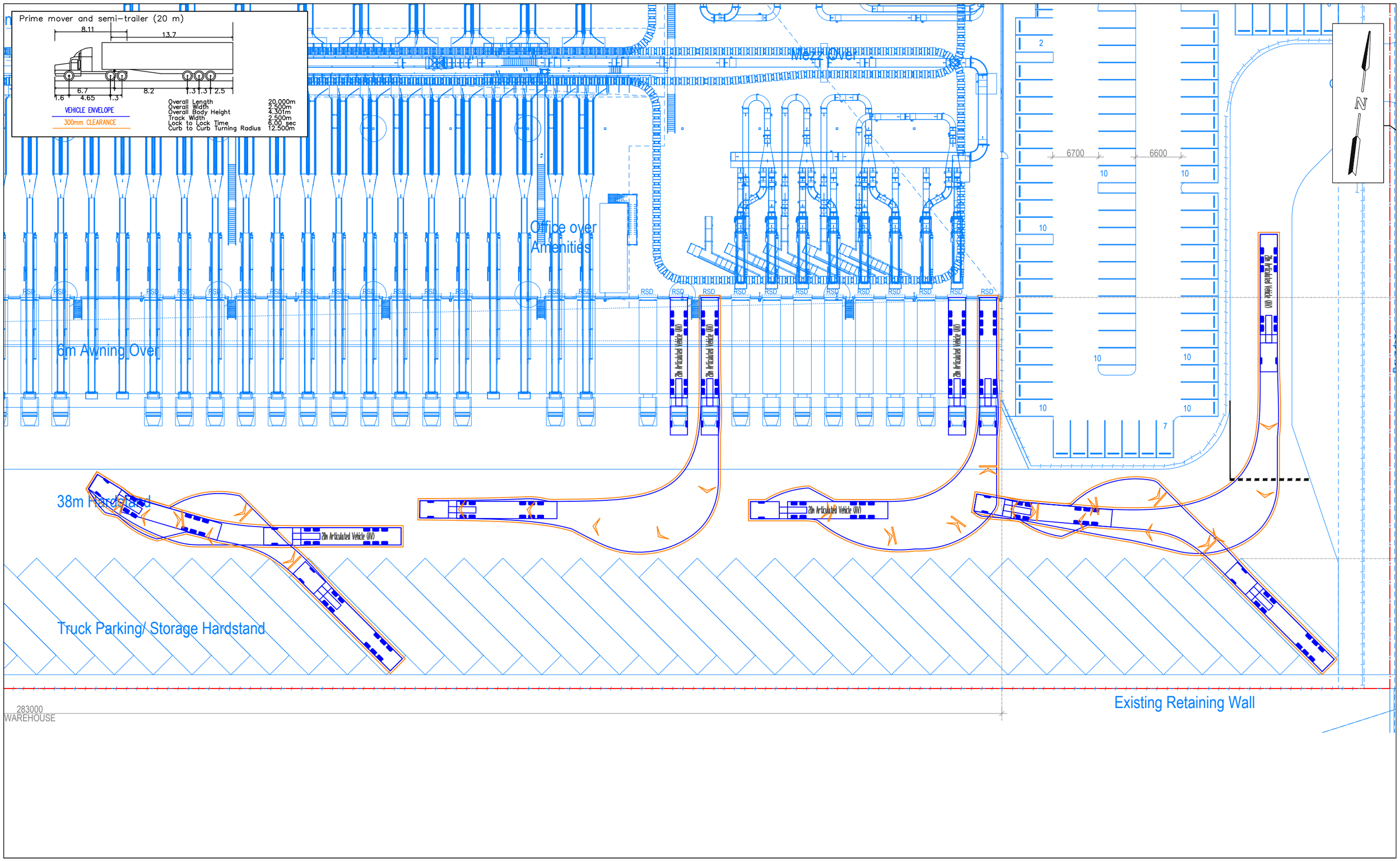

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1518
KEMPS CREEK, NSW

DOCUMENT INFORMATION
TRANSPORT ASSESSMENT
WAREHOUSE 2A SWEPT PATH ASSESSMENT

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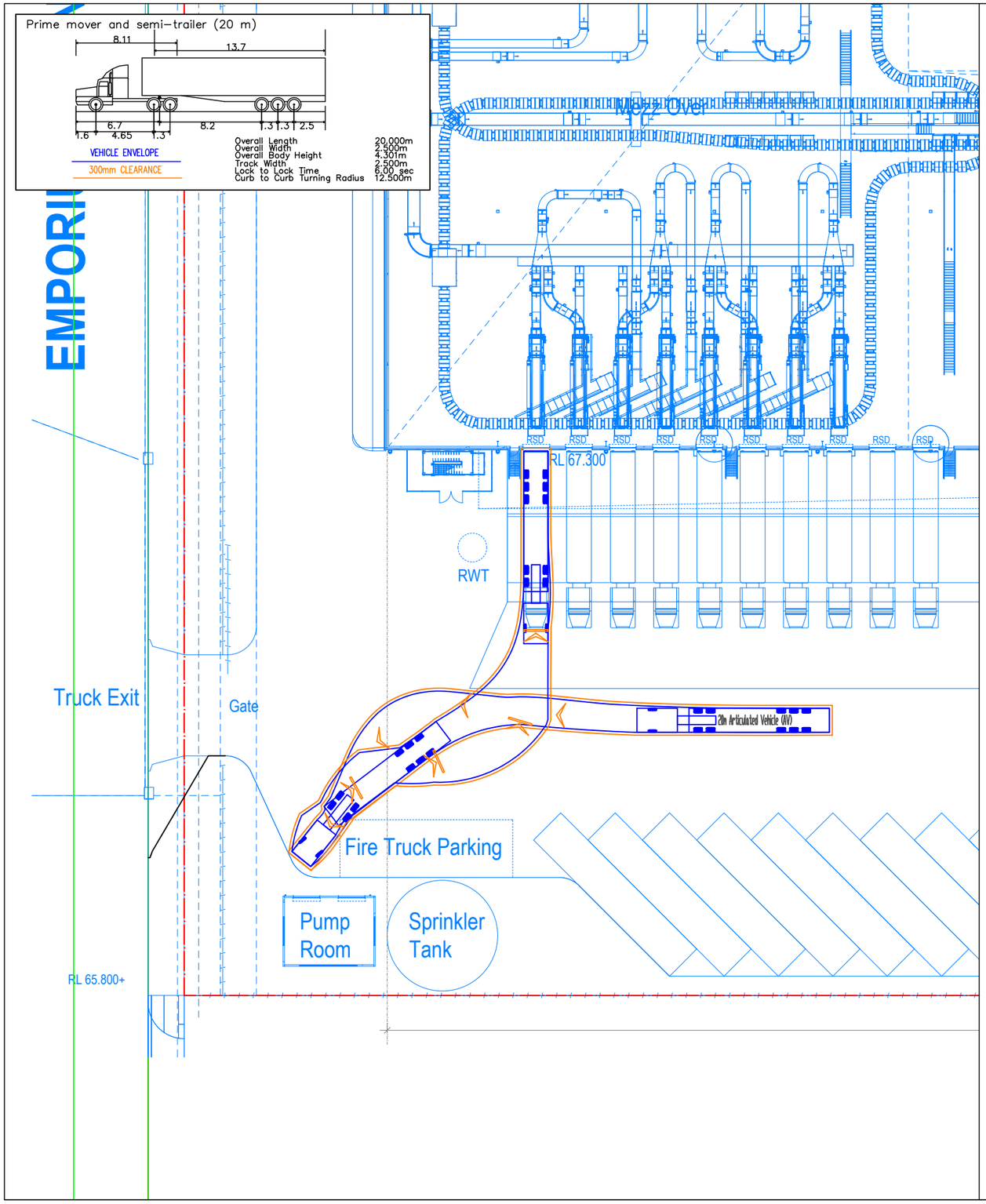

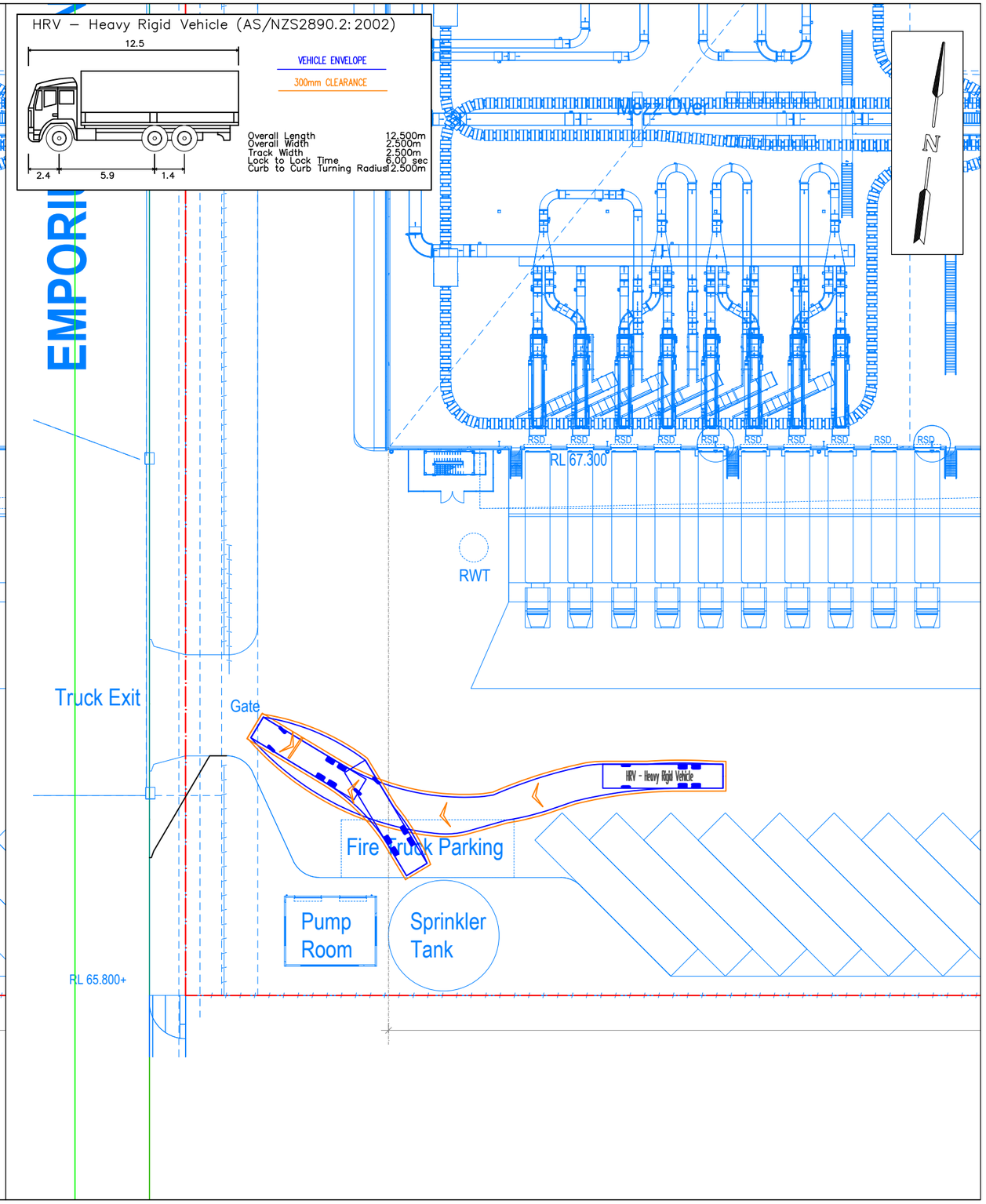

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WAREHOUSE 2A SWEPT PATH ASSESSMENT

FILE NAME	SHEET
AG1518-03-v01.dwg	AG05

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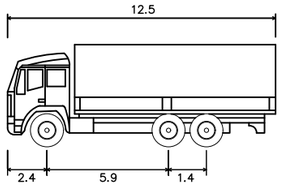
HRV – Heavy Rigid Vehicle (AS/NZS2890.2: 2002)

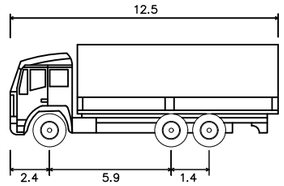


VEHICLE ENVELOPE

300mm CLEARANCE

Overall Length	12.500m
Overall Width	2.500m
Track Width	2.500m
Lock to Lock Time	6.00 sec
Curb to Curb Turning Radius	12.500m

HRV – Heavy Rigid Vehicle (AS/NZS2890.2: 2002)



VEHICLE ENVELOPE

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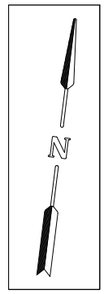
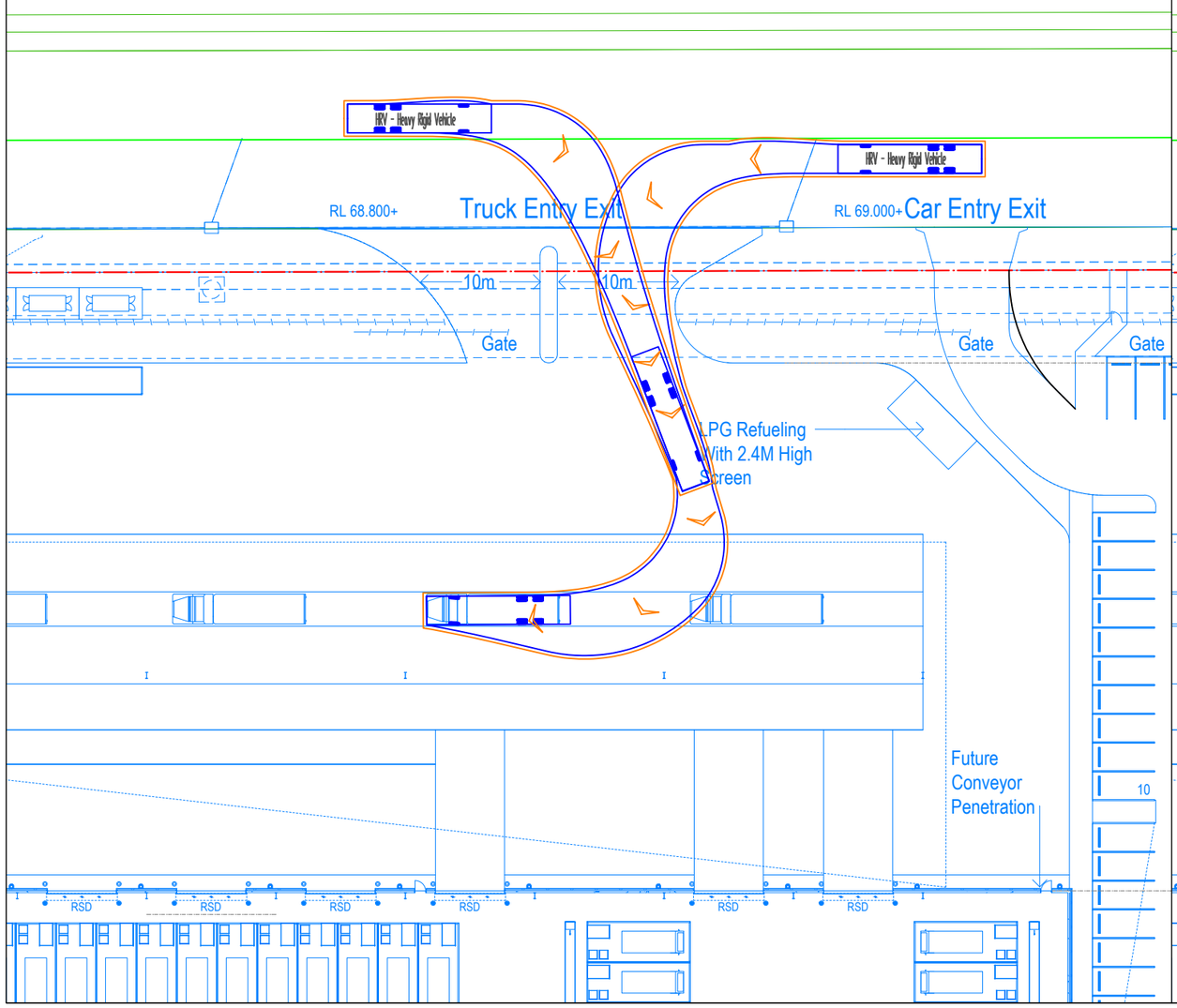
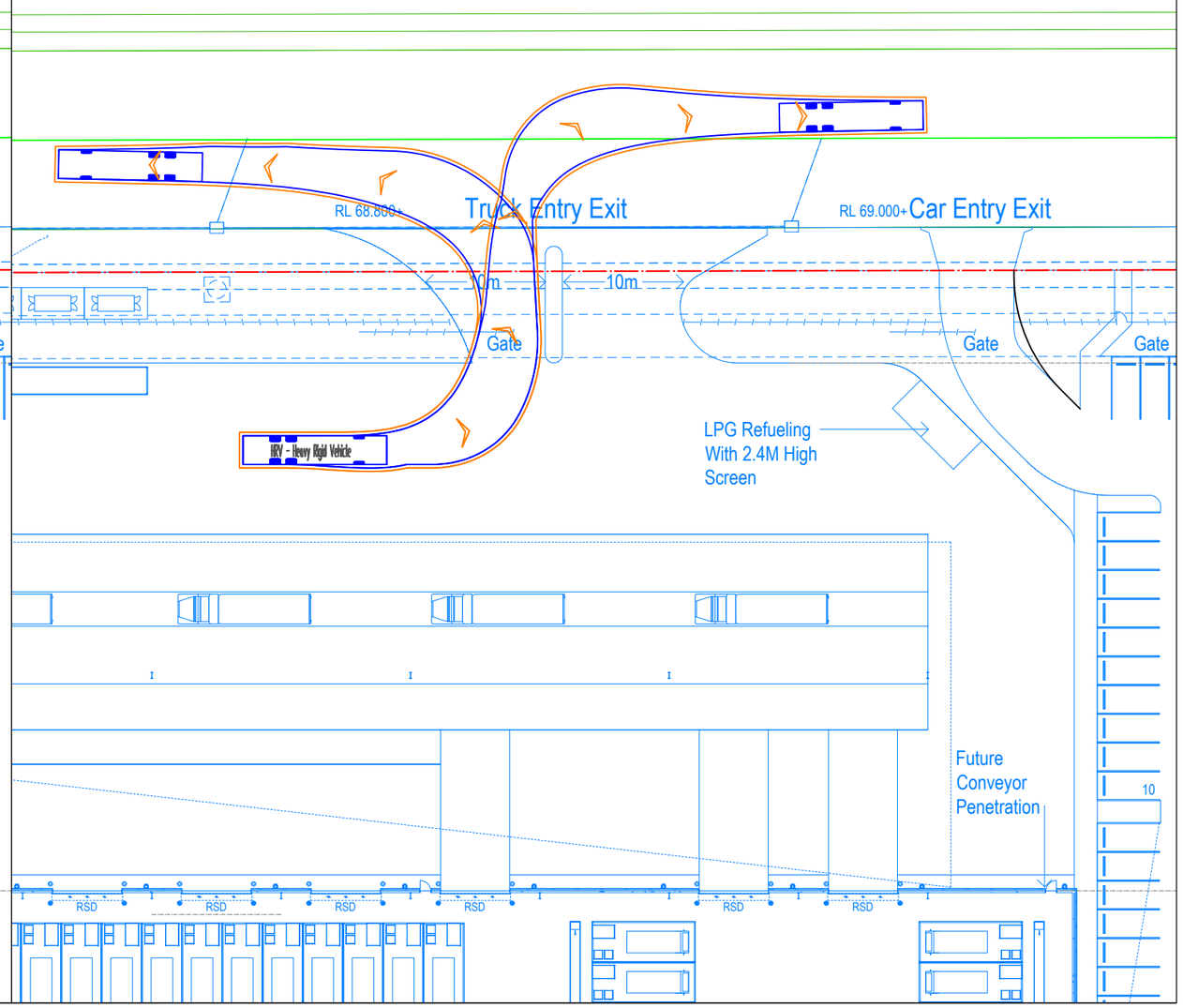
Lock to Lock Time	6.00 sec
Curb to Curb Turning Radius	12.500m







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PROJECT: 1518

KEMPS CREEK, NSW

DOCUMENT INFORMATION

TRANSPORT ASSESSMENT

WAREHOUSE 2A SWEPT PATH ASSESSMENT

FILE NAME	SHEET
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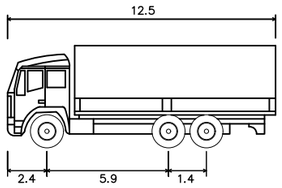
PLOT DATE: 30/09/2021 4:21:19 PM | CAD REFERENCE: C:\Users\Eric Ye\Desktop\Design\AG1518-03-v01.dwg | Eric Ye |

HRV – Heavy Rigid Vehicle (AS/NZS2890.2: 2002)

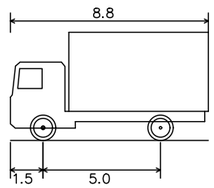


VEHICLE ENVELOPE

300mm CLEARANCE

Overall Length	12.500m
Overall Width	2.500m
Track Width	2.500m
Lock to Lock Time	6.00 sec
Curb to Curb Turning Radius	12.500m

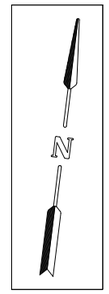
MRV – Medium Rigid Vehicle (AS/NZS2890.2: 2002)

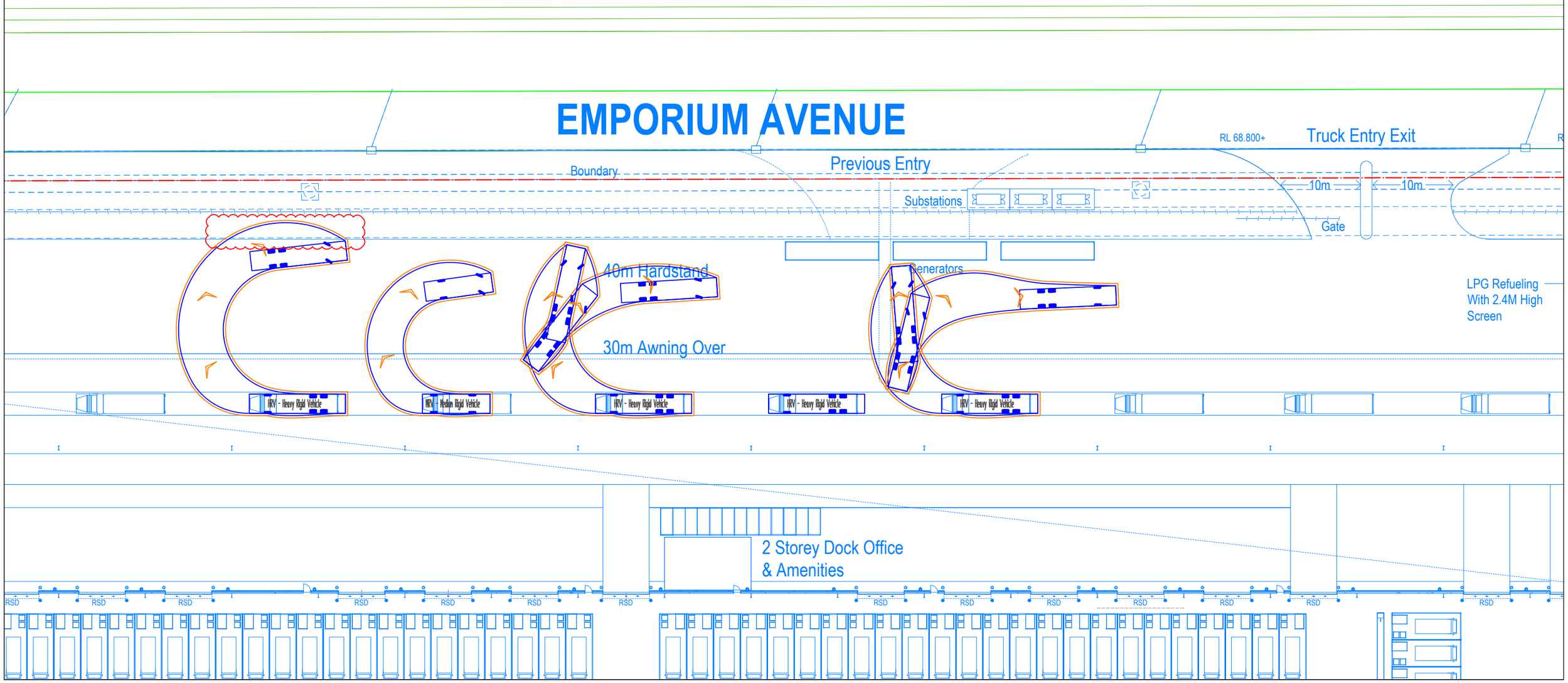


VEHICLE ENVELOPE

300mm CLEARANCE

Overall Length	8.800m
Overall Width	2.500m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m





GENERAL NOTES

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Base Plan (Job No 21220, drawing OAK 2A DA 10, revision D,dated 27.09.21) prepared by SBA Architects, received 29.09.21.
Emporium Avenue and Sepia Road planned for a posted speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 300mm clearance.

DESIGNED	Eric Ye
PAPER SIZE	A3
APPROVED BY	Ali Rasouli
DATE	30.09.2021
SCALE	1:500
	0 5 10

CLIENT: GOODMAN

PROJECT: 1518, KEMPS CREEK, NSW

DOCUMENT INFORMATION

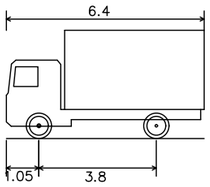
TRANSPORT ASSESSMENT

WAREHOUSE 2A SWEPT PATH ASSESSMENT

FILE NAME	SHEET
AG1518-03-v01.dwg	AG07

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

SRV – Small Rigid Vehicle (AS/NZS2890.2: 2002)

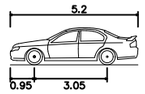


VEHICLE ENVELOPE

300mm CLEARANCE

Overall Length	6.400m
Overall Width	2.330m
Track Width	2.330m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	7.100m

B99 Vehicle (AS/NZS2890.1: 2004)



VEHICLE ENVELOPE

300mm CLEARANCE

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	2.200m
Min Body Ground Clearance	0.312m
Track Width	1.840m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	6.30m

DELINEATION TO BE CONFIRMED BY SBA

IF SERVICE VEHICLE PARKING IS DELINEATED WITH LINE MARKING, CURRENT AISLE WIDTH IS SUFFICIENT FOR VEHICLE SIZES UP TO SRVs.

IF SERVICE VEHICLE PARKING IS DELINEATED WITH STRUCTURE, CURRENT AISLE WIDTH IS ONLY SUFFICIENT FOR VEHICLE SIZES UP TO B99s.

RSD

RSD

RSD

RSD

RSD

RSD

SRV - Small Rigid Vehicle

SRV - Small Rigid Vehicle

SRV - Small Rigid Vehicle

SRV - Small Rigid Vehicle

SRV - Small Rigid Vehicle

6,000

MINIMUM TWO-WAY AISLE WIDTH FOR SRVs IS 6200mm PLUS 300mm CLEARANCES TO STRUCTURE. I.E. IF DELINEATION IS STRUCTURE, AN AISLE WIDTH OF 6800mm IS REQUIRED FOR TWO-WAY MOVEMENT.

RECOMMEND EITHER OPERATING AISLES AS ONE-WAY CIRCULATION OR WIDEN AISLE BETWEEN PARKING MODULES

NORTHERN TWO PARKING SPACES WILL REQUIRE A 3-POINT TURN TO EXIT

Future Conveyor Penetration

10

10

3

Covered Out

N

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DESIGNED	Eric Ye
PAPER SIZE	A3
APPROVED BY	Ali Rasouli
DATE	30.09.2021
SCALE	1:250
0 2.5 5	

CLIENT: GOODMAN

PROJECT: 1518

KEMPS CREEK, NSW

DOCUMENT INFORMATION

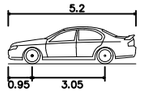
TRANSPORT ASSESSMENT

WAREHOUSE 2A SWEPT PATH ASSESSMENT

FILE NAME	SHEET
AG1518-03-v01.dwg	AG08

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

B99 Vehicle (AS/NZS2890.1: 2004)



VEHICLE ENVELOPE

300mm CLEARANCE

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Overall Body Height	2.200m
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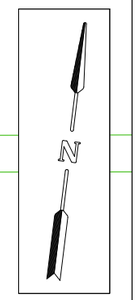

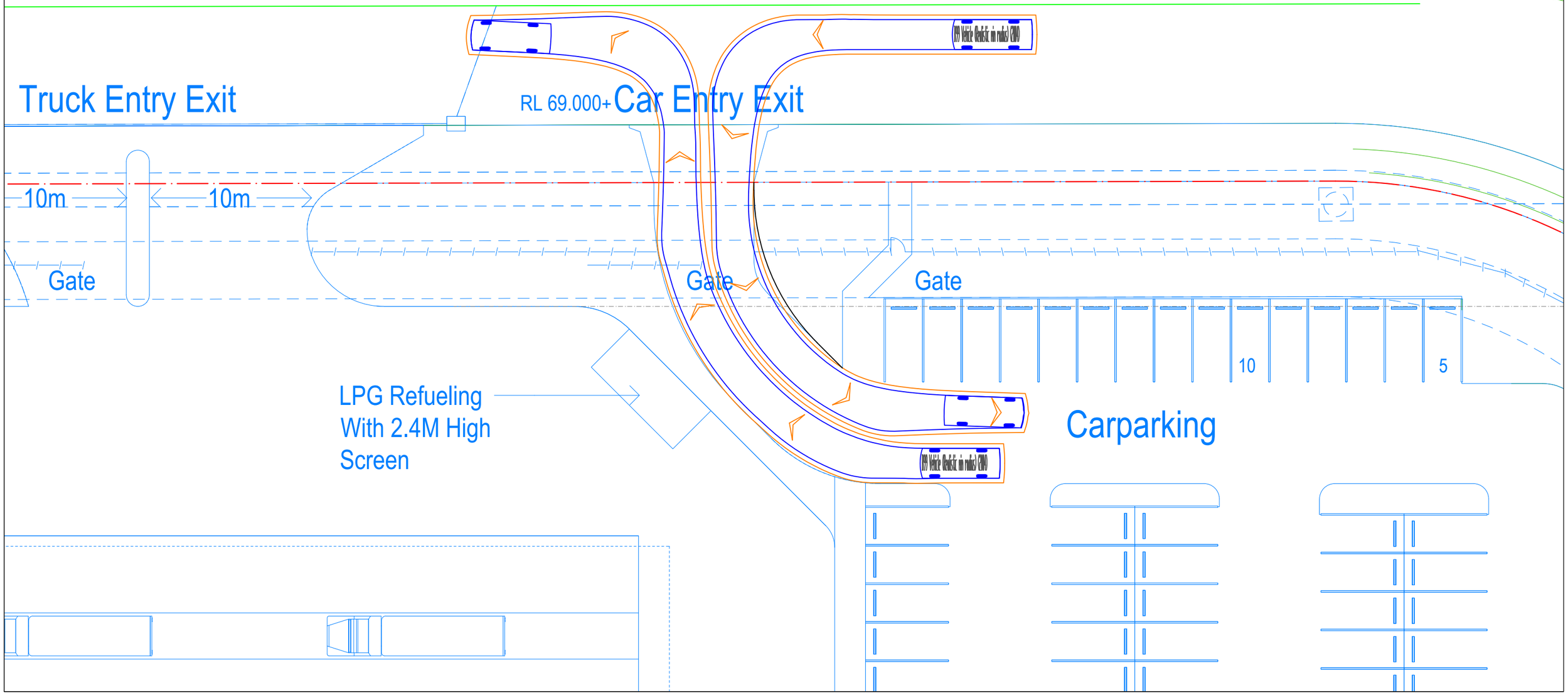

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DATE	30.09.2021
SCALE	1:250
	0 2.5 5

CLIENT: GOODMAN

PROJECT: 1518

KEMPS CREEK, NSW

DOCUMENT INFORMATION

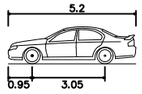
TRANSPORT ASSESSMENT

WAREHOUSE 2A SWEPT PATH ASSESSMENT

FILE NAME	SHEET
AG1518-03-v01.dwg	AG09

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

B99 Vehicle (AS/NZS2890.1: 2004)



VEHICLE ENVELOPE

300mm CLEARANCE

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	2.200m
Min Body Ground Clearance	0.312m
Track Width	1.840m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	6.30m

2 Storey Office

Boundary

SEP

115300 WAREHOUSE

Car Entry Exit

+RL 69.600

Truck Entry

Gate

10

10

10

6

2

6700

6600

10

10

N

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0 2.5 5	

CLIENT: GOODMAN

PROJECT: 1518 KEMPS CREEK, NSW

DOCUMENT INFORMATION

TRANSPORT ASSESSMENT

WAREHOUSE 2A SWEPT PATH ASSESSMENT

FILE NAME	SHEET
AG1518-03-v01.dwg	AG10

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

Appendix B. Drivers Code of Conduct

Drivers operating within Warehouse 2A 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.

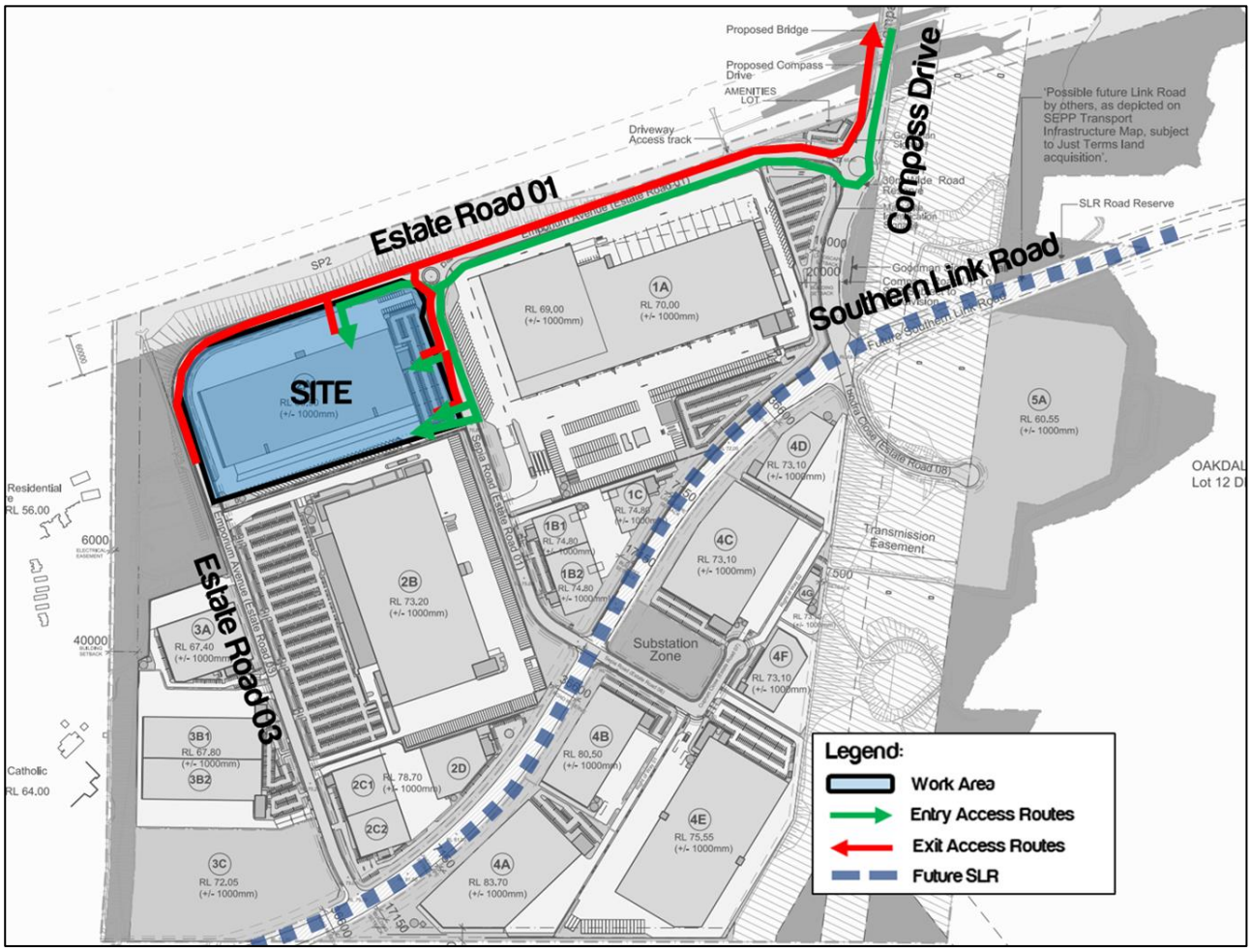
Drivers undertaking any of the following will be in a breach of conduct, result in administrative action and potential removal from Lot 2A and the broader Oakdale West Estate:

- 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 2A 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

Mario Dizon

From: Raymond Tran <Raymond.TRAN@transport.nsw.gov.au>
Sent: Monday, 15 August 2022 10:07 AM
To: Lachlan O'Reilly
Cc: Stephanie Partridge; Rob Moody; Luke Ridley; Alasdair Cameron; Malgy Coman; Laura Van putten
Subject: RE: Oakdale West Estate - Building 2A | Sustainable Travel Plan Consultation

Hi Lachlan

I have reviewed the OTMP and have no comment.

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

From: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>
Sent: Saturday, 6 August 2022 5:14 PM
To: Pahee Rathan <Pahee.RATHAN@transport.nsw.gov.au>; Raymond Tran <Raymond.TRAN@transport.nsw.gov.au>
Cc: Stephanie Partridge <Stephanie.Partridge@goodman.com>; Rob Moody <Rob.Moody@goodman.com>; Luke Ridley <Luke.Ridley@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>
Subject: Oakdale West Estate - Building 2A | Sustainable Travel Plan Consultation

Dear Pahee and Reymond,

As you're aware, Goodman are currently constructing the Oakdale West Estate. We're hoping to shortly commence operation of our Lot 2A warehouse (see indicated in red in Fig.1) within the Estate.

Figure 1 - Oakdale West, including Lot 2A

In accordance with the Consent for the development (SSD 9794683) , Goodman have prepared an Operational Traffic Management Plan (OTMP) and Sustainable Travel Plan (STP) for the facility which is in line with the Estate's (SSD 7348) approved overarching OTMP.

Based on the Consent, it is a requirement of Condition B5 (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:

Sustainable Travel Plan

B5. Prior to the commencement of operation of any part of the development, the Applicant must prepare a Sustainable Travel Plan. The Sustainable Travel Plan must:

(a) be prepared in consultation with TfNSW;

(b) outline facilities and measures to promote public transport usage, such as car share schemes and employee incentives; and

(c) describe pedestrian and bicycle linkages and end of trip facilities available on-site.

We'd therefore be grateful if you're able to please review the STP (contained within Appendix C of the attached Building 2A 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 15 August 2022 to remain on programme.

Regards,

Goodman

Lachlan O'Reilly
Project Administrator
Lachlan.OReilly@goodman.com

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M. +61 481 254 556

The Hayesbery
1-11 Hayes Road
Rosebery NSW 2018
Australia

www.goodman.com

OFFICIAL

Appendix D. Green Travel Plan

Green Travel Plan

Lot 2A – Oakdale West Industrial Estate

19/08/2022
P1518r07v3

Info@asongroup.com.au
+61 2 9083 6601
Suite 17.02, Level 17,
1 Castlereagh Street,
Sydney, NSW 2000

Document Control

Project No	1518
Project	Lot 2A – Green Travel Plan
Client	Goodman Property Services (Aust) Pty Ltd
File Reference	P1518r07v3 GTP_Lot 2A, Oakdale West Industrial Estate

Revision History

Revision No.	Date	Details	Author	Approved by
-	02/08/2022	Draft	M. Dizon	J. Laidler
Issue I	04/08/2022	Issue I	M. Dizon	J. Laidler
Issue II	18/08/2022	Issue II	M. Dizon	J. Laidler
Issue III	19/08/2022	Issue II	M. Dizon	J. Laidler

Contents

Contents Continued

Figures

Tables

APPENDICES

1 Introduction

1.1 Context

Ason Group has been engaged by Goodman Property Services (Aust) Pty. Limited (Goodman) to prepare a Green Travel Plan (GTP) relating to Lot 2A within the Oakdale West Industrial Estate (OWE) at Kemps Creek (the Site). It is noted that SSD 9794683[1] was approved on 16 December 2021, and as such the GTP has been prepared accordingly.

This GTP has been developed to address Condition B5 and B6 of the Oakdale West Estate Stage 3 Development (SSD-9794683) which is outlined in **Table 1**.

TABLE 1 CONDITIONS OF CONSENT (SSD 9794683)

Condition		Response
B5	Prior to the commencement of operation of any part of the development, the Applicant must prepare a Sustainable Travel Plan. The Sustainable Travel Plan must:	Noted. A Green Travel Plan (equivalent to a STP) has been prepared and largely addresses points a to c.
(a)	be prepared in consultation with TfNSW;	Noted. Consultation with TfNSW will be initiated as part of the finalisation of this GTP.
(b)	outline facilities and measures to promote public transport usage, such as car share schemes and employee incentives; and	Refer to Section 4 of this GTP.
(c)	describe pedestrian and bicycle linkages and end of trip facilities available on-site	Refer to Section 2.3 and Section 2.2.2 of this GTP.
B6	The Applicant must implement the Sustainable Travel Plan throughout operation of the development	Noted.

1.2 Goals

This GTP has specifically been prepared to achieve the following key goals:

1. Identify objectives and modes share targets (i.e., site and land use specific, measurable, and achievable and timeframes for implementation) to define the direction and purpose of the future GTP;
2. Suggest specific tools and actions to help achieve the objectives and mode share targets;
3. Suggest measures to promote and support the implementation of the GTP, including financial and human resource requirements, roles and responsibilities for relevant employees involved in the implementation of the future GTP;
4. Suggest a methodology and monitoring/review program to measure the effectiveness of the objectives and mode share targets of the future GTP, including the frequency of monitoring and the requirement for travel surveys to identify travel behaviours at appropriate times.

[1] https://www.planningportal.nsw.gov.au/major-projects/projects/oakdale-west-estate-stage-3-development

1.3 Objectives

Underpinning this GTP comprises a package of measures which could be adopted and designed to address the specific travel needs of the Site. In this regard, the overall intention is to encourage and facilitate the use of alternative and sustainable modes of transport and to reduce single-occupancy car travel for journeys to and from the Site.

The primary objectives of the future GTP will be to:

- Reduce the environmental footprint of Oakdale West Estate.
- Set future staff travel mode share targets.
- Improve access, amenity, convenience, and safety of sustainable transport modes to/from the Site.
- Promote the use of 'active transport' modes such as walking and cycling, particularly for short-medium distance journeys.
- Reduce reliance on the use of private vehicles for all journeys.
- Encourage a healthier, happier and more active & public transport use culture.

Having regard for the above, this GTP seeks to adopt the movement hierarchy shown in **Figure 1**, with priority given to 'active transport' such as walking and cycling.

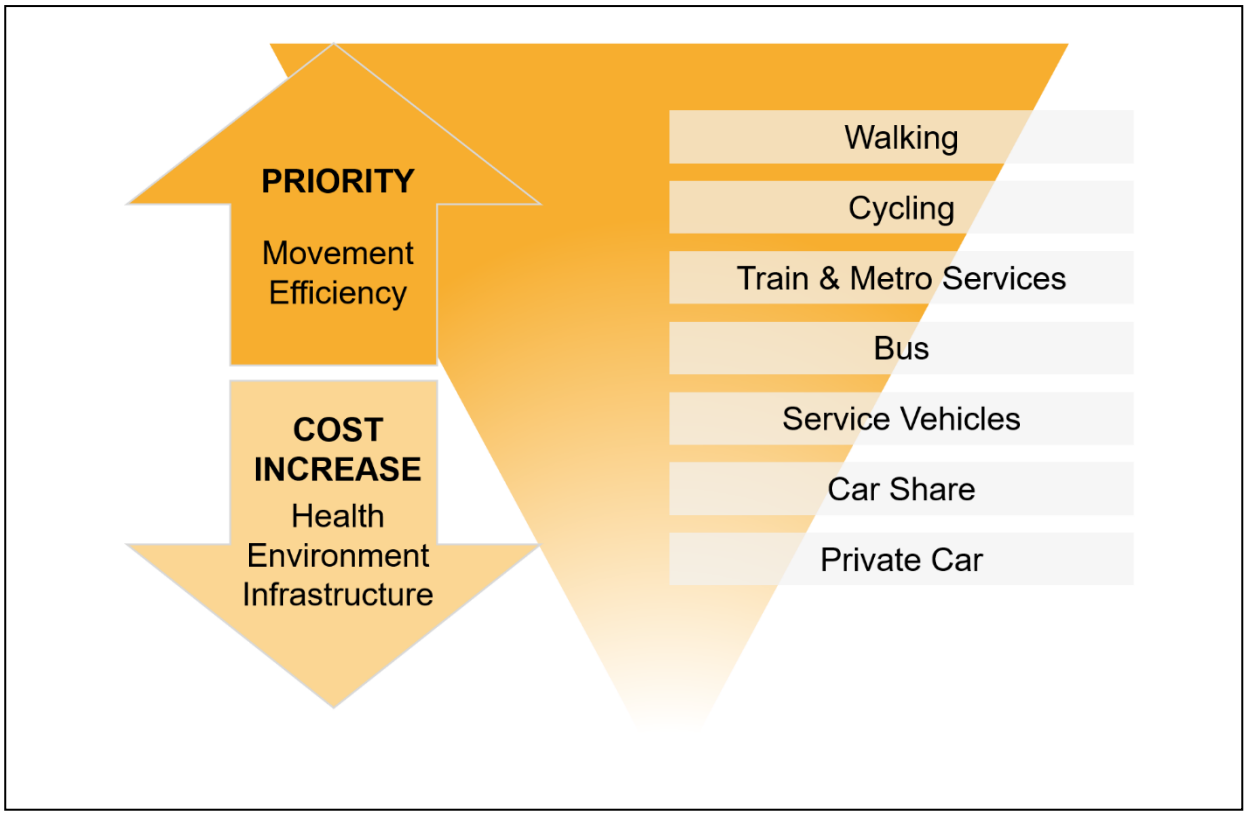


Figure 1: Movement Hierarchy

2 Site Audit

2.1 Introduction

An audit of the Site is required to determine the existing facilities in the area and review existing transport choices. This section will need to be updated prior to implementation of any future Plan, and should be updated regularly, to ensure that it remains as up to date as possible. The audit considers the following:

- Public transport services in the area, including proximity to the Site, frequency of services and accessibility;
- Bicycle and pedestrian facilities, including accessibility, connectivity, and safety; and
- Mode-split data for the Site and local area.

2.2 Development Site

2.2.1 Location & Description

Warehouse 2A is an industrial warehouse development with ancillary office, located within the broader Oakdale West Estate (OWE). 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 599,455m^2 is to be provided by the industrial buildings within the Estate, as outlined by the Concept Plan (SSD 7348 MOD 10). It is noted that MOD 10 is currently under review.

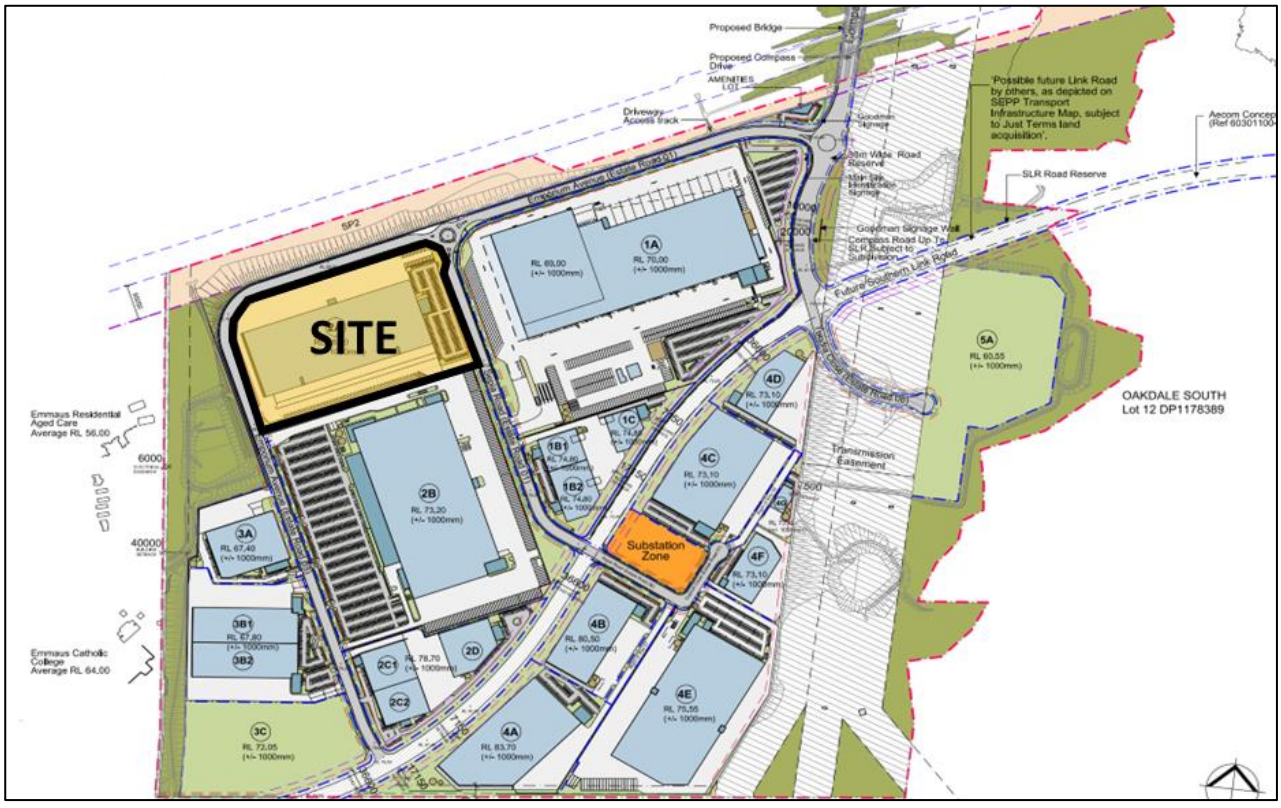


Figure 2: OWE Context Showing Warehouse 2A (MOD 10)

Figure 3 below provides the location of the Site in the context of the Estate with regard to existing road systems.

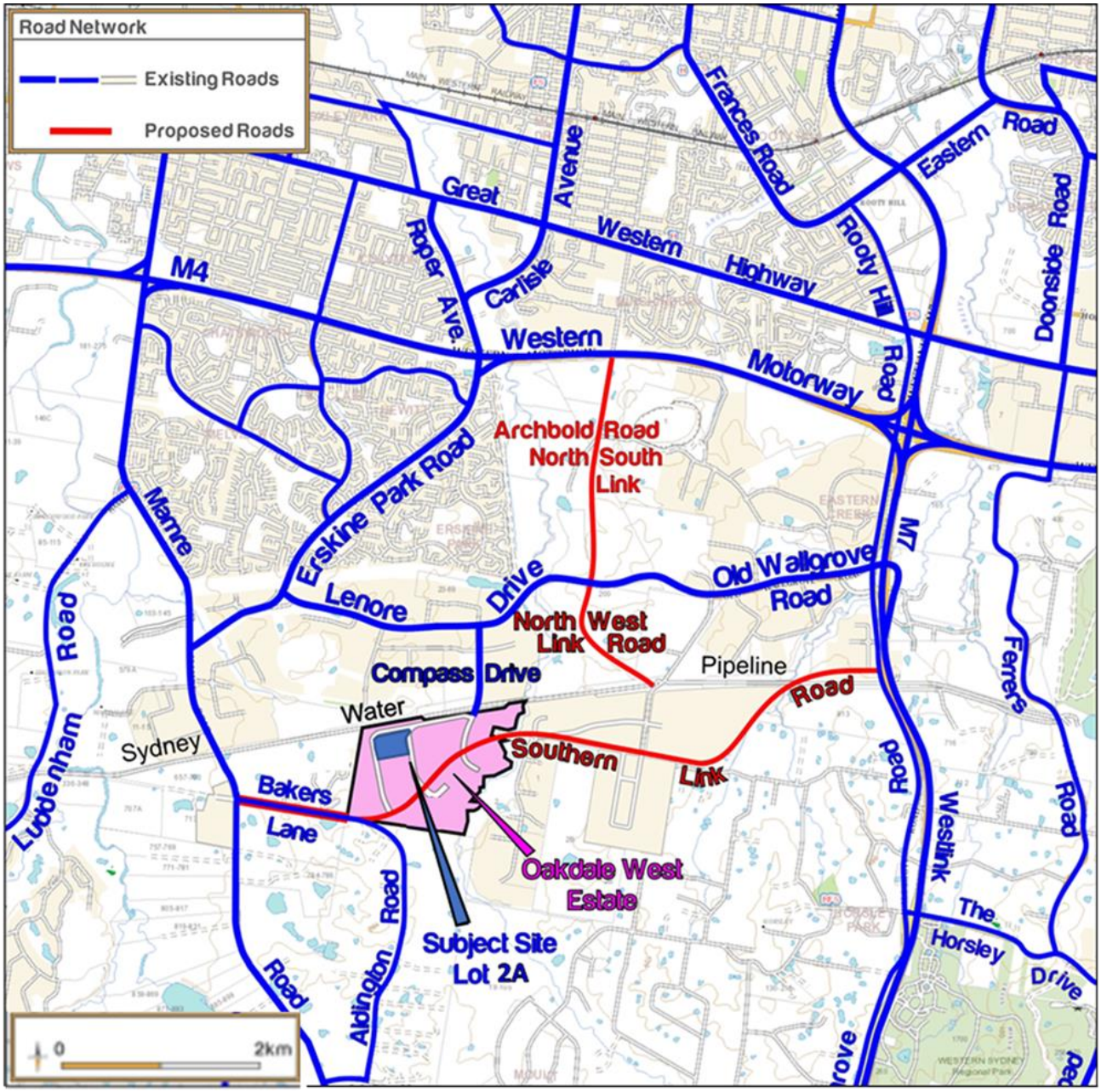


Figure 3: Site Appreciation and Road Hierarchy

2.2.2 Proposed Development

A site plan and an overview of the proposed surroundings are provided in Error! Reference source not found.. Warehouse 2A details are summarised in **Table 2.**

TABLE 2: DEVELOPMENT YIELD

Component	Warehouse 2A
Warehouse GFA (m^2)	42,665[1]
Office GFA (m^2)	1,350
Total GFA (m^2)	44,015
Car Parking Provision	255 spaces[2]
Loading Bay Provisions	56 spaces[3]
Accessible Spaces	6 Spaces
Fuel Efficient Parking	10 Spaces
Bicycle Parking[4]	24 Spaces
Showers[4]	4 Showers
Lockers[4]	195

Note: 1) Includes 8,403 m^2 of mezzanine GFA

2) Includes 6 accessible spaces.

3) Includes bays recessed docks only.

4) See Figure 5 and Figure 6 for bicycle parking and changeroom locations.

Warehouse 2A is an industrial warehouse development with ancillary office. **Figure 4** below presents a plan illustrating the proposed development showing the general layout of the warehouse and associated traffic circulation, loading, and parking areas.

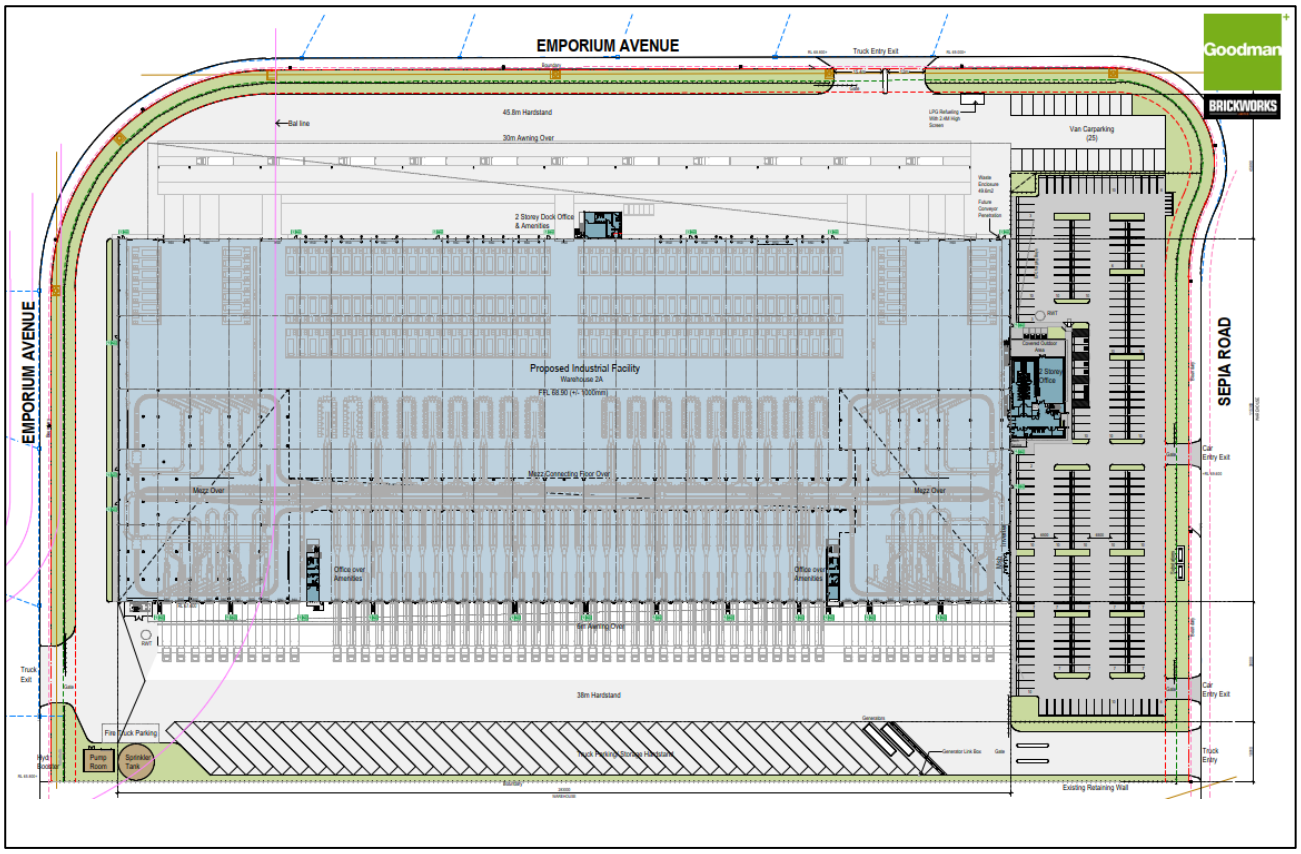


Figure 4: Warehouse 2A Site Plan

A reduced plan of Warehouse 2A has been provided below for reference.

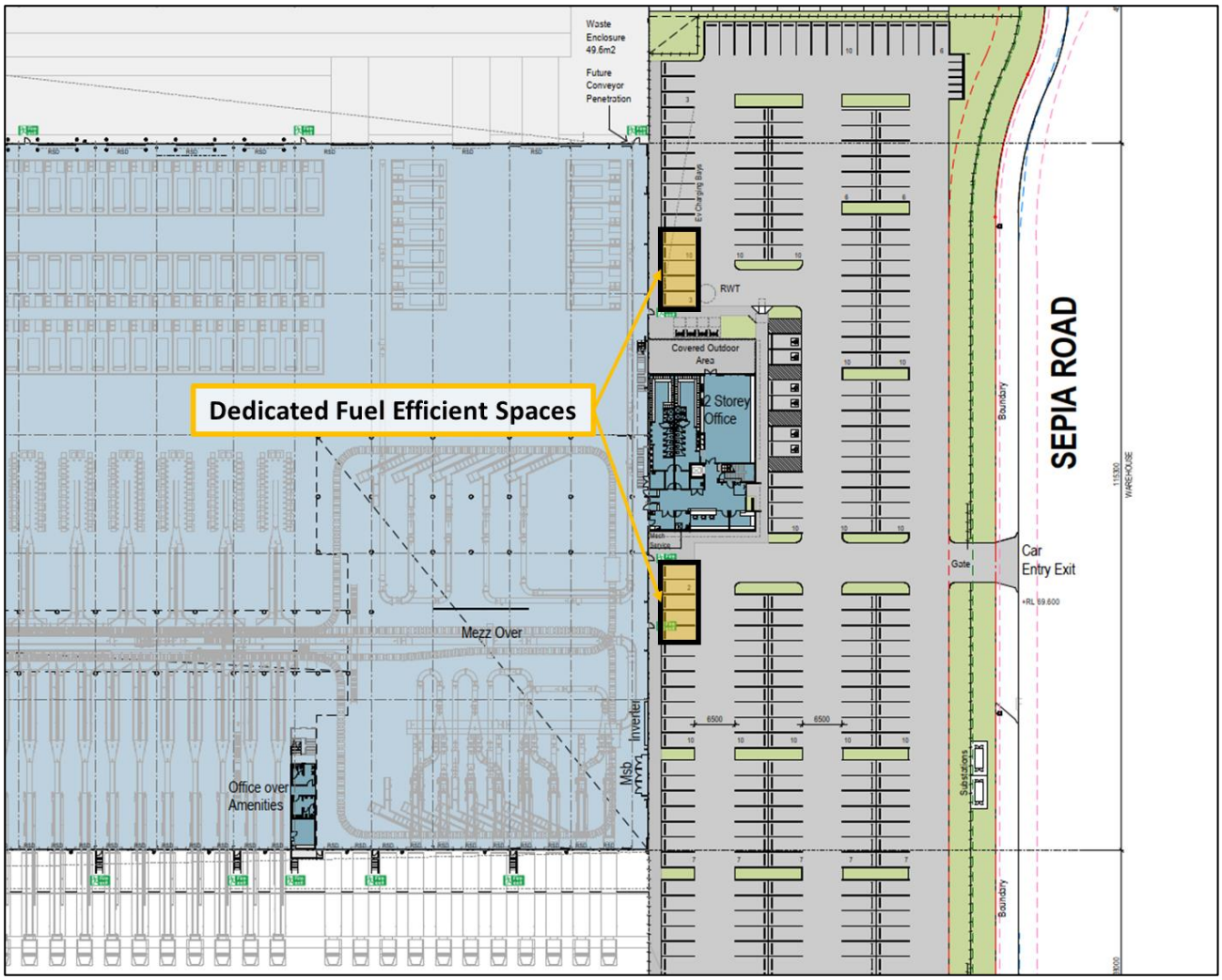


Figure 5: Dedicated Fuel-Efficient Spaces – Warehouse 2A

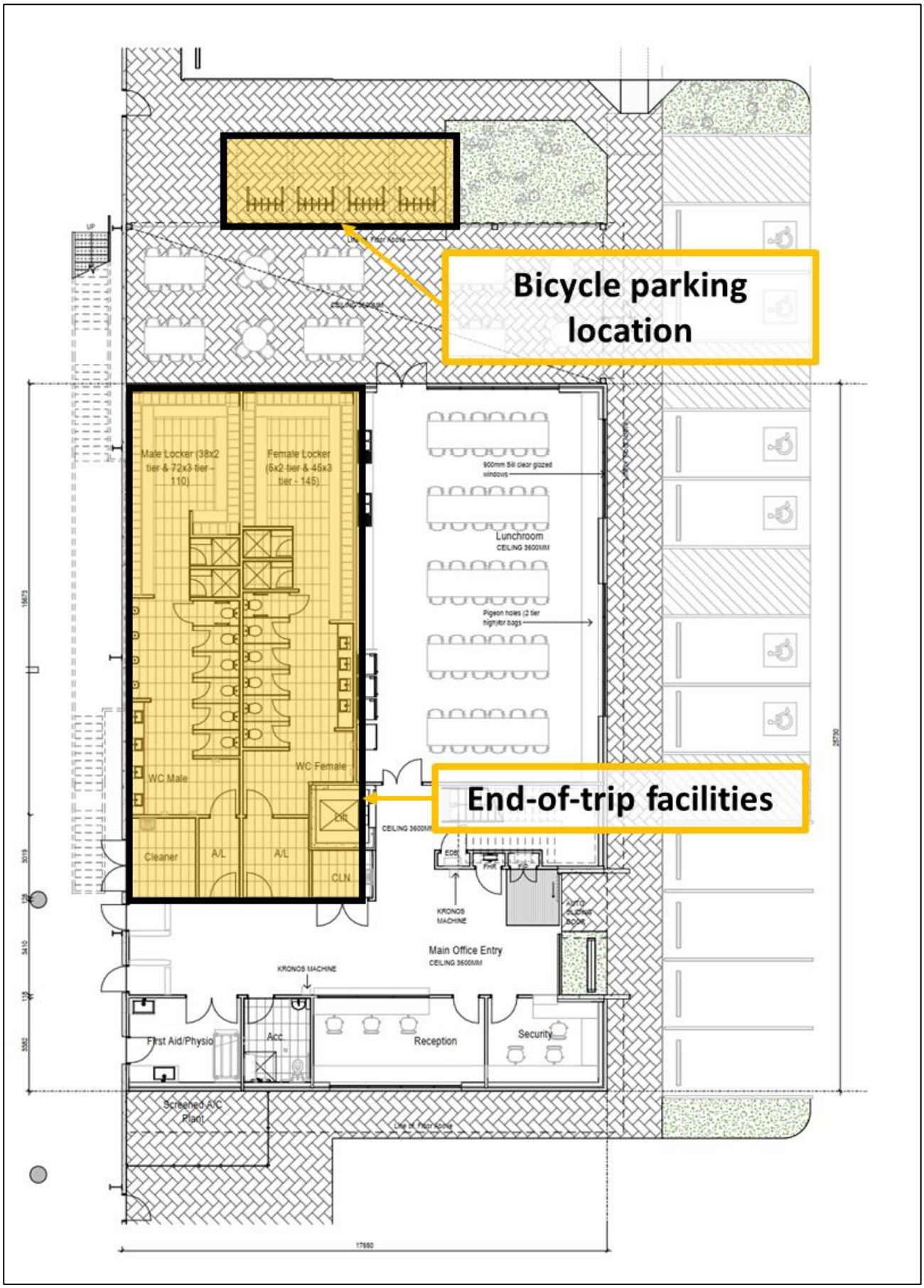


Figure 6: End-of-trip facilities – Warehouse 2A

2.3 Existing Public & Active Transport

2.3.1 Introduction

The Site is limited with the current active and public and transport service offerings, as shown in **Figure 7**. A summary of existing public transport services is provided below.

2.3.2 Active Transport Connections

A Shared Path (cyclists and pedestrians) is provided along the northern side of Lenore Drive and western side of Old Wallgrove Road, providing connections to the regional pedestrian and cycle networks. Compass Drive and the internal roads will include a 2.5-metre shared path for both pedestrians and cyclists.

Footpaths and cycle routes do not carry high volumes of pedestrians or cyclists. Notwithstanding, any TGS shall maintain a suitable level of access past work areas for these users at all times.

2.3.3 Bus Services

TfNSW Guidelines state that bus services influence the travel mode choices of sites within 400m (approximately 5 minutes' walk) of a bus stop.

The introduction of a new bus route provides additional access for workers/ visitors within OWE. This new bus service (Route 779) commenced operations on 24 October 2021 and provides direct access to and from St Marys Train Station. Introduction of a direct connection with St Marys Train Station increases the accessibility of the site via public transport services.

2.3.4 Train Services

The Integrated Public Transport Service Planning Guidelines, Sydney Metropolitan Area (Transport for NSW, December 2013) states that rail services influence the travel mode choices of areas within 800 metres (approximately 10 minutes' walk) of a railway station. The closest railway station to the Oakdale West Precinct is Mt Druitt Station, is approximately 7km north of the site. This would imply that commuting by rail would have minimal influence on workplace travel.

It should be noted that several studies conducted for the Broader Western Sydney Employment Area (BWSEA) reference the potential development of connecting freight or passenger corridor to the Site's west, connecting the T1, T2 and T5 lines to Badgerys Creek Airport[2,3].

[2] Western Sydney Rail Needs Scoping Study https://www.westernsydneyairport.gov.au/files/WSRNSS_Outcomes_Report.pdf

[3] Broader Western Sydney Employment Area – Structure Plan https://www.planning.nsw.gov.au//media/Files/DPE/Reports/broader-western-sydney-employment-area-structure-plan-transport-planning-preliminary-analysis-report-exhib-draft-2013-06.pdf?la=en

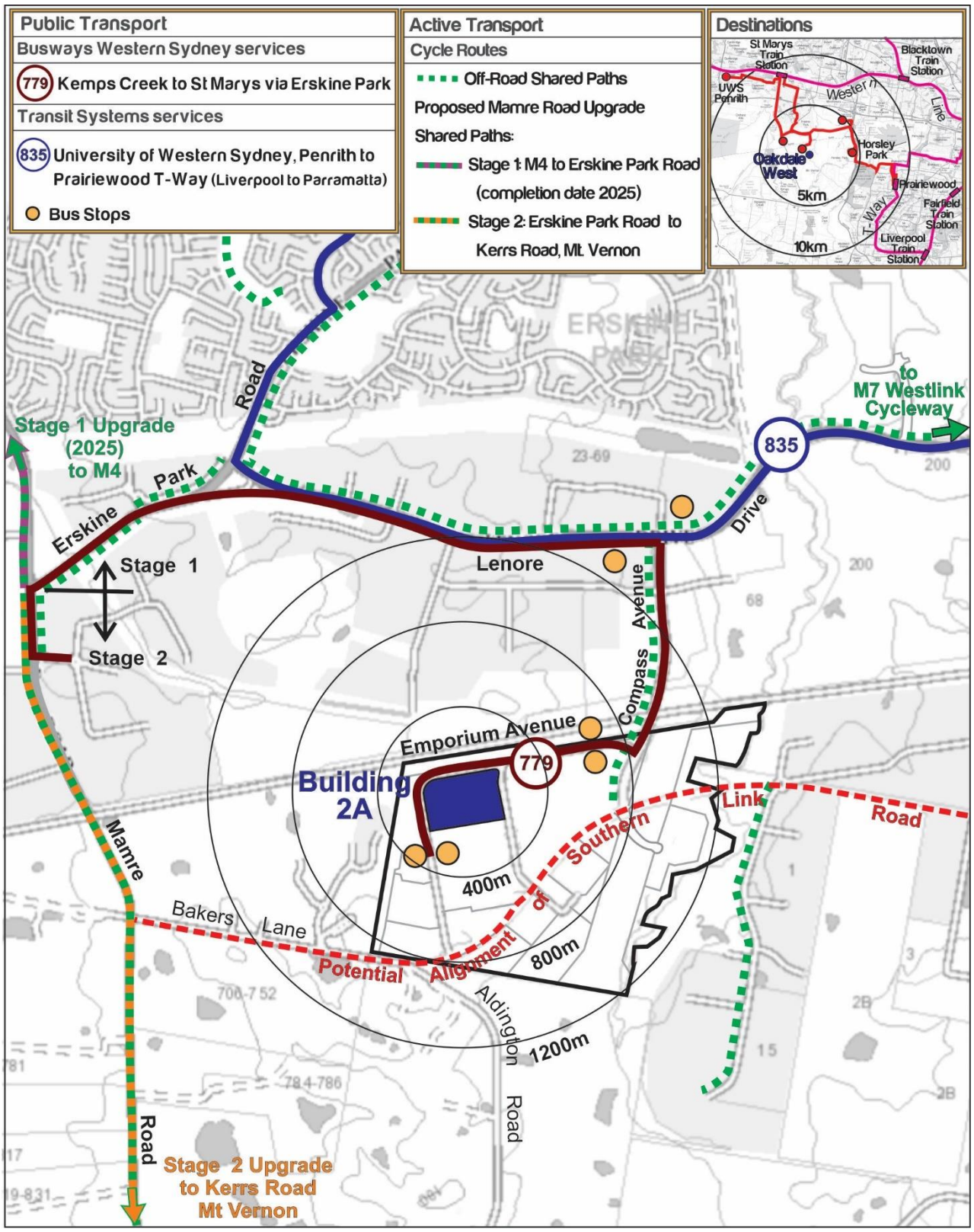


Figure 7: Public & Active Transport Network

2.4 On Demand Services

2.4.1 Car Share

Car sharing has emerged as a cost effective, flexible alternative to private vehicle ownership. Provision of car share in the area could facilitate intermittent work trips that may need to be made by car such that staff can commute by other modes. Prior to the commencement of car share providers, it is proposed to consider schemes such as provision of car share priority parking spaces, to actively encourage car sharing amongst staff.

2.5 Existing Travel Patterns

2.5.1 Journey to Work Data Analysis

Journey-to-Work (JTW) data from the Australian Bureau of Statistics (ABS) 2016 Census and specifically aggregated Destination Zones (DZ) has been referenced to understand the baseline travel characteristics of the Site. This data informs the initial targets and should be refined and updated as part of the monitoring process through the use of travel survey data of the operational development.

It is noteworthy that the OWE is still in development, as such existing travel patterns cannot be ascertained at this time. Therefore, for the purposes of the STP, a neighbouring travel zone with existing development, DZN114695449, has been identified and assessed. The JTW information for the surrounding locality is presented in Figure 8 below.

It is evident that the area experiences a high proportion of private vehicle trips (inclusive of vehicle driver and vehicle passenger modes) and similarly a low proportion of public and active transport modes; reflective of the current availability of non-car opportunities. Accordingly, the mode share analysis indicates a high likelihood for staff associated with the development to use private vehicles as the primary mode of transport.

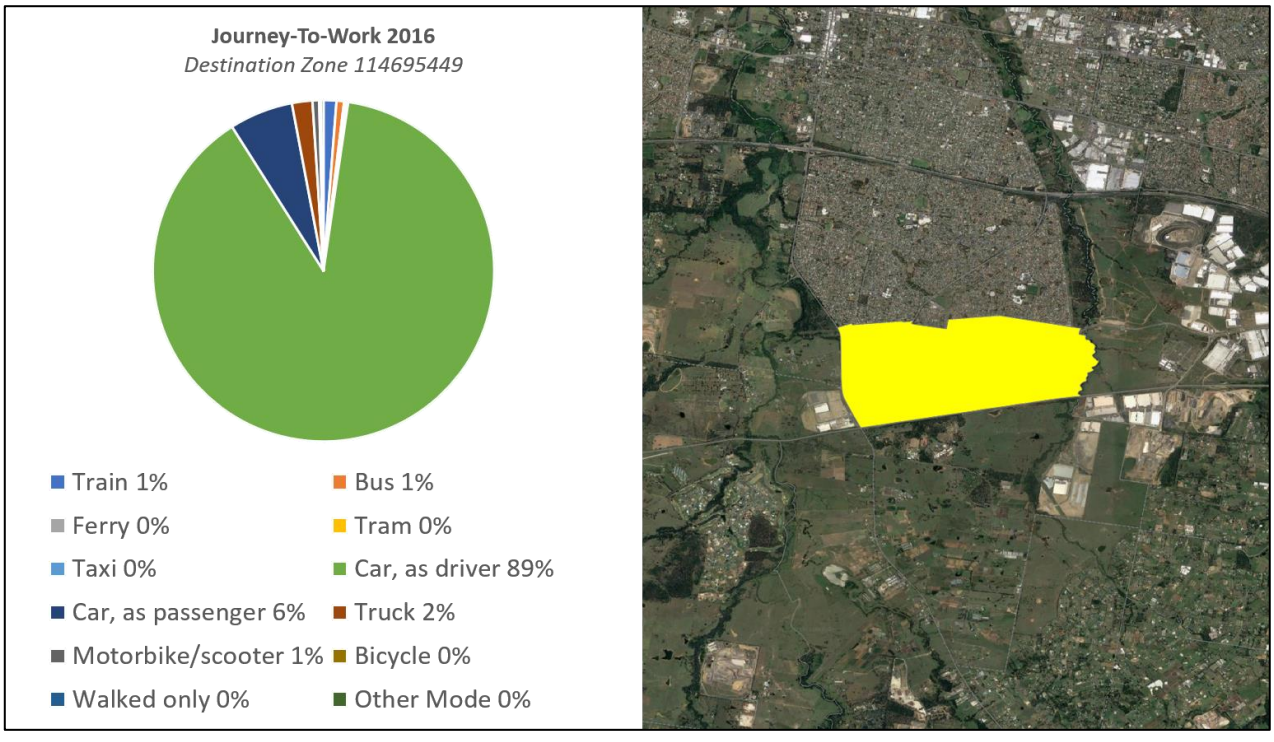


Figure 8: Journey-to-work 2016 Profile

The travel modes are presented in **Table 3**

TABLE 3: TRAVEL MODE SUMMARY (JOURNEY TO WORK)

Travel Mode	Mode Share of Employees
Car as driver	89%
Car as passenger	6%
Truck	2%
Train	1%
Bus	1%
Motorbike/Scooter	1%
Walked only	0%
Bicycle	0%
Taxi	0%
Other Modes	0%

With reference to **Table 3**, it is evident that the private vehicle (car) is the overwhelming preferred mode of choice for commuters travelling to work in the area. The data indicates that 95% travel to work by car with 89% as the driver and 6% as passenger i.e. car-pooling.

2.6 Accessibility

The Site addresses accessibility requirements for employees with mobility impairments by implementing the requirements outlined within AS2890.6 and AS1428, which delivers the appropriate measures to be put in place.

The appropriate measures include

- Dedicated accessible parking spaces are provided and consistent with Figure 2.2 of AS 2890.6
- Those accessible parking spaces being designated to those spaces closest to the office for each warehouse.
- Walkways and ramps are provided per Section 10 of AS 1428.1

Any further accessibility requirements or updates shall be identified during the annual review for this GTP.

3 Development, Scope & Implementation

3.1 Introduction

This section sets out in broad terms how the GTP will be developed, the scope of the GTP and the objectives.

3.2 Responsibility

The responsibility for the future GTP will lie with site management and should form part of organisational policies. The future GTP should include a statement on company policy in relation to travel and should be endorsed by senior management.

3.3 GTP Scope

The future GTP should address the following types of travel generated by the development:

- Commuter journeys by staff;
- Visitor journeys;
- Business travel; and
- Site related deliveries from contractors etc.

The future GTPs are expected to have most effect on commuter journeys by staff. While the operator will aim to encourage sustainable travel by visitors, ultimately staff travel is easier to influence.

The aim is to develop practical measures that are effective in reducing car use for all journeys to the Site.

3.4 Implementation

A Travel Plan Co-ordinator (TPC) will be appointed by management and would act as the primary point of contact for enquiries relating to the progress of the GTP, and act separately to the Site management team. It is recommended that a consistent TPC be appointed for the Site so as to achieve a coordinated approach across the Site. A sub-management team shall be formed to ensure all of the actions of the GTP are enacted.

The TPC and sub-management team should be appointed before the Site becomes occupied, or within 1 month of the site becoming occupied. Details for the TPC role and responsibilities associated with the GTP are provided below. The main duties of the TPC are envisaged to be:

- Leader of a broader team/ committee that is responsible of the development and implementation of the GTP.
- Internal liaison to promote awareness of the GTP amongst staff within the Site.
- Liaison with outside bodies, such as Penrith City Council (Council) and local bus operators, as required regarding the operation of the GTP.

- Providing updated travel information to staff and visitors, as necessary.
- Monitoring, review and (if necessary) updates to the GTP.

The TPC and the sub-management team will promote participation in and commitment to the GTP from the tenant and will ensure a smooth transition so that the tenant will be responsible for their ongoing monitoring and updating of the GTP. The TPC and the sub-management team shall make it clear to the tenant of the Site, that there are requirements to try and achieve sustainable transport mode shares for the Site, as a condition of the development, for the life of the development.

3.5 Consultation

It is essential that any parties that may play a part in the future GTP's and its actions are aware and have an opportunity to discuss. This would enable equitable input and feedback as well maximising the overall efficacy of the GTP. For this reason, a coordinated approach to GTPs across the Site should be implemented (subject to individual tenant participation) to assist in the consultation with the relevant parties as per consultation requirements under the SSD consent.

Other organisations may be added to this list as the Plan evolves.

3.5.1 Consultation with TfNSW

Consultation with TfNSW has been undertaken, with comments regarding the subject GTP received on 12 August 2022. Evidence of consultation has been provided within **Appendix C** of this GTP. The response table below shall be updated accordingly on receipt of the comments for this proposal.

TABLE 4: COMMENTS FROM TFNSW (12 AUGUST 2022)

Item No.	Condition	Response
1	**Shuttle bus**: TfNSW recommend that a shuttle bus have a mode share allocated to the mode share table (Section 3.6.2), the applicant should strongly re-consider privately funding a shuttle bus on a 24/7 basis to move workers to and from the train station. This will be an essential way to move workers more sustainably. TfNSW noted that this is included in Table 5, Strategy 2.5 Lobby for Precinct wide shuttle service if practical	It is noted that Figure 7 of this GTP presents the approved public transport bus routes (routes 779 and 835) which service the Oakdale West Industrial Estate. It is understood that Goodman Pty Ltd (the Client) will not be providing shuttle buses as this is not deemed feasible for these projects. Also, the Client assumes that TfNSW would not consider this viable to create a separate private shuttle bus (24/7) to transport workers where an existing public transport service already exists. It is also noted that TfNSW has commented on the proximity of the Warehouse 2A (which is also within the Oakdale West Industrial Estate) to Mount Druitt train station. In respect of the comment around Mount Druitt being closer to the Estate, this is noted. However given that St. Marys is 1 stop away from Mt Druitt (3min average travel time based on Sydney Trains Timetable), the Client believes the time/distance is negligible, and thus the existing transport bus service is a more sustainable option considering it services the community also, as opposed to just the Precinct. Please note that this GTP has been updated to include strategy regarding shuttle buses for the Site. (See: Table 6; Item 2.5)
2	**Car parking:** TfNSW recommends that the amount of car parking at the site, set at 255 spaces, is significantly reduced and managed, as this encourages private car use over other more sustainable modes such as public transport. This is consistent with Future Transport 2056 in which Travel Demand Management (TDM) is one of TfNSW top priorities to provide incentives to harness more sustainable modes.	Based on the occupancy and use of the building (approved 24-hours operation / split shift roster), in order to comply with Condition B3 of SSD 9794683 consent conditions, the parking numbers implemented at the site have been developed in order to meet the condition, and ensure that the development does "*utilise public and residential streets or public parking facilities*" The number of parking spaces has been approved as part of the SSDA process. The utilisation of parking spaces, and quantum required shall be reviewed after the opening of the Site, and as part of the ongoing monitoring of this GTP. As outlined within Figure 5, Parking spaces for fuel efficient vehicles (including EV and carpooling vehicles) are located in close proximity to warehouse entrances, and

		demonstrates giving priority to those who focus on 'green travel' Please note that this GTP has been updated to include strategy regarding parking management for the Site. (See Table 6: Item 6.1)
3	**Parking management**: TfNSW request that you consider providing charging stations for Electric Vehicles (EV), and a parking management plan that prioritises use by staff on a needs basis to further reduce car use – this could include providing dedicated spaces for those who are carpooling / car sharing to encourage carpooling. This should also be included in Table 5 (Implementation Plan) in Section 3 Promoting Car Pooling and Elective Vehicle Use	Noted. As outlined within Figure 5, Parking spaces for fuel efficient vehicles (including EV and carpooling vehicles) are located in close proximity to warehouse entrances, and demonstrates giving priority to those who focus on 'green travel'.
4	**Travel Access Guide**: TfNSW appreciate the TAG provided in the GTP. We would ask that you provide staff and visitors additional information about service routes and timetables for buses and trains being available on Trip Planner at transportnsw.info/. The TAG should also include the following: – Provide information on shuttle including proposed times for pick up and drop off at St Mary's train station. – Provide information on car share, car-pooling and priority parking for people that car pool. – Once longer term pedestrian active and public transport infrastructure is in place, the TAG can promote these connections. – Provide promotion of end of trip facilities, including any new cycling infrastructure available, and update number and location of bike parking facilities and End of Trip facilities, and locate on TAG. – For further helpful information – please check this link How to Create a Travel Access Guide doc here. – We also would also discourage you from promoting car park areas on the TAG. TfNSW – TfNSW ask that the Travel Access Guide: – Provides information on car share, car-pooling and priority parking for people that car pool. – Does not promote car park areas on the TAG. – Provides additional information about service routes and timetables for buses and trains – as well as the Trip Planner at transportnsw.info/.	Noted. Travel Access Guide (TAG) has been updated to address TfNSW comments and located in Appendix A.

5	**End of Trip (EoT) facilities:** TfNSW appreciates that there will be provision of fully serviced end of trip facilities such as showers and lockers however, it is recommended that the provision of bicycle spaces and EoT is monitored over time to ensure there is sufficient provision to further encourage cycling as a mode – for employees and visitors. The following link provides a good reference for end of trip facilities.	Noted. Monitoring of the bicycle parking and EoT facilities within the Site will occur as per the outlined strategy. (See Table 6; Item 6).
6	**Travel Survey:** TfNSW appreciates the Travel Survey provided and advise the following additional steps. The survey will need to be distributed 3 months post-occupancy (this will need to be included in the proposed action strategies). The survey does not need to be carried out before that time, only the proposed survey needs to be included. Staff and visitors travel surveys should include questions to ask obtain workforce data analysis (including staff residential postcodes) to identify the actual staff travel origin and destination patterns, to inform strategies that help to reduce car parking demand for staff and visitors to get to and from the site. The Travel Survey should be promoted as a strategy in Table 5 Implementation Plan to promote different sustainable transport routes. The Travel Survey should also be promoting any initiatives or strategies that encourage sustainable transport routes.	Noted. See Item 7.3 within Table 6 . The Travel Survey will be distributed to each tenancy 3 months post-occupancy. It is noted that the Travel Survey included in Appendix B includes a question relating to the post code of staff's place of residence.
7	**Public Transport Service provision:** TfNSW asks that you also consult with the TfNSW service operational planners regarding bus routes and operational requirements also.	Noted. It is noted that the Client has consulted with TfNSW with regard to bus routes servicing the Site, as this is how the implementation of bus route 779 arose.
8	**Submission**: Please submit an updated GTP back to TfNSW with enough time to review prior to occupancy.	Noted.

3.6 Travel Mode Targets

3.6.1 Introduction

Based on the existing travel mode splits identified in Section 2.5, the Site and the surrounding areas are considered to have a low dependency on public and active transport. This is reflective of the current nature of the area, which is largely industrial developments (or other large-scale agribusinesses / residential developments).

As such, it is expected that the JTW data accurately reflects the current trends for travel to places of work at industrial sites. For example, the TfNSW *Guide to Traffic Generating Developments – Updated Traffic Surveys* (2013) itself provides details in relation to the principal mode of travel used by staff at Erskine Park and Eastern Creek warehouses (found in close proximity to the Site), as found by surveys undertaken by TfNSW. These surveys indicate that 90% of all workers would travel via private vehicles with 8% travelling as passengers.

This section therefore sets out the targets for the reduction in car journeys associated with the Site, with consideration to the future land use in the area. Targets are the means of measuring the achievement of the objectives. They need to be clear, directly linked to the objectives, monitored, and reviewed.

Questionnaire surveys will be conducted in the future that will form the updated travel mode baseline to further develop site-specific targets. The first surveys will be undertaken shortly after occupation. These surveys will be repeated at a suitable time to assess the effectiveness of the implemented GTP; the targets are to be reviewed to align with the most up-to-date information.

The implemented GTP is to be in place for the lifetime of the development. The initial timeframe in which targets need to be monitored and reviewed will be reviewed every 1-2 years, for a minimum of 5 years.

3.6.2 Mode Share Targets

It is essential that mode share targets be achievable with consideration for the public transport, walking and cycling opportunities available within proximity to the Site. Targets should also be factoring in what future transport options could reasonably be used to access the Site, and also the nature of the development itself.

TABLE 5: MODE SHARE TARGETS

Travel Mode	Mode Share of Employees (DZN 114695449)	Proposed Targets	Relative Change
Car as driver	89%	68%	-22%
Car as passenger	6%	10%	+4%
Train[1]	1%	5%[2]	+4%
Bus[1]	1%	10%	+9%
Walked only	0%	0%	-
Bicycle	0%	5%	+5%
Other Modes	2%	2%	-

Note: 1) Key opportunity in future with provision of further regional infrastructure
2) The JTW classifies multi-modal journeys by indicating the 'primary' mode only and is considered in this proposition.

Given the limited options for modal availability in the area, it is difficult to quantify the degree of modal shift from private vehicular usage to public and active transport modes. However, in the context of development outlined in the above sections, it is evident that there is clear direction in a strategic context for the expansion of public and active transport networks to serve the Western Sydney area.

In this context, the mode share targets identified above can be considered with a focus on 20% for public and active transport, and 80% on private car usage. This ratio is reflective of travel zones observed to have higher degrees of road network connectivity and limited access to rail facilities. It shall be necessary to adjust these mode share targets as future developments and planned transport infrastructure are realized, allowing for more ambitious targets to be set.

The changes made to cycling, train and bus travel modes are specifically reliant on the improvement of connectivity and additional infrastructure to facilitate them, which is anticipated to occur through several developments and initiatives associated with the broader WSEA. Similarly, the 'Vehicle Passenger' travel mode increase will primarily be met through Precinct specific initiatives.

4 Measures and Action Strategies

4.1 Measures

The below is a range of measures which could achieve the objectives of this GTP and are expanded further within **Table 6**.

This section needs to be reviewed and confirmed prior to implementation of any future Plan.

- An introduction to the GTP for all staff, setting out its purpose and objectives.
- Provision of public transport travel information for staff, customers, and visitors.
- Encouragement of car sharing, both amongst staff on site and in the wider context.
- Provision of fuel-efficient vehicle spaces (including car share, car pool and / or EV's).
- Assisted cycle purchase schemes.
- Interest free loans to assist with cycle purchase, cycle equipment purchase etc.
- A transport section on the company website with links to local bus operator sites, to ensure that travel information is always up to date.
- The provision of transport information for visitors to the Site.

4.2 Strategies

Seven main strategies are identified, and the actions required for each are detailed in Table 6. The table details specific actions that could be implemented as part of the future GTP (subject to tenant requirements) and the party responsible for implementing each action.

These actions must be reviewed at regular intervals to ensure that the mode split targets are being met. By that principle, this document is classed as a living document and subject to regular review. It is important to note, that the actions should not be taken as mandatory but potential options that should be investigated and implemented by future inhabitants of the development.

TABLE 6: IMPLEMENTATION PLAN

STRATEGY		HOW IT WORKS	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
1 Travel Planning and Demand Management					
1.1	Green / Sustainable Travel Plans	• Develop a GTP to provide information for Travel Access Guide (TAG) (See **Appendix A**) • Management of GTPs. • Promotion of GTPs.	Building Manager to be responsible for overall implementation of final GTP and providing annual reporting on GTP outcomes to Council. Tenant to develop Company specific travel plan based on Final GTP prior to the commencement of a new lease/sale of property. Company/Staff/Visitors shall be responsible for ongoing implementation of Company assigned actions and participation in annual monitoring and reporting process to Council	Upon completion of the development and ongoing annual GTP events.	Tenant / Business Owner
1.2	Travel Information Points	• Establish locations such as travel information points where staff and visitors and others can access travel information via interactive platforms. • Promotion of GTPs • Provision of travel and transport information options	Tenant / Business Owner	Upon completion of the development (building occupation)	Tenant / Business Owner
1.3	Flexible Working hours	Allow employees the flexibility to commute outside peak periods to reduce overall congestion and travel time.	Tenant / Business Owner	Subject to employer preference. Action to be considered by employers / Visitors as part of an Employer specific GTP to be developed and forwarded to Council prior to building occupation.	Tenant / Business Owner
1.4	Teleworking	Provide the option to work remotely (where possible) to reduce the number of vehicles travelling to the development and encourage teleconferencing rather than travelling to meetings.	Tenant / Business Owner	6 months after the commencement of the operations within the Site to better understand the travel patterns of staff.	Tenant / Business Owner

STRATEGY		HOW IT WORKS	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
2 Promoting Public Transport					
2.1	Opal Card Loan Schemes / Subsidising schemes for public transport travel through pre-paid credit cards	Company may consider subsidising staff public transport travel. Alternatively, staff can pay for their own Opal Cards / pre-paid travel card through their salary, spreading the cost over the year to make it more affordable.	Tenant / Business Owner / TPC	Subject to employer. Can be implemented at building occupation	Tenant / Business Owner
2.2	Maximise Bus Service Frequency	• Meet or exceed Transport NSW bus planning guidelines. • Decrease headway where possible, especially during peak periods. • Report back to TfNSW on perception of bus service adequacy.	TfNSW	Developer to hold on-going discussions with TfNSW after each annual review of GTP and report on relevant findings	TfNSW
2.3	Provide bus stops with shelter facilities	Ensuring provision of bus stops suitable for waiting areas for commuters – Developer to recommend improvements to the proposed / implemented bus stops along Burley Road to TfNSW.	TfNSW	Subject to discretion of TfNSW. Advisable to be prior to the opening of the development	TfNSW
2.4	Public Transport for work travel	The company and the TPC can promote public transport as one of the main preferences for work travel. This should be supported by all users and visitors to development having access to Opal Cards.	TPC	Upon completion of the development (building occupation).	Tenant / Business Owner
2.5	Lobby for Precinct wide shuttle service if practical	Shuttle service initiative that would transport staff to / from the Site to the Railway Station.	TPC to lobby Estate Manager / Owner	Ongoing internal discussions at this time. No commitment has been established internally. Updates can be made to organisation as appropriate. Given that the Site is being serviced by existing public transport (bus routes 779 and 835), provision of private shuttle services is not considered viable.	Estate Owner / Manager
3 Promoting Carpooling & Electric Vehicle Use					

STRATEGY		HOW IT WORKS	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
3.1	Open Car Sharing	Where anyone in a defined geographical area can join a ride sharing scheme. This involves no input from the employer and should be on the onus of staff to schedule.	Staff	Ongoing in the workplace	Fuel costs can be arranged and split equitably by those involved
3.2	Closed Car Sharing	The company / department sets up an in-house car-matching scheme	Company, TPC	Ongoing in the workplace. Updates can be made 6 months after the commencement of the operations within the Site to better understand the travel patterns of staff.	Tenant / Business Owner
3.3	Third-party Car Sharing Program	Companies such as Liftshare are an online service that facilitates journey sharing between individual users, as well as providing separate services for businesses, organisations, and events.	Staff – encouraged by TPC	Ongoing in the workplace. Updates can be made 6 months after the commencement of the operations within the Site to better understand the travel patterns of staff.	Staff
3.4	Carpool week	Arrange for a dedicated carpool campaign week to promote the benefits of carpooling.	Tenant / Business Owner	One week per calendar year.	Tenant / Business Owner
3.5	Prioritise Parking Spaces	Arrange for parking spaces closest to the buildings entrance (bar accessible spaces) be dedicated to fuel efficient vehicles, car share and/or carpooling vehicles.	Tenant / Business Owner	Ongoing in the workplace. The allocation of dedicated parking spaces should be undertaken following a review of the utilisation of carpooling and/or car share during the first GTP update.	Tenant / Business Owner
3.6	Electric Vehicle Program	As with Item 3.5, Arrange for parking spaces closest to the buildings entrance (bar accessible spaces) be dedicated to Electric Vehicles and other more environmentally friendly vehicles.	Tenant / Business Owner	The allocation of dedicated parking spaces should be undertaken following a review of the utilisation Electric Vehicles during the first GTP update.	Tenant / Business Owner
4 Promoting Cycling					
4.1	Create a Bicycle Users Group (BUG)	BUGs are local groups of like-minded bike riders who get together generally for social riding in their area. For the purposes of the workplace, this can be adapted as a way of creating as social and healthy aspect of travelling to work. As a minimum, the establishment of the BUGs should be promoted as Precinct wide initiative.	Tenant / Business Owner, TPC	Ongoing in the workplace. Updates can be made 6 months after the commencement of the operations within the Site to better understand the travel patterns of staff.	Tenant / Business Owner
4.2	Providing & Maintaining End of Trip Facilities	Providing facilities such as showers, change rooms, lockers. For the initial stages of development, it is recommended to provide facilities compliant with the relevant controls and	Developer / Estate &/or warehouse Owner / Manager	To be provided at sports complex completion.	Developer / Estate &/or warehouse Owner / Manager

STRATEGY		HOW IT WORKS	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
		the NSW Cycleways Design Toolkit, and as the Site develops further, they should be reviewed as part of the GTP monitoring process to meet any increase in demand.			
4.3	Promote Bicycle Initiatives	Promotion of bicycle initiatives – NSW bicycle week, Ride to Work etc.	TPC	To be promoted annually	Developer / Estate &/or warehouse Owner / Manager
4.4	Advertise Bicycle Routes	Promotion of bike lanes through the TAG.	TPC	To be promoted and provided at communal areas such as key information kiosks within facility	Tenant / Business Owner
5 Promoting Walking					
5.1	Providing End of Journey Facilities	Provision of sufficient end of trip facilities such as showers, change rooms, lockers etc to maximise pedestrian activity throughout the site and the wider precinct.	Developer	To be provided at completion of development	Tenant / Business Owner
5.2	Walking routes	Incentivise travelling by foot by highlighting possible routes particularly those to nearest bus stops	Tenant / Business Owner	To be promoted and provided at communal areas such as key information kiosks within facility	Tenant / Business Owner
5.3	Promote walking initiatives	Promotion of walking initiatives: walk to game / training day, pedometers / step challenge / gamification of walking / reward programs based on steps to elevate pedestrian activity throughout site and to / from public transport points.	Tenant / Business Owner, TPC	To be implemented monthly or as appropriate throughout the calendar year.	Tenant / Business Owner
5.4	Provide footpaths	Lobbying of Council regarding provision of footpaths.	Council	To be provided at completion of development	Council

STRATEGY		HOW IT WORKS	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
6 Reducing Parking					
6.1	Limited parking allocation on site	Parking availability will inherently generate vehicle trips. By restricting parking supply, you can discourage non-essential car use. A review will be undertaken during the first 6 months (and every year thereafter) to determine usage of parking within the Site. This includes parking spaces allocated for employees, customers/ visitors, carpooling, and electric vehicles (EV).	Site Management	To be an ongoing consideration. A review can be made 6 months after the commencement of the operations within the Site (and every year thereafter) to better understand the parking supply vs demand situation on site.	Tennant / Business Owner
7 Influencing Travel Behaviour					
7.1	Provision of Sustainable Travel Packs to employees and visitors	Introduces employees and visitors alike to the GTP and provides information on walking and cycling routes, and travel by bus & train, timetables, and access routes. This would include a TAG.	Tenant / Business Owner, TPC	Travel Packs to be provided upon occupancy of building to employees.	Tenant / Business Owner
7.2	Increase Public Transport Provision	Incentive to introduce altered shift times (flexible work place policies) in order to line up with public transport timetables.	Site Management	To be an ongoing consideration.	Tennant / Business Owner
7.3	Worker and Visitor Questionnaire	Utilise the questionnaire/ travel survey provided within Appendix B to develop a broader understanding of where staff and visitor travel origin / destination patterns. This would inform additional strategies to influence travel behaviour.	Site Management	To be an ongoing consideration.	Tennant / Business Owner

4.3 Communications Strategy

4.3.1 Welcome Packs

New staff shall be provided with a 'welcome pack' as part of the on-site induction process which includes a GTP Pamphlet and other information in relation to sustainable transport choices. This pack shall include copy of the GTP, and a Travel Access guide (TAG) as provided in **Appendix A**, as well as general information regarding the health and social benefits of active transport and advice on where to seek further information. It is recommended that an electric copy of the welcome pack be created and made available to staff and provide a website link to the TfNSW trip planner[4] website.

4.3.2 Accurate Transport Information

In addition to these 'welcome packs', a copy of the TAG (Appendix A) shall be clearly displayed in communal areas of the site including (but not limited to):

- Staff lunchroom
- Lift lobby area and entrances to buildings
- Any marketing material associated with the Site, such as websites and newsletters.

[4] https://transportnsw.info/trip#/trip

5 Monitoring Strategy

5.1 Plan Maintenance

The future GTP shall be subject to ongoing reviews and will be updated accordingly. Regular reviews will be undertaken by the TPC. As a minimum, a review of the GTP would occur once a year.

The key considerations when reviewing or monitoring the GTP are as follows:

Update baseline conditions to reflect any changes to the transport environment in the vicinity of the Site such as changes to bus services, new cycle routes etc.

- Track progress against target travel mode targets.
- Identify any shortfalls and develop an updated action plan to address issues.
- Ensure travel modes targets are updated (if necessary) to ensure they are realistic and remain ambitious.

5.2 Monitoring

So as to record the overall success, as well as the effectiveness of the individual measures, monitoring, and review of the future GTP is to be conducted at regular intervals. The TPC will act as the primary point of contact for all enquiries relating to the GTP's progress.

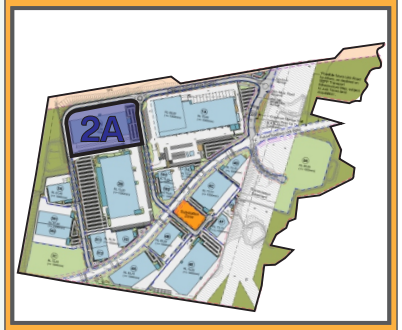
The GTP will be monitored around every 1-2 years, with the first travel survey being carried out shortly after first occupation of the Development. Travel mode surveys would determine the proportion of persons travelling to/from the Site by each transport mode. This will be in the form of annual travel mode questionnaire surveys to be completed by all persons attending the Site, as far as practicable. A sample of a typical travel mode questionnaire form is included in **Appendix B**.

If targets are not met at the end of the initial period of monitoring, the GTP will be reviewed, new measures introduced and would be reassessed at the next monitoring stage.

Appendix A. Travel Access Guide

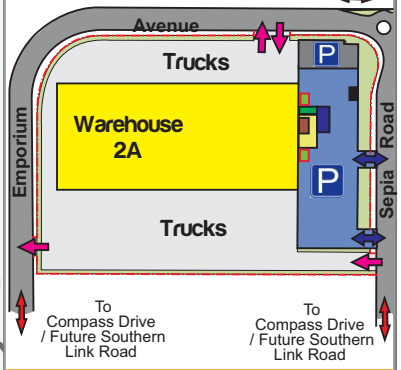
Travel Access Guide

Warehouse 2A
Emporium Avenue



Note:
This Travel Access Guide can be updated further to include active transport and public transport opportunities as they come online.

Warehouse 2A Detail



Access
- Road arrival / Departure
- Car Park Entry / Exit
- Truck Entry / Exit

Parking Spaces / Facilities
- 25 Van
- Car Park including 6 Motorcycles, 24 Bicycles
- 10 Fuel Efficiency
- End of Trip Facilities
- 6 Accessible
- Office

August 2022

to St Marys Train Station (T1 Western and North Shore Line)

To Penrith

To St Marys

M4 Western Motorway

To UWS via S Marys

To Rooty Hill and Mt Druitt

To Old Windsor Road Glenwood

To Wentworthville

Orchard Hills Metro Station

Western Sydney Airport Metro Line Opening 2026

Luddenham Metro Station

to Aerotropolis

Luddenham Road

Mamre Road

Park Road

John Morphett Place

Erskine Park Road

James Erskine Drive

Lenore Drive

Old Wallgrove Road

Proposed Archibold Road North South Link

Proposed North West Link Road

Old Wallgrove Road

Roberts Road

M7

738

835

Compass Drive

Water Pipeline

Sydney

Emporium Avenue

Millner Avenue

Alignment for Southern Link Road

Burley Road

Bakers Lane

Potential

Warehouse 2A
Oakdale West
See Detail

Aldington Road

Abbotts Road

To Kerrs Road Mt Vernon

To Bonnyrigg

813

Westlink

To Prairiewood

To Fairfield

The Horsley Drive

To Canley Vale Bankstown and Fairfield

To Prestons

Wallgrove Road

North 0 1km

Existing Public Transport

Bus Services

Busways Western Sydney

779 St Marys to Kemps Creek via Erskine Park

Transit Systems

835 Prairiewood to University of Western Sydney Penrith via Wetherill Park, Horsley Park, Eastern Creek, Erskine Park, St Clair, Colyton, St Marys

Nearest Bus Stops

Other regional services

738 Bonnyrigg to Fairfield

813 Mt Druitt to Eastern Creek via Rooty Hill Loop

Timetables and the Trip Planner can be found at https://transportnsw.info/ and https://transportnsw.info/trip

Existing and Proposed Active Transport Routes

- Existing Shared Paths
- Motorway Cycle Lanes
- Proposed Mamre Road Upgrade from M4 Motorway to Kerrs Road, Mt Vernon
- Future Southern Link Road Cycleway from Mamre Road to M7 Westlink

How to create a Transport Access Guide link here: http://data.mysydney.nsw.gov.au/Travel+Choices/Travel%2BAccess%2BGuide_How%2Bto%2BGuide+(1).pptx

Appendix B. Sample Questionnaire

Instructions for Surveyor(s)

5. The Survey Form (over page) should be completed by EVERY PERSON attending the site on a particular day.
6. This survey should be completed SEPARATELY for EACH TRIP undertaken

Travel Mode Questionnaire Survey Form

Date: **Approximate Time:**

Q1. Are you one of the following?

☐ Warehouse staff

☐ Office staff

☐ Courier / office delivery

☐ Casual contractor

☐ Company driver / sub-contractor

☐ Other (Please specify)……

Q2. How did you travel TO the site today? Please choose the mode that you use for the greatest distance.

☐ Walked only

☐ Bicycle only

☐ Train

☐ Bus

☐ Taxi

☐ Car share vehicle

☐ Motorcycle / scooter

☐ Car (as passenger)

☐ Car (as driver)

☐ Other (Please specify)……

Q3. What time do you typically arrive to the site?

☐ Before 6:00

☐ 06:00 – 06:29

☐ 06:30 – 06:59

☐ 07:00 – 07:29

☐ 07:30 – 07:59

☐ 08:00 – 08:29

☐ 08:30 – 08:59

☐ 09:00 – 09:29

☐ 09:30 – 09:59

☐ Other (Please specify)……

Q4. If you drove to the site, where did you park?

☐ Not applicable – did not drive

☐ On-site car park

☐ On-site within truck hardstand

☐ Other (Please specify)……

Q5. What time do you typically leave the site?

☐ Before 15:00

☐ 15:00 – 15:29

☐ 15:30 – 15:59

☐ 16:00 – 16:29

☐ 16:30 – 16:59

☐ 17:00 – 17:29

☐ 17:30 – 17:59

☐ 18:00 – 18:29

☐ 18:30 – 18:59

☐ Other (Please specify)……

Q6. How did you travel FROM the site today? Please choose the mode that you use for the greatest distance.

☐ Walked only

☐ Bicycle only

☐ Train

☐ Bus

☐ Taxi

☐ Car share vehicle

☐ Motorcycle / scooter

☐ Car (as passenger)

☐ Car (as driver)

☐ Other (Please specify)……

Q7. What is the post code of your place of residence?

☐ (Please specify)……

Q8. What is the likelihood for you to choose another mode to travel to work, e.g. switching from driving to public transport or from public transport to walking or cycling?

☐ Very likely

☐ Likely

☐ Neutral

☐ Unlikely

☐ Very unlikely

☐ Not possible

Q9. What would make you want to choose another mode of transport to travel to/from work?

☐ (Please specify)……

Q10. What is the likelihood for you to change the timing of the journeys you make to avoid the busiest periods if possible, given your work conditions?

☐ Very likely

☐ Likely

☐ Neutral

☐ Unlikely

☐ Very unlikely

☐ Not possible

Q11. Do you have any general comments on how you currently travel or how you would like to travel?

☐ (Please specify)……

[Blank Page]

Appendix C. Evidence of Consultation

From: Sophia Grieve <Sophia.Grieve@transport.nsw.gov.au>
Sent: Friday, 19 August 2022 10:41 AM
To: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>; Rosie Selby <Rosie.Selby@transport.nsw.gov.au>; David Surplice <David.Surplice@transport.nsw.gov.au>
Subject: FW: Lot 2A, Oakdale Industrial Estate - SSD 9794683

Dear Lachlan
Thanks very much for making all of the revisions requested from us.
We have formally closed out items below in yellow.
I can confirm that TfNSW is now satisfied with the content of the GTP; and for the requirement for the proponent to consult with Transport for NSW on the GTP, as per Condition B5 and B6.
Many thanks
Cheers Sophia Grieve

Sophia Grieve
Travel Demand Project Manager
Customer Journey Planning
Greater Sydney
Transport for NSW

E sophia.grieve@transport.nsw.gov.au
transport.nsw.gov.au

231 Elizabeth Street, Sydney
NSW 2000

From: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>
Sent: Thursday, 18 August 2022 4:58 PM
To: Sophia Grieve <Sophia.Grieve@transport.nsw.gov.au>; Rosie Selby <Rosie.Selby@transport.nsw.gov.au>; David Surplice <David.Surplice@transport.nsw.gov.au>
Cc: Stephanie Partridge <Stephanie.Partridge@goodman.com>; Rob Moody <Rob.Moody@goodman.com>; Luke Ridley <Luke.Ridley@goodman.com>
Subject: RE: Lot 2A, Oakdale Industrial Estate - SSD 9794683

Hi Sophia,

Thanks for your feedback below.

We have worked with ASON over the last few days to update the plan as requested, and provide the attached revision for your records.

In respect of how we have addressed your comments, I refer to our response below in Orange.

We trust this now closes this report out, and appreciate if you could confirm closure by COB 19 Aug 22.

We appreciate yours and Rosie's assistance to date on these plans, and look forward to hearing from you shortly.

Regards,
Lachie

Lachlan O'Reilly
Project Administrator
Lachlan.OReilly@goodman.com

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M. +61 481 254 556

The Hayesbery
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Rosebery NSW 2018
Australia
www.goodman.com

From: Sophia Grieve <Sophia.Grieve@transport.nsw.gov.au>
Sent: Tuesday, 16 August 2022 11:49 AM
To: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>; Rosie Selby <Rosie.Selby@transport.nsw.gov.au>; David Surplice <David.Surplice@transport.nsw.gov.au>
Subject: FW: Lot 2A, Oakdale Industrial Estate - SSD 9794683

Hi Lachlan
Thank you for your response.
Please find my below response in blue.
Cheers Sophia

From: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>
Sent: Monday, 15 August 2022 12:40 PM
To: Sophia Grieve <Sophia.Grieve@transport.nsw.gov.au>; Rosie Selby <Rosie.Selby@transport.nsw.gov.au>; David Surplice <David.Surplice@transport.nsw.gov.au>
Cc: Stephanie Partridge <Stephanie.Partridge@goodman.com>; Ben Milner <Ben.Milner@goodman.com>; Luke Ridley <Luke.Ridley@goodman.com>; Alasdair Cameron <Alasdair.Cameron@goodman.com>; Rob Moody <Rob.Moody@goodman.com>
Subject: RE: Lot 2A, Oakdale Industrial Estate - SSD 9794683

Hi Sophia,

Thanks for providing the below feedback on the STP.

Please see below Goodman's response in green to TfNSW comments.

Noting we have just closed out the Building 4E STP consultation (attached) and this plan is aligned with Building 4E strategy, we trust the below will close this consultation review out also.

If you could please confirm so we can submit accordingly that would be greatly appreciated.

Regards,
Lachie

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Project Administrator
Lachlan.OReilly@goodman.com

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M. +61 481 254 556

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1-11 Hayes Road
Rosebery NSW 2018
Australia
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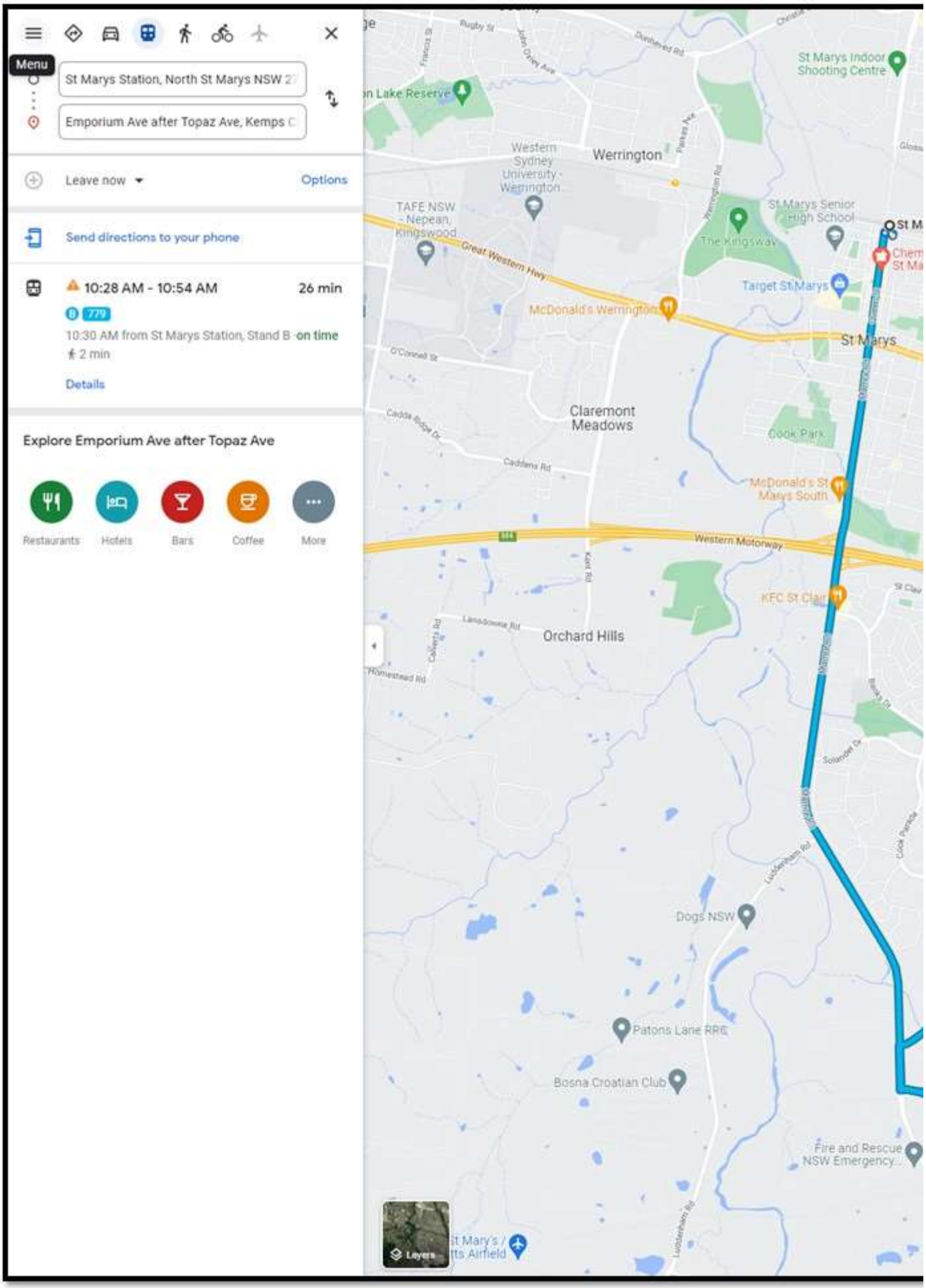
From: Sophia Grieve <Sophia.Grieve@transport.nsw.gov.au>
Sent: Friday, 12 August 2022 9:38 AM
To: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>; Rosie Selby <Rosie.Selby@transport.nsw.gov.au>; David Surplice <David.Surplice@transport.nsw.gov.au>
Cc: Stephanie Partridge <Stephanie.Partridge@goodman.com>; Ben Milner <Ben.Milner@goodman.com>; Luke Ridley <Luke.Ridley@goodman.com>; Alasdair Cameron <Alasdair.Cameron@goodman.com>
Subject: FW: Lot 2A, Oakdale Industrial Estate - SSD 9794683

Hi Lachlan
Please find our comment and recommendations for you below.

Comment: TfNSW have reviewed the Green Travel Plan (GTP) included in the SSD 9794683 for Lot 2A, Oakdale Industrial Estate. Noted and thankyou. We appreciate the prompt response.

Recommendations: TfNSW make the following recommendations for the applicant to update their GTP.

Shuttle bus: TfNSW recommend that a shuttle bus have a mode share allocated to the mode share table (Section 3.6.2), the applicant should strongly re-consider privately funding a shuttle bus on a 24/7 basis to move workers to and from the train station. This will be an essential way to move workers more sustainably. TfNSW noted that this is included in Table 5, Strategy 2.5 Lobby for Precinct wide shuttle service if practical. Goodman note TfNSW comment, however deem the implementation of a privately funded shuttle bus from train station not viable. Goodman note that the Bus Service 779 from St Marys Station is currently approved and operational. (Refer to below snippet of 1 route time for example). As such, Goodman would not consider it viable to create a private 24/7 shuttle bus to transport works, where an existing service already is in place.


Menu
St Marys Station, North St Marys NSW 2
Emporium Ave after Topaz Ave, Kemps C
Leave now
Options
Send directions to your phone
10:28 AM - 10:54 AM
26 min
779
10:30 AM from St Marys Station, Stand B · on time
2 min
Details
Explore Emporium Ave after Topaz Ave
Restaurants
Hotels
Bars
Coffee
More
Werrington
Western Sydney University - Werrington
TAFE NSW - Nepean, Kingswood
Great Western Hwy
St Marys Indoor Shooting Centre
St Marys Senior High School
The Kingsway
Target St Marys
McDonald's Werrington
St Marys
Claremont Meadows
Cook Park
McDonald's St Marys South
Western Motorway
KFC St Clair
Orchard Hills
Dogs NSW
Patons Lane RRG
Bosna Croatian Club
Fire and Rescue NSW Emergency...
Layers

Notwithstanding the above, Goodman refer to R. Selby comments on the Building 4E Sustainable Traffic Plan, and refer to the comments around Public Transport from Mount Druitt Station also to the estate. Noting that Mt Druitt Station is 1 stop away from St Marys, a Station with an existing bus route servicing Oakdale West Industrial Estate (779) Goodman consider this transportation method met.
TfNSW - To note that this is included in the Goodman report as a Strategy item (Strategy 2.5 Lobby to Precinct wide shuttle bus) – closed. Noted – Closed.
TfNSW - Closed

Car parking: TfNSW recommends that the amount of car parking at the site, set at 255 spaces, is significantly reduced and managed, as this encourages private car use over other more sustainable modes such as public transport. This is consistent with Future Transport 2056 in which Travel Demand Management (TDM) is one of TfNSW top priorities to provide incentives to harness more sustainable modes.

Goodman appreciate the comment, however based on the occupancy and use of the building (approved 24 Hours operation / split shift roster), in order to comply with Condition B3 of SSD 9794683 consent conditions, the parking numbers implemented at the site have been developed in order to meet the condition, and ensure that the development does note "utilise public and residential streets or public parking facilities".

Notwithstanding the above, Goodman note that TFNSW had the opportunity to comment on the DA as part of the exhibition phase and raise the above concern, and given the stage of works onsite we are unable to meet the recommendation.
TfNSW – Noted, closed Noted – Closed.
TfNSW - Closed

Parking management: TfNSW request that you consider providing charging stations for Electric Vehicles (EV), and a parking management plan that prioritises use by staff on a needs basis to further reduce car use – this could include providing dedicated spaces for those who are carpooling / car sharing to encourage carpooling. This should also be included in Table 5 (Implementation Plan) in Section 3 Promoting Car Pooling and Elective Vehicle Use.

As noted within Table 2 and Figure 5 of the Sustainable Traffic Plan, Goodman note that we are providing Electric Vehicle (EV) charging spaces for building users to utilise. Goodman note that we are installing 7 x 7kW Dual Ocular IQ Charging Stations, capable of charging 14 Electric Vehicles (EV). As such we consider this comment addressed already within.
TfNSW – Noted, closed Noted – Closed.
TfNSW - Closed

Travel Access Guide: TfNSW appreciate the TAG provided in the GTP. We would ask that you provide staff and visitors additional information about service routes and timetables for buses and trains being available on Trip Planner at transportnsw.info/. The TAG should also include the following:

- Provide information on shuttle including proposed times for pick up and drop off at St Mary's train station.
- Provide information on car share, car-pooling and priority parking for people that car pool.
- Once longer term pedestrian active and public transport infrastructure is in place, the TAG can promote these connections.
- Provide promotion of end of trip facilities, including any new cycling infrastructure available, and update number and location of bike parking facilities and End of Trip facilities, and locate on TAG.
- For further helpful information – please check this link How to Create a Travel Access Guide doc **here**.
- We also would also discourage you from promoting car park areas on the TAG.

Goodman note the response and will monitor as/when applicable.
TfNSW – TfNSW ask that the Travel Access Guide:

- Provides information on car share, car-pooling and priority parking for people that car pool.
  - Goodman have included 10 Fuel Efficient car spaces within the TAG. Refer to the Key identified within the TAG. Note – In accordance with Strategy 3 (pg 23 of the GTP), ongoing monitoring of the

spaces will be undertake to review the utilisation at the first GTP review, and updates made if required.

TfNSW – Closed

- Does not promote car park areas on the TAG.
  - Goodman have updated the TAG to include details on the respective number of spaces / facilities available. Refer to the Key identified within the TAG.

TfNSW - Closed

- Provides additional information about service routes and timetables for buses and trains – as well as the Trip Planner at transportnsw.info/.
  - Goodman have updated the TAG to include details for Transport for NSW info and Trip Planner. Refer to the Key identified within the TAG.

TfNSW - Closed

End of Trip (EoT) facilities: TfNSW appreciates that there will be provision of fully serviced end of trip facilities such as showers and lockers however, it is recommended that the provision of bicycle spaces and EoT is monitored over time to ensure there is sufficient provision to further encourage cycling as a mode – for employees and visitors. The following link provides a good reference for **end of trip facilities.**

Goodman note the response and will monitor as/when applicable. As per the comment above, Goodman note the facility currently has adequate EoT and Bicycle spaces to accommodate the mode of transport.

TfNSW – Noted, closed

Travel Survey: TfNSW appreciates the Travel Survey provided and advise the following additional steps.The survey will need to be distributed 3 months post-occupancy (this will need to be included in the proposed action strategies). The survey does not need to be carried out before that time, only the proposed survey needs to be included. Staff and visitors travel surveys should include questions to ask obtain workforce data analysis (including staff residential postcodes) to identify the actual staff travel origin and destination patterns, to inform strategies that help to reduce car parking demand for staff and visitors to get to and from the site. The Travel Survey should be promoted as a strategy in Table 5 Implementation Plan to promote different sustainable transport routes. The Travel Survey should also be promoting any initiatives or strategies that encourage sustainable transport routes.

Goodman note the response and will work with the tenant to distribute the plan to the relevant stakeholders within 3 months of occupancy as noted

TfNSW – Noted, closed

Public Transport Service provision: TfNSW asks that you also consult with the TfNSW service operational planners regarding bus routes and operational requirements also.

Goodman note that TfNSW has been consulted with already in regards to Bus routes, as this is how the implantation of Route 779 arose. As such, Goodman consider this comment closed.

TfNSW - Closed

Submission: TfNSW would ask that you submit your updated GTP with sufficient time to review prior to occupancy.
Goodman consider this STP address TfNSW comments as stands, and thus an update is not required at this time. Goodman note that the plan will be monitored / update in accordance with the above, and if necessary provide to TFNSW for comment.

TfNSW – Our team are responsible for endorsing whether your GTP meets the Condition when we're satisfied that it does so. Our comments are indicative of what we would like to see included in the GTP, in order for us to provide that endorsement. Given there are further requirements for your GTP to be updated, we will require an updated GTP to be sent back to us to review.

TfNSW – Closed

Many thanks
Cheers Sophia Grieve

Sophia Grieve
Travel Demand Project Manager
Customer Journey Planning
Greater Sydney
Transport for NSW

E sophia.grieve@transport.nsw.gov.au
transport.nsw.gov.au

231 Elizabeth Street, Sydney
NSW 2000

Transport for NSW

I acknowledge the Aboriginal people of the country on which I work, their traditions, culture and a shared history and identity. I also pay my respects to Elders past and present and recognise the continued connection to country.

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APPENDIX H

Waste Management Plan

OAKDALE WEST ESTATE

Building 2A
Operational Waste Management Plan

Prepared for:

Goodman Property Services (Aust) Pty Limited
The Hayesbery
1-11 Hayes Rd
Rosebery NSW 2011

SLR Ref: 630.30081-R11
Version No: -v7.0
October 2022

PREPARED BY

SLR Consulting Australia Pty Ltd
ABN 29 001 584 612
10 Kings Road
New Lambton NSW 2305 Australia
(PO Box 447 New Lambton NSW 2305)
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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 Limited (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
630.30081-R11-v7.0	4 October 2022	Celine El-Khouri	Andrew Quinn	Andrew Quinn
630.30081-R11-v6.0	25 August 2022	Celine El-Khouri	Andrew Quinn	Andrew Quinn
630.30081-R11-v5.1	25 August 2022	Celine El-Khouri	Andrew Quinn	Andrew Quinn
630.30081-R11-v5.1	25 August 2022	Celine El-Khouri	Andrew Quinn	Andrew Quinn
630.30081-R11-v5.0	15 August 2022	Celine El-Khouri	Andrew Quinn	Andrew Quinn
630.30081-R11-v4.1	11 August 2022	Celine El-Khouri	Andrew Quinn	Andrew Quinn

CONTENTS

DOCUMENT REFERENCES

TABLES

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FIGURES

APPENDICES

1 Introduction

1.1 Overview

SLR Consulting Australia Pty Ltd (SLR) has been commissioned by Goodman Property Services (Aust) Pty Ltd (the Client) to prepare a waste management plan (WMP) in support of a development application (DA) to Penrith City Council (Council) for Building 2A of the Oakdale West Industrial Estate (the Project).

This WMP applies to the waste generated from the operational stages of the Project and has been prepared using architectural drawings supplied by the Client and attached in Appendix A.

The relevant requirements of the SEARs issued for SSD-9794683 and SSD-7348 MOD 10 are addressed in this report as shown in Table 1.

Table 1 SSD-9794683 and SSD-7348 MOD 6 Conditions for Waste Management

SSD-9794683 and SSD-7348 MOD 6 Conditions	Relevant Sections in this WMP
Waste Management – Including details of the quantities and classification of waste streams generated during construction and operation and proposed storage, handling and disposal requirements.	Section 5

1.2 Objectives

The principal objective of this WMP is to identify all potential waste likely to be generated at the Project site during the operational phase, including a description of how waste would be handled, processed and disposed of, or re-used or recycled, in accordance with Council's 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 Project comply with Council's development consent conditions and other relevant regulatory authorities.

1.3 Review of WMP

This WMP will be reviewed and updated:

- To remain consistent with waste and landfill regulations and guidelines
- If changes are made to site waste and recycling management, or
- To take advantage of new technologies, innovations and methodologies for waste or recycling management.

Copies of the original WMP and its future versions should be retained by the building manager. Changes made to the WMP, as well as the reasons for the changes made, should be documented by the building manager as part of the review process.

2 Project Description

2.1 Overview of Proposed Development

The Client is developing the Oakdale West Industrial Estate site (Oakdale West) at Lot 11 in DP 1178389 in Kemps Creek. This site is primarily a greenfield site and will be comprised of five industrial warehouse and office precincts, including internal roads, car parking spaces and hardstand. The Project site Building 2A is located in Precinct 2. The lot address is Lot 105 in DP 1262310. A site plan of the Project is shown in Figure 1.

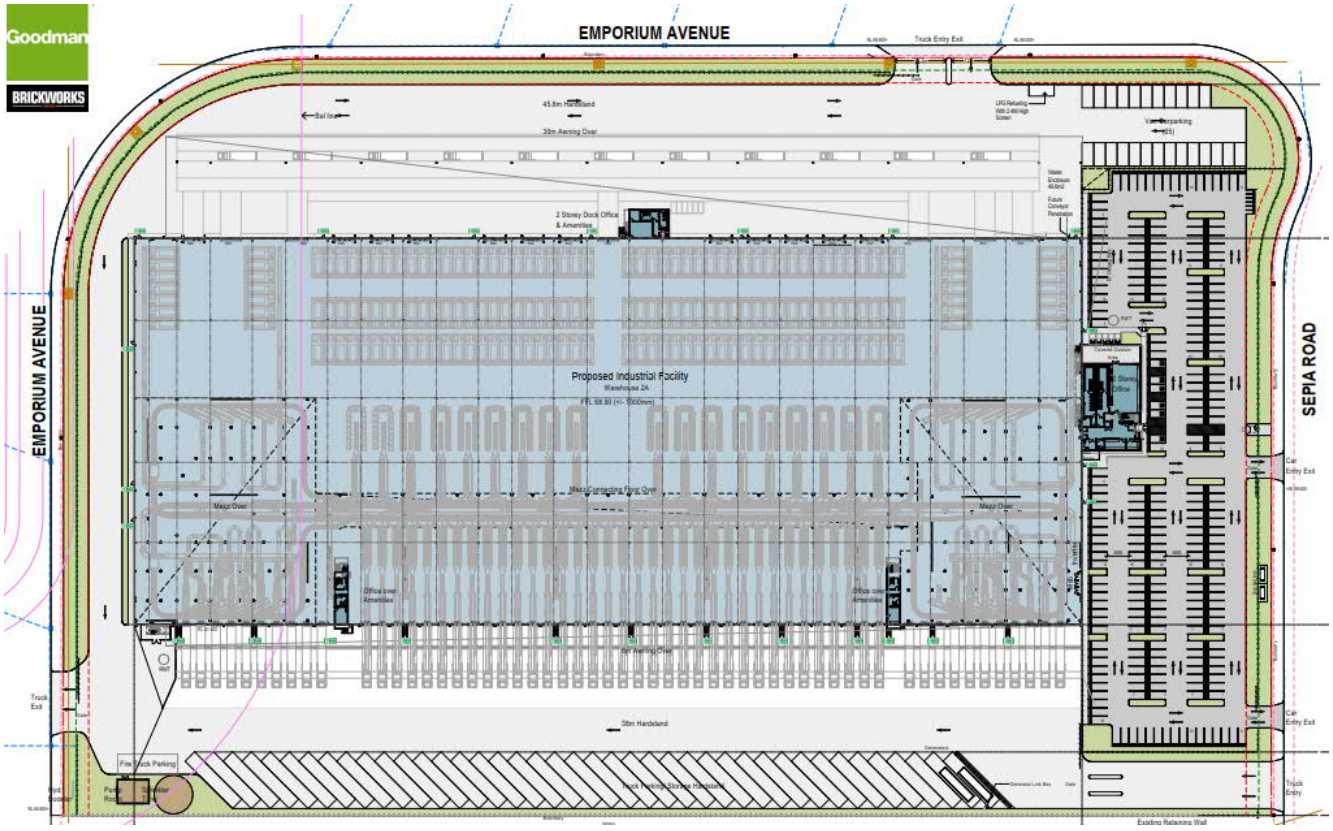

Figure 1 The Project Site Plan

2.2 Overview of Proposed Operations

SLR understands that the Project will be used as a warehouse and distribution centre, with anticipated 24-hours per day operation, seven days per week.

3 Better Practice Waste Management and Recycling

3.1 Waste Management Hierarchy

This WMP has been prepared in line with the waste management hierarchy shown in 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.

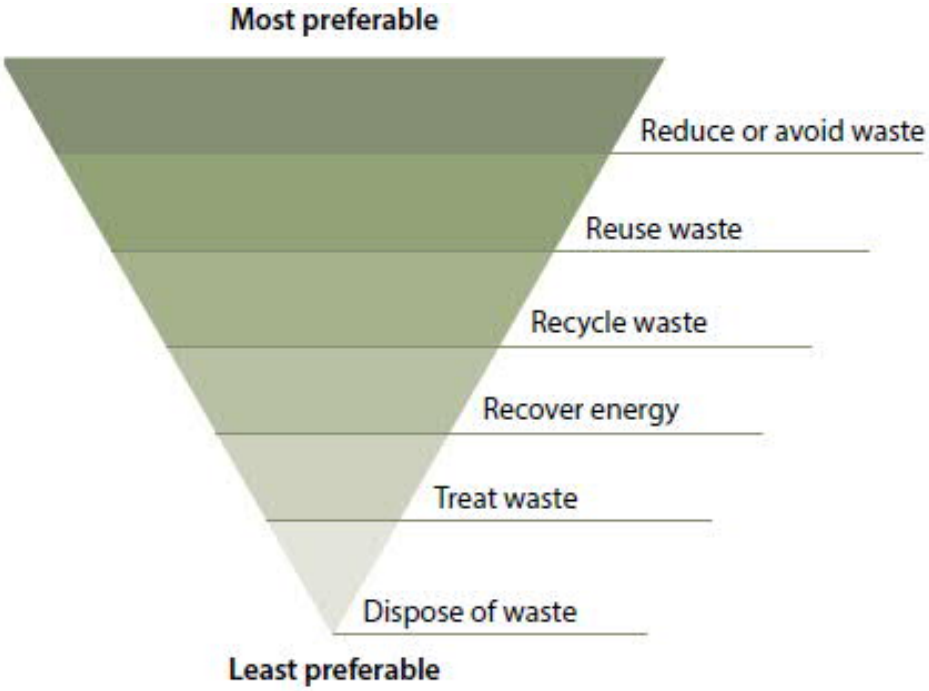

Image from NSW EPA (2014) NSW Waste Avoidance and Resource Recovery Strategy 2014-21.

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 2 below should be referred to during the operational phase of the Project.

Table 2 Legislation and guidance

Legislation and Guidance	Objectives
Council legislation and guidelines	
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 (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 and the Waste Management Guidelines for Industrial, Commercial and Mixed Use.
Waste Strategy 2017-2026, Penrith City Council	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. 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.
State and National legislation and guidelines	
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	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 waste that may be recovered for beneficial re-use. These waste typically include those from demolition and construction works, as well as operational waste such as food waste. • 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.

[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
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 waste generated during the demolition, construction and operational phases of a development, as well as the system for licencing waste transport and disposal.
The Work Health and Safety Regulation 2017	The Work Health and Safety Regulation 2017 provide detailed actions and guidance associated with the topics discussed in The Work Health and Safety Act 2011. The primary aim of the regulation is to protect the health and safety of workers and ensure that risks are minimised in work environments. Workplaces are to ensure that they are compliant with the requirements specified in the regulations. The regulations discuss items such as actions that are prohibited or obligated in work environments, the requirements for obtaining licences and registrations, and the roles and responsibilities of staff in workplaces.
Waste Avoidance and Resource Recovery Act 2001	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: • 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. 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.

5 Operational Waste Management

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 (DPIE, 2021) sets a target of 80% average recovery rate from all waste streams by 2030. Analysis by DPIE (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 achieve this recovery rate. Waste reporting and audits can be used to determine the actual percentage of wastes that are being or have been recycled during operation.

5.2 Waste Streams and Classifications

The operation of the Project is anticipated to 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.

Potential ongoing waste types, their associated waste classifications, and management methods are provided in Table 3. For further information on how to determine a waste's classification, refer to the NSW EPA (2014) Waste Classification Guidelines. Suggestions for recycling drop off locations and contacts can be found on https://businessrecycling.com.au/ for each waste type.

Table 3 Potential waste types, classifications and management methods for operational waste

Waste Types	NSW EPA Classification	Proposed Management Method
General Operations		
Clean office paper	General solid (non-putrescible) waste	Paper recycling at off-site licensed facility
Cardboard including bulky cardboard boxes	General solid (non-putrescible) waste	Cardboard recycling at off-site licensed facility
Recyclable beverage containers, glass and plastic bottles, aluminium cans, steel cans	General solid (non-putrescible) waste	NSW container deposit scheme 'Return and Earn', container recycling at off-site licensed facility
Food waste	General solid (putrescible) waste	Dispose to landfill with general garbage
Batteries	Hazardous waste	Off-site recycling, alternatively contact the Australian Battery Recycling Initiative for more information

Waste Types	NSW EPA Classification	Proposed Management Method
Mobile Phones	Hazardous waste	Off-site recycling; can be taken to the Mobile Muster program. Contact Mobile Muster for more information
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
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	Off-site recycling or disposal, contact FluoroCycle[3] or Lamp Recyclers[4] for more information
Cleaning chemicals, solvents, area wash downs, empty oil or paint drums, chemical containers	Hazardous waste if containers used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and residues have not been removed by washing or vacuuming. General solid (non-putrescible) waste if containers cleaned by washing or vacuuming.	Transport to comply with the transport of Dangerous Goods Code applies in preparation for off-site recycling or disposal at licensed facility.
Garden organics - lawn mowing, tree branches, hedge cuttings, leaves	General solid (non-putrescible) waste	Reuse on-site or contractor removal for recycling at licenced facility

5.3 Estimated Quantities of Operational Waste

SLR has adopted 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 Project. The operational waste generation rates used are shown below in Table 4.

Table 4 Waste generation rates applied to the operations of the Project

Type of Premises	General Waste Generation (L/100 m²/day)	Recycling Generation (L/100 m²/day)
Warehouse	10	10
Offices	10	10

Using the waste generation rates in Table 4 above, the approximate weekly waste quantities for the Project have been calculated. The operational waste quantities were additionally calculated based on the below assumptions:

- The floor areas as shown on the architectural drawings shown in Appendix A, and
- A week comprising seven days of operation

[3] https://www.fluorocycle.org.au/

[4] https://www.lamprecyclers.com.au/

The estimated quantities of operational waste generated by the Project are shown in Table 5.

Table 5 Estimated quantities of operational general waste and recycling

Building 2A	Area (m²)	(L/day)		(L/week)	
		General Waste	Recycling	General Waste	Recycling
Warehouse	34,262	3,426	3,426	23,983	23,983
Office	1,050	105	105	735	735
Dock Office	195	20	20	137	137
Total	35,507	3,551	3,551	24,855	24,855

The Project is anticipated to produce minimal quantities of garden organics. This waste will be taken by a landscaping contractor who will dispose of it at an off-site licenced facility.

5.4 Waste Storage Area Size

The waste storage area for the Project must be large enough to adequately store all quantities of operational waste and recycling between collections. All waste storage room calculations have considered the bin dimensions listed in the Penrith DCP, as outlined in Table 6.

Table 6 Dimensions and approximate footprint of bins

Bin Capacity	Height (mm)	Depth (mm)	Width (mm)	Footprint (m²)
3 m³	1,540	1,520	2,060	3.13

To allow for ready movement of bins into and out of the bin storage area, the bin storage area is to provide a floor area of at least 200% of the total minimum bin GFA. This can also act as a contingency in the event of spikes in waste generation. Additionally, in accordance with the Penrith DCP, an additional 0.2 m is to be permitted between the bins to allow for manoeuvrability. This has been considered in the calculation of the waste storage area for each of the buildings in the Project.

The recommended storage areas do not include consideration for the storage of bulky and hazardous waste. For the additional storage space for bulky and hazardous waste, refer to Section 5.4.1.

The estimated number of bins required for weekly storage of operational waste and recycling generated by the Project are in Table 7 and are based on:

- The estimated quantities of operational waste and recycling as shown in Table 5, and
- Bin dimensions from the Penrith DCP as shown in Table 6

Table 7 Recommended number of bins and storage area for weekly operations

Location	Bins Required		Total Number of Bins	Collections per Week	Recommended Storage Area (m²)
	General Waste	Recycling			
Building 2A	2 x 3 m³	2 x 3 m³	4	6	25.0

5.4.1 Bulky and Hazardous Waste Management

As outlined in the Penrith DCP, additional storage space for the bulky waste stream must be provided. This stream includes broken pallets, broken storage units, e-waste and other materials that cannot be disposed of in the general or recyclable waste stream.

The Penrith DCP does not provide storage area dimensions for bulky waste. In the absence of dimensions for bulky waste provided by Council, SLR recommends 8 m^2 to be allocated for bulky waste storage for the development. Therefore, in addition to the recommended waste storage area noted in Table 7, the total waste storage area recommended for the Project is identified in Table 8.

Table 8 Total recommended storage area for operations of the Project

Location	Recommended Storage Area (m^2)		
	Waste and Recycling	Bulky waste	Total Storage Area
Building 2A	25.0	8	33.0

This additional space can also act as a contingency in the event of spikes in waste generation and allow for additional bins. Depending on the Project's operations, this may include additional bins for the separate storage of items such as hard and soft plastics, timber, glass and metals and aluminium. Management may consider organising a bulk bin as required to remove bulky waste items or engage a contractor to collect and transport these items for reuse, recycling or disposal at an EPA licensed facility.

The waste storage area for the Project is shown on the architectural drawing in Appendix A and is labelled as 'Waste Enclosure'.

In the unlikely event of hazardous waste generation, SLR also recommends using this space to separate and manage hazardous waste. In accordance with the Penrith DCP, hazardous waste management at the site must be placed in specialised containment bins and 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 prior to undertaking any hazardous waste removal. Removal is to be undertaken by appropriately licensed specialised services.

5.5 Waste Storage Room Location

In accordance with the Penrith DCP, the design for the waste storage areas of the Project is to take into consideration better practice waste management and recommendations from the Penrith DCP. In accordance with better practice waste management and the Penrith DCP, the waste storage area should be located so that:

- It is located away from primary street frontages
- It is near any on-site loading bays
- It is convenient, safe, functional and directly accessible to users in each tenancy and servicing collection staff, but inaccessible to the public
- It avoids pedestrian or vehicular traffic hazards likely to be caused by waste collection and storage,
- It has 1.8 m zone of unobstructed clearance between the waste storage area and the entrance.

As detailed in the Penrith DCP, the nominated collection area is to be clearly nominated on site plans accompanying development applications.

5.6 Waste Storage Area Features

In accordance with better practice waste management and the Penrith DCP, the Project's waste storage areas should have the following features:

- Blend in with the design of the wider development and the surrounding streetscape
- Be well lit and well-ventilated
- Fully enclosed and walled
- Adequate vermin prevention measures
- Reduce potential noise and odour impacts
- Enhance safety for the public
- Be connected to a water outlet for washing purposes
- Equipped with a hot and cold tap-based water supply centralised mixing valve
- Floor graded to a central drainage point which is connected to the sewer
- Have water discharge from washing flow to a sewer approved by the relevant authority
- Waterproofed and sealed non-slip floor constructed in accordance with the BCA
- Waste equipment is protected from theft and vandalism
- Be fully enclosed, walled and not permit through access to other on-site waste infrastructure
- Have a minimum 2.7 m unobstructed internal room height in accordance with the BCA
- Adequate lighting and natural or mechanical ventilation in accordance with the BCA
- Provide suitable dual door access with a minimum width of 1.8 m and a minimum 1.8 m unobstructed access corridor for the service of bins
- Provide administrative management, including signage to ensure appropriate use
- Be screened, preferably with landscape buffer planting, from public areas to reduce the impacts of noise, odour and visual amenity, and
- Flexible in design to allow for future changes in operation, tenancies and uses.

5.7 Waste Servicing

Interim waste and recyclables storage units are required in the warehouse and office spaces. The units are to be collected at the end of each day and transferred by cleaners to the central waste storage room.

SLR anticipates that waste collections will be undertaken through a private contractor. The following general waste servicing access requirements should be implemented:

- Waste will be removed regularly.
- Arrangements should be in place so that the waste and recycling storage rooms are not accessible to the general public.

In accordance with the Penrith DCP, the following is required for the access provisions for of waste collection vehicles:

- Collection vehicles must be able to enter and exit the collection area in a forward direction
- Drawings must show the site's entry point, vehicle's route of travel and manoeuvring
- Swept path models must illustrate how a standard waste collection vehicle will enter, service and exit the site
- A 0.5 m unobstructed clearance is required from all obstructions for the vehicle's ingress and egress manoeuvres
- For rear loaded vehicles, an additional 2 m unobstructed loading zone is required behind the vehicle for the loading of 660 L and 1,100 L bins. Additionally, a 0.5 m side clearance is required on either side of the vehicle for driver movements and accessibility
- Unobstructed access, adequate driveways and ramps of sufficient strength to support waste collection
- Access for the collection vehicles must be separate from the entry and exit driveway of any car parking areas to and from public areas
- An acoustic assessment is to accompany the DA and account for waste collection location and times, and
- A structural engineer's report is to accompany the DA and confirm that all infrastructure used for vehicle ingress and egress movements can support the waste collection vehicle's weight. The Penrith DCP consists of dimensions for waste collection vehicles.

SLR understands that a traffic impact assessment has been undertaken by Ason Group for this Project, which has taken into consideration Council's requirements for waste collection vehicles, and which incorporates swept paths that illustrate access to the waste storage area. SLR also understands that an acoustic assessment has been undertaken for this Project, which accounts for traffic movements and waste collection.

Once a private waste contractor is engaged, a valid waste and recycling collection contract is recommended to demonstrate disposal at a waste facility lawfully able to accept it. Written evidence of the valid contract should be kept on-site.

5.8 Waste Avoidance, Reuse and Recycling Measures

5.8.1 Waste Avoidance

Waste avoidance measures 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.

5.8.2 Re-use

Possible re-use opportunities include establishing systems with in-house and supply chain stakeholders to transport products in re-useable packaging where possible.

5.8.3 Recycling

Recycling opportunities 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.

5.9 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:

- 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 Project
- Ensure all staff are trained in correct waste separation and management procedures
- Provide directional signage to show location of and routes to waste storage area
- 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.

5.10 Signage

As outlined in the Penrith DCP, the waste storage and collection areas should be provided with appropriate signage. These signs should clearly identify waste management procedures and provisions to contractors, tenants and visitors should be distributed around the Project.

Signs which clearly identify waste management procedures and provisions to staff and visitors should be distributed around the Project. 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 3
- 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 Project, 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 EPA[5]. 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 3 Example of bin labels for operational waste

5.11 Monitoring and Reporting

Monitoring is recommended to ensure waste and recycling management arrangements and provisions for the Project are functional, practical and are maintained to the standard outlined in this plan, at a minimum.

Visual assessments of bins and bin storage areas should be conducted by the building manager, at minimum:

- Weekly, in the first two months of operation to ensure the waste management system is sufficient for the operation, and
- Every six months, to ensure waste is being managed to the standards outlined in this document.

[5] NSW EPA waste signage and label designs http://www.epa.nsw.gov.au/wastetools/signs-posters-symbols.htm

Quantities of waste and recycling associated with disposal of waste and recycling, including dockets, receipts and other physical records should be recorded by the Building Manager. This is to allow reviews of the waste management arrangements and provisions at the site over time. Records of waste disposal should also be available to regulatory authorities such as the NSW Environmental Protection Authority and SafeWork NSW, upon request.

Any deficiencies identified in the waste management system, including, but not limited to, unexpected waste quantities, is to be rectified by the Building Manager as soon as it is practical. Where audits show that recycling is not carried out effectively, management should carry out additional staff training, signage re-examination and reviews of the waste management system where the audit or other reviewing body has deemed necessary. If this waste management plan no longer sufficiently meets the needs of the Project, review and updates to maintain suitability must be undertaken.

5.12 Roles and Responsibilities

It is the responsibility of the Building Manager, or equivalent role, to implement this WMP and a responsibility of all warehouse tenants and staff to follow the waste management procedures set out by the WMP. SLR recommends that all subcontractors enlisted by the Client are to have roles and responsibilities identified and the Project's waste management system clearly explained. A summary of recommended roles and responsibilities are provided in Table 9.

Table 9 Operational waste management responsibility allocation

Responsible Person	General Tasks
Management	Ensure the WMP is implemented throughout the life of the operation.
	Update the WMP on a regular basis (e.g. annually) to ensure the Plan remains applicable.
	Undertake liaison and management of contracted waste collections.
	Organise internal waste audits.
	Manage any complaints and non-compliances
	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 daily 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

Goodman

BRICKWORKS LIMITED

EMPORIUM AVENUE

RL 68.800+ Truck Entry Exit RL 69.000+

Boundary

15.4m 12m

Gate

45.8m Hardstand

Bal line

30m Awning Over

LPG Refueling With 2.4M High Screen

Van Carparking (25)

Waste Enclosure 49.6m2

Future Conveyor Penetration

2 Storey Dock Office & Amenities

EV Charging Bays

RWT

Covered Outdoor Area

2 Storey Office

Mech Service

Proposed Industrial Facility

Warehouse 2A

FFL 68.90 (+/- 1000mm)

Mezz Connecting Floor Over

Mezz Over

Mezz Over

Office over Amenities

Office over Amenities

Inverter

Msb

Substations

Boundary

Boundary

Boundary

EMPORIUM AVENUE

SEPIA ROAD

45890

115300 WAREHOUSE

Car Entry Exit

+RL 69.600

Gate

Gate

Gate

Car Entry Exit

RL 67.600

6m Awning Over

RWT

Truck Exit

Gate

38m Hardstand

Generators

Fire Truck Parking

Hyd Booster

Pump Room

Sprinkler Tank

Truck Parking/ Storage Hardstand

Generator Link Box

Gate

Truck Entry

RL 65.800+

Boundary

283000 WAREHOUSE

Existing Retaining Wall

36000

18910

LEGEND		SERVICES LEGEND	
	SITE BOUNDARY		SEWER
	LOT BOUNDARY		STORMWATER
	BUILDING 7.5M SETBACK		ELECTRICAL
	LANDSCAPE 3.75M SETBACK		
	2.1m PALISADE FENCING		
	RETAINING WALL		

DEVELOPMENT AREA SCHEDULE

SITE AREA	**80,582 sqm**			**HARDSTAND AREA**	**32,115 sqm**
WAREHOUSE (excl. mezz)	**34,262 sqm**	**MEZZANINES (Inside warehouse)**	**8,403 sqm**	**LIGHT DUTY AREA**	**6,950 sqm**
OFFICE (2 Levels)	**1,050 sqm**	**TOTAL GFA**	**44,015 sqm**		
DOCK OFFICE (North - 2 Levels)	**195 sqm**	**TOTAL GLA**	**35,612 sqm**	**CARPARKING** (inclusive of 6 disabled spaces and 13 EV charging spaces)	**253**
AMENITIES SOUTH 1st floor only.	**105 sqm**	**SITE COVER (exc. awning)**	**44 %**		
Ground Floor excluded as it is already part of the warehouse area)		**FLOOR SPACE RATIO**	**0.54 : 1**	**MOTORCYCLES**	**6**

SBA ARCHITECTS

Oakdale West Estate	PROPOSED INDUSTRIAL FACILITY - PROPOSED BUILDING 2A	**Site Plan**	1:500@A1 1:1000@A3
Kemps Creek, NSW	Development Application		25/10/2021

OAK 2A DA010 (O)

Job No 21220

APPENDIX B

Council Waste Management Plan Form

WASTE MANAGEMENT PLAN
DEMOLITION, CONSTRUCTION AND USE OF PREMISES

If you need more space to give details, you are welcome to attach extra pages to this form.

PLEASE COMPLETE ALL PARTS OF THIS FORM THAT ARE RELEVANT TO YOUR DEVELOPMENT APPLICATION (DA).

IF YOU NEED MORE SPACE TO GIVE DETAILS, YOU ARE WELCOME TO ATTACH EXTRA PAGES TO THIS FORM.

Council will assess the information you provide on this form along with your attached plans. We will take into account the types and volumes of waste that could be produced as a result of your proposed development, and how you are planning to:

- minimise the amount of waste produced
- maximise re-use and recycling
- store, transport and dispose of waste safely and thoughtfully.

APPLICANT DETAILS

First name

Surname

Postal Address

Street No.

17/60

Street name

Castlereagh St

Suburb

Sydney

Post code

2000

Contact phone number

Email address

DETAILS OF YOUR PROPOSED DEVELOPMENT

Street No.

Street name

Aldington Road

Suburb

Kemps Creek

Post code

What buildings and other structures are currently on the site?

The site is currently vacant

Briefly describe your proposed development

The proposed development is Lot 2A, located in Precinct 2, which is one of five industrial warehouse and office precincts in the Oakdale West Industrial Estate site. Lot 2A will include one warehouse building, two two-level ancillary offices, two two-level dock offices, truck and car parking areas and associated site hardstands, and minor landscaping areas, a sprinkler tank and a pump room.

Applicant Signature

Date

PENRITH CITY COUNCIL

SECTION 1: DEMOLITION

*Please include details on the plans you submit with this form, for example location of on-site storage areas/ containers, vehicle access point/s.

Materials		Destination		
		Re-use and recycling		Disposal
Material	Estimated volume (m^2 or m^3)	ON-SITE* Specify proposed re-use or on-site recycling	OFF-SITE Specify contractor and recycling facility	Specify contractor and landfill site
Excavation (eg soil, rock)				
Green waste				
Bricks	Not applicable			
Concrete				
Timber (Please specify type/s)				
Plasterboard				
Metals (Please specify type/s)				
Other				

PENRITH CITY COUNCIL

SECTION 2: CONSTRUCTION

*Please include details on the plans you submit with this form, for example location of on-site storage areas/ containers, vehicle access point/s.

Materials		Destination		
		Re-use and recycling		Disposal
Material	Estimated volume (m^2 or m^3)	ON-SITE* Specify proposed re-use or on-site recycling	OFF-SITE Specify contractor and recycling facility	Specify contractor and landfill site
Excavation (eg soil, rock)		Not applicable		
Green waste				
Bricks				
Concrete				
Timber (Please specify type/s)				
Plasterboard				
Metals (Please specify type/s)				
Other				

SECTION 3: WASTE FROM ON-GOING USE OF PREMISES

If relevant, please list the type/s of waste that may be generated by on-going use of the premises after the development is finished.	Expected volume (average per week)
Please refer to Section 5 of the attached waste management plan for further detail	

SECTION 4: ON-GOING MANAGEMENT OF PREMISES

If relevant, please give details of how you intend to manage waste on-site after the development is finished, for example through lease conditions for tenants or an on-site caretaker/manager. Describe any proposed on-site storage and treatment facilities. Please attach plans showing the location of waste storage and collection areas, and access routes for tenants and collection vehicles.

Please refer to Section 5 of the attached waste management plan for further detail

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APPENDIX I

Landscape Management Plan

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Oakdale West Estate, Precinct 2 - Building 2A

Landscape Management Plan

Prepared by: Scape Design Pty Ltd
Prepared for: Goodman Property Services

Revision Schedule

Revision	Date	Issued by
01	27/04/22	CH
02	5/8/22	CH

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2 CONDITIONS

2.1 TABLE OF CONDITIONS

Condition No.		Condition	Action
Landscaping			
B14.		*Prior to the commencement of operation of the development, the Applicant must implement the Landscape Plan included in the RtS and shown on the figures in* ***Appendix 1.***	The landscaping is in progress
B15.		*The Applicant must maintain the landscaping on the site in accordance with the approved Landscape Plan for the life of the development. If any aspect of the landscaping has not been successful, the Applicant must undertake replanting and rehabilitation works, as reasonably practicable.*	The landscaping contract includes an initial 3 month maintenance period, to be followed by an ongoing maintenance regime.

3 INTRODUCTION

3.1 GENERAL

3.1.1 GENERAL CONDITIONS

Contract: Oakdale West Estate (OWE) – Building 2A (SSD-9794683 - Stage 3). For further information refer to the Oakdale West Estate LMP

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 (LMP), 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 LMP in conjunction with these packages. If in doubt about any details or if conflicts are found in the documents, seek advice.

This LMP 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 Building 2A.

3.1.3 WORKMANSHIP AND MATERIALS

All landscape works, including detailed design (if relevant), 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 CONSULATION

Penrith City Council (PCC) were consulted in January 2020 to review and comment on the Oakdale West Estate Landscape Master Plan. The comments that were received have been resolved as per the following table:

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.	*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).*	Car parking planting layout has been consolidated to larger beds, capable of supporting grass/groundcover planting and canopy trees. Where this is not possible, trees with root vaulting have been provided.

		Refer to Appendix 7.1 of this LMP for amended Landscape Plans.
2. Islands are proposed as resin bonded aggregate. There is opportunity for Water Sensitive Urban Design measures	*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.*	Resin bonded aggregate has been removed and replaced with decomposed granite and canopy trees with root vaulting. 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.	*It is recommended that tree quantities are increased within landscape setbacks, this can be achieved by decreasing spacing between individual trees.*	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.	*It is recommended that street trees are planted at 8-10m centres.*	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.	*Small trees are inappropriate for the scale of the built form ie. Crepe Myrtle, Tuckeroo. Tree species diversity is to be increased.*	Tree species have been updated to reflect a greater diversity of native canopy trees, providing greater resilience and amenity to the area. Tree species have been selected to suit the soil volume that is available to them. 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.	*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.*	The Southern Link Road edge comprises native trees set in mass planting and is consistent with the Oakdale West Estate.
~~7. Surrounding public road intersections are considered to require additional landscaping.~~	~~*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.*~~	~~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.	*An alternative product must be provided and established for the precinct.*	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	*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.*	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.	*Irrigation details required.*	Refer to Section 5.2 and Appendix 7.3 of OWE Estate 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 2A of Precinct 2 is located in the north west corner of the Oakdale West Estate and is accessed via Estate Road 01 and Estate Road 03. Building 2A is bordered by the Water NSW pipeline lands across Estate Road 03 to the north, Lots 2B to the south and Lot 1A across Estate Road 01 to the east.

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 LMP is to support the Oakdale West Estate LMP by providing greater detail on site management, visual and landscape treatments, and maintenance works specially for Building 2A. Further information on each of these can be found below within this LMP.

4 SITE MANAGEMENT

4.1 ENVIRONMENTAL ASPECTS

4.1.1 DESCRIPTION

The LMP 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. It also outlines that ecological impacts are to be mitigated through adherence to the provisions set out Flora & Fauna Management Plan.

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 is the environmental bund along the western boundary of the estate, which has already been constructed and is well vegetated. Further information is provided 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, including native canopy trees.

Plant typologies implemented are to be low maintenance and drought resistant, ensuring all new landscaped areas are adaptable to the Western Sydney Climate. Tree planting typologies have referenced the Penrith City Council (PCC) *Native Tree Guide*, ensuring that a proportion of locally endemic tree species are reinstated to the former agricultural site, to also increase the percentage of canopy cover. Landscape setbacks have been designed to foster a clustered and dense approach to tree planting, including native species, underplanted with a range of shrubs and groundcovers.

Car parking areas are to incorporate Water Sensitive Urban Design (WSUD) where possible. Tree pits are to utilise structural soil in order increase soil availability and therefore provide the best possible conditions for tree growth and maturity. Refer to L.SK.200 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 either gravel surfaces, low planting or 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 located as per the CIVIL ENG. and ARCHITECT Drawings. Monitor Maintenance requirements with planting and lawn care at fence and gate interfaces where required (Section 5 of this LMP).

Planted Verges (Excluding Turfing)
Where road and car park medians and verges are to be planted, a 250mm wide area of mulch only is to be used next to kerbing to maintain clear sightlines to edges. 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.

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 appointed principal's representative and principal's consulting 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, in accordance with Goodman's *Landscape Guidelines*.

5.1.3 REQUIREMENTS

Contractors must submit an annual routine landscape maintenance program to Goodman's Project Superintendent, Landscape Manager and/or the consulting 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 (DLP) (3 months).

Post the initial DLP period, the Client (Goodman Property Services Australia Pty Ltd) 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 (15 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 hessian ties*
- *Reinforced turf cell system (if required).*

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

All landscape areas are to be maintained throughout the maintenance program, including planting and turf areas, footpaths, gabion walls and landscape features.

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, reinforced turf cell system 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 that 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, noxious weeds, 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: For trees planted in turf, including those with mulched surrounds, provide 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 and reinforced turf cell system 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 be 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 noxious and/or 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

Not with standing 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 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.

								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			x			x	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.

								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 (including reinforced turf cell system)			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							Refer to the **Erosion and Sediment Control Plan** for erosion control measures.
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 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 cover; check and adjust irrigation	Mow lawns; check and adjust irrigation	Weed; inspect mulch for deficiencies in cover; check and adjust irrigation	Mow and trim lawns; treat for insects and 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	Mow and trim lawns

			insects and disease	
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
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 of 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 *Callistemon viminalis 'Little John'* *Pennisetum alopecurioides* *Trachelospermum jasminoides*	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.	
PM1B	Car Park Edge Mix - Shade *Hibbertia scandens* *Pennisetum alopecurioides 'Nafray'* *Viola hederacea*	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 *Gazania tomentosa* *Pennisetum alopecuriodes*	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 *Callistemon 'White Anzac'* *Gazania tomentosa* *Pennisetum alopecurioides*	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.	

Plant Mix	Shape/description	Critical issues	Pruning Frequency	Planting Palette
PM3B	Site Edge Mix Low – Shade *Rhaphiolepsis indica 'Oriental Pearl'* *Trachelospermum jasminoides 'Tricolor'* *Viola hederacea*	**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 *Nandina domestica 'Gulf Stream'* *Pennisetum alopecurioides*	**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 *Doryanthes excelsa* *Lorapetalum chinense rubrun 'China Pink'* *Photinia x fraseri 'Red Robin'*	**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.	
PM6A	Site Hedge Mix – Sun *Acmena smithii 'Hot Flush'* *Metrosideros thomasii* *Rhapiolepsis indica 'Oriental Pearl'* *Rhapiolepsis indica '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 *Gazania tomentosa*	**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 *Trachelopsermum jasminoides 'Tricolor'*	**Groundcovers** Drought tolerant, low water and fertiliser requirements.	**Groundcovers** Prune after flowering to remove spent flowers, encourage healthy growth and maintain safe access.	

Plant Mix	Shape/description	Critical issues	Pruning Frequency	Planting Palette
PM9A	Climbers Mix – Sun *Hibbertia scandens*	**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 *Trachelopsermum jasminoides*	**Climbers** Drought tolerant, low water and fertiliser requirements.	**Climbers** Prune after flowering to remove spent flowers, encourage healthy growth and maintain safe access.	

Tree Mix	Shape/description	Critical issues	Pruning Frequency	Planting Palette
Trees	General Trees *Angophora bakeri* *Angophora floribunda* *Corymbia eximia* *Corymbia maculata* *Cupaniopsis anacardioides* *Eucalyptus amplifolia* *Eucalyptus crebra* *Eucalyptus moluccana* *Glochidion ferdinandi* *Lagerstroemia indica 'Tuscarora'* *Magnolia grandiflora 'Exmouth'* *Melaleuca linarifolia* *Pyrus calleryana 'Capital'* *Tristaniopsis laurina 'Luscious'* *Waterhousea floribunda*	**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

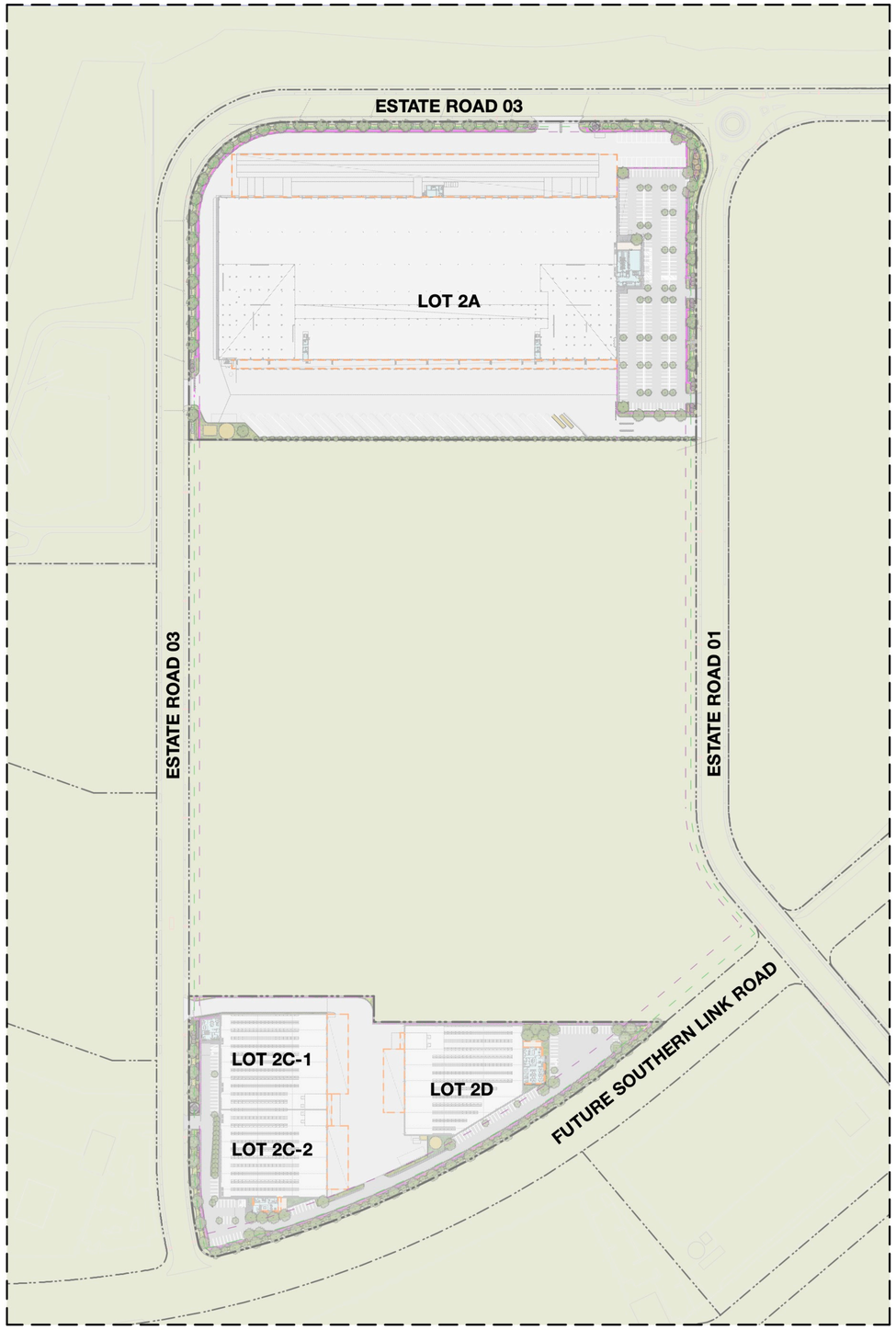
Key Element	Trigger/ Response	Condition Green	Condition Amber	Condition Red
Irrigation	Trigger	Irrigation system operating at optimum frequency.	Irrigation system yet to be installed.	Irrigation system fails.
	Response	No response required. Continue to monitor.	Provide additional hand watering until 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.

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

KEY MAP



scape DESIGN

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PROJECT

Oakdale West Estate
Lots 2A, 2C and 2D

Kemps Creek, NSW

Cover Sheet

PHASE

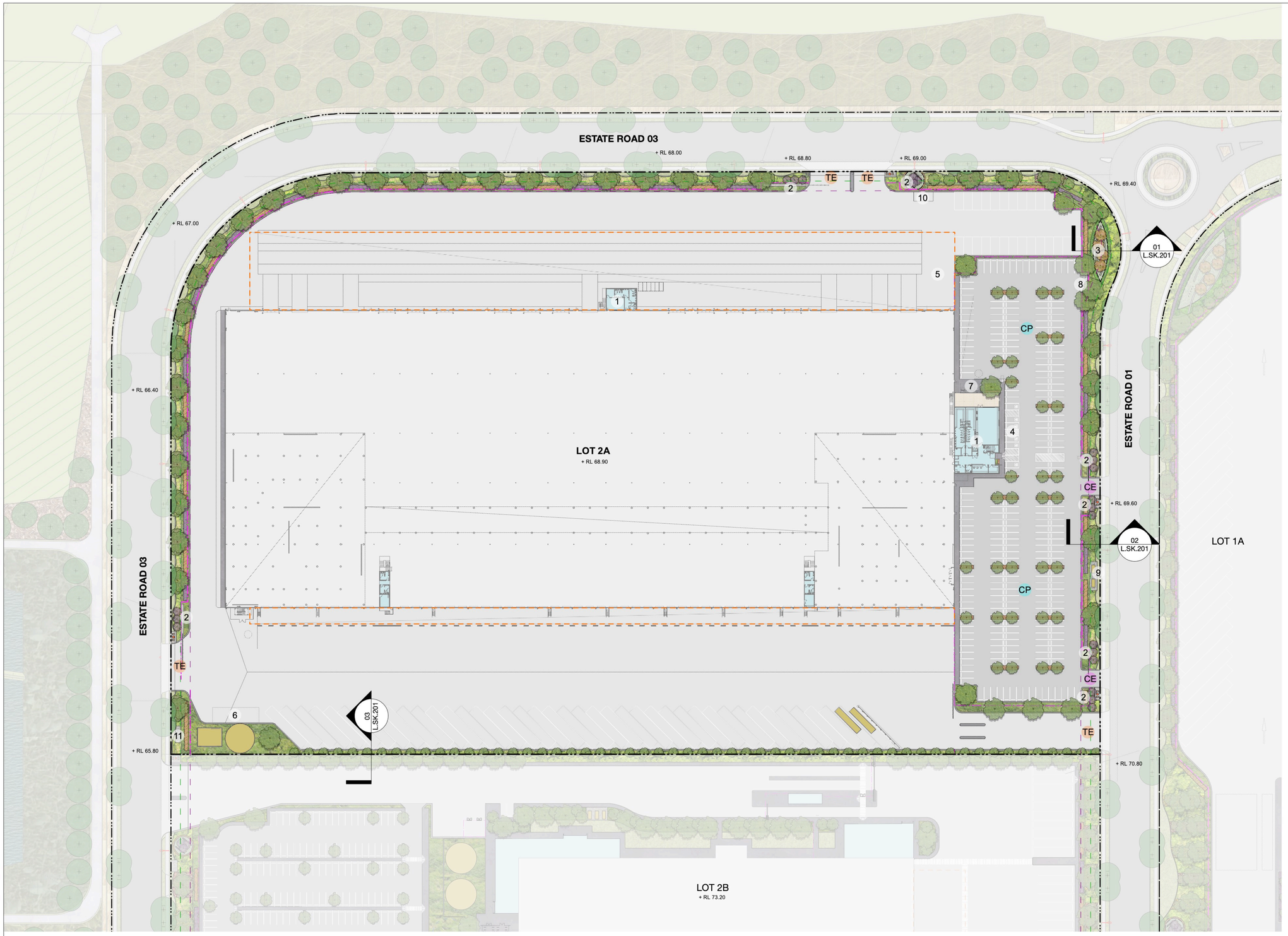
Development Application
Landscape Drawing Set

CLIENT

Goodman Property Services (AUST) PTY LTD

TRANSMITTAL

Dwg. Number	Dwg. Name	Revision	Date
L.SK.00	Cover Sheet	G	1/11/21
L.SK.01	Landscape Sketch Plan - Lot 2A	F	1/11/21
L.SK.02	Landscape Sketch Plan - Lot 2C & 2D	D	19/10/21
L.SK.03	Planting Plan - Lot 2A	F	1/11/21
L.SK.04	Planting Plan - Lot 2C & 2D	D	19/10/21
L.SK.05	Planting Schedule - Lot 2A	F	1/11/21
L.SK.06	Planting Schedule - Lot 2C & 2D	D	19/10/21
L.SK.07	Character & Materials	D	13/10/21
L.SK.105	Landscape - Detailed Plan & Notes - Lot 2A	F	1/11/21
L.SK.106	Landscape - Detailed Plan & Notes - Lot 2C & 2D	C	19/10/21
L.SK.200	Carpark Details	E	1/11/21
L.SK.201	Landscape - Typical Street Sections - Lot 2A	E	1/11/21
L.SK.202	Landscape - Typical Street Sections - Lot 2C & 2D	C	19/10/21



Note: All finished levels subject to change +/- 1000mm.

0 10 20 30 40 50 M

LEGEND

PROGRAMME

1 Office
2 Entry Feature Trees
3 Site Marker
4 Accessible Parking
5 Waste Enclosure
6 Fire Truck Parking
7 Bicycle Racks
8 Motorcycle Parking
9 Substations
10 LPG Refueling with 2.4M High Screen
11 Hyd Booster
CE Car entry/exit
CP Carparking
TE Truck entry/exit

GENERAL

Site Boundary
Lot Boundary
+ FFL 562.00 Finished Floor Level
+ RL 562.00 Reduced Level
Architecture Above
Chain Mesh Fence Refer Arch. dwgs.
Palisade Fence Refer Arch. dwgs.
Building Setback
Landscape Setback
Proposed Ramp

PREPARATION & GROUNDWORKS

Proposed Stairs
Building
Office
Services

WALLS & EDGES

Steel Edge
Flush Concrete Kerb
Raised Concrete Kerb
Freestanding Gabion Wall
Freestanding Insitu Wall
Freestanding Precast Wall
Retaining Gabion Wall
Retaining Insitu Wall
Retaining Precast Wall
Steel Wall

PAVEMENTS

Temporary Recycled Aggregate
Coarse Aggregate
Decomposed Granite
Asphaltic Concrete
Insitu Concrete
Precast Concrete
Stone Tiles
Feature paving
Pram Ramp

FURNITURE & FITTINGS

Proposed Table Setting
Proposed Bicycle Racks
Proposed Street Lighting
Proposed Sleeper Mullion
Proposed Sandstone Block
Gate
Signage
Proposed Seating
Proposed Pergola

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
PM4-Site markers mix
PM5A-Feature planting mix-sun
PM6A-Site hedge mix-sun
PM7A-Groundcover mix A
PM7B-Groundcover mix B
PM9A-Climbers mix

TREES

Existing Tree to be Removed Refer ARBORISTS REPORT
Existing Tree to be Retained
Stage 1 Works - Proposed Tree
Proposed Tree - General
Proposed Tree - Entry Marker
Proposed Tree - Site Marker

scape DESIGN

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Kemps Creek, NSW

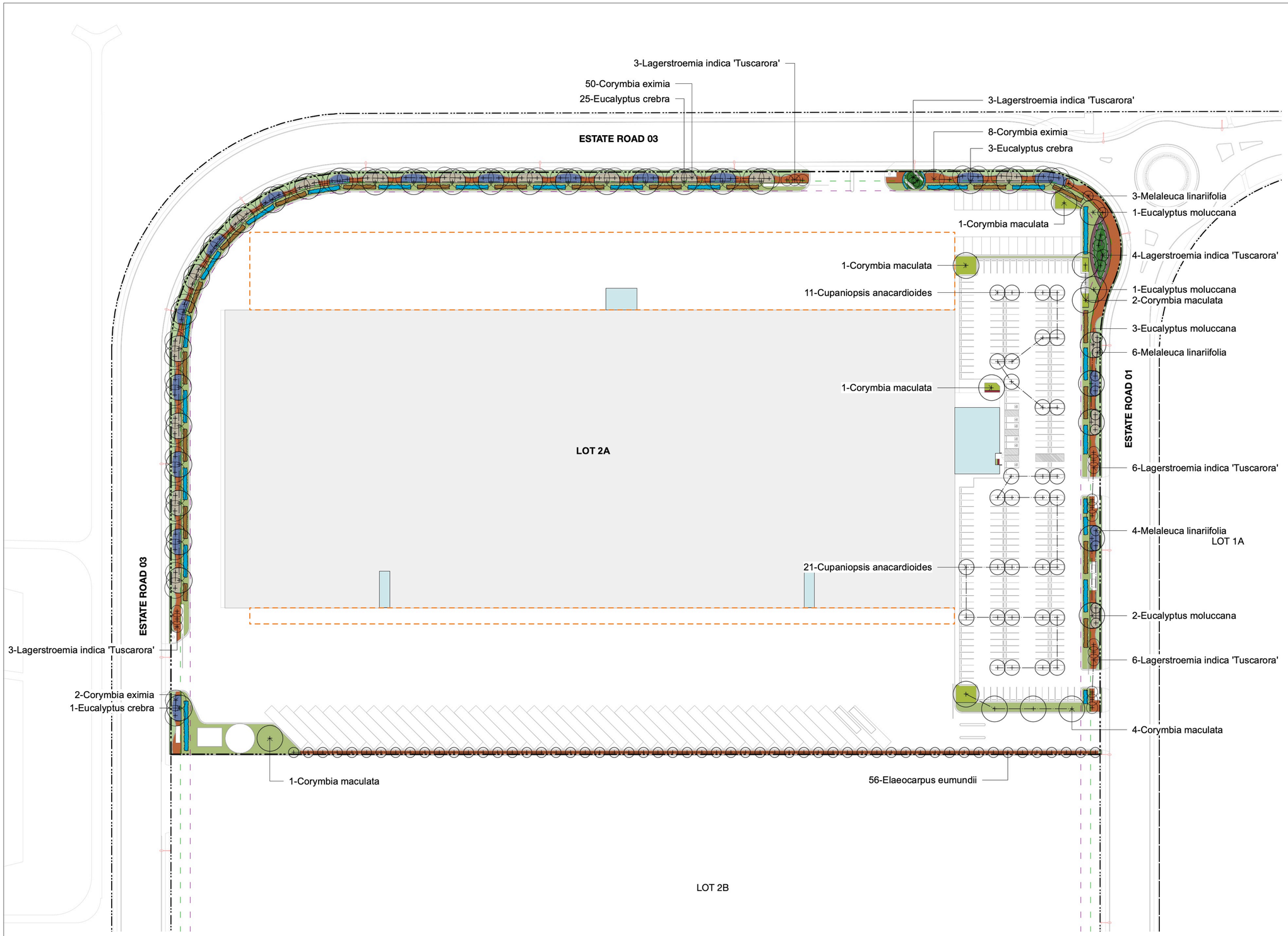
CLIENT
Goodman Property Services

revision	revision description	by	date
F	REVIEW & COORDINATION	ZZ	1/11/21
E	REVIEW & COORDINATION	ND	15/10/21
D	REVIEW & COORDINATION	ZZ	13/10/21
C	REVISED ENTRY & CARPARK	ZZ	23/4/21
B	DEVELOPMENT APPLICATION	MF	13/11/20

Landscape Sketch Plan - Lot 2A

scale	1:750@A1
drawn	MF/ZZ
checked	CH
project no.	163-18
project phase	Development Application

L.SK.01 F



LEGEND

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
- PM3A-Site edge mix low - sun
- PM4-Site markers mix
- PM5A-Feature planting mix
- PM6A-Site hedge mix - sun
- PM7A-Groundcover mix A
- PM7B-Groundcover mix B
- PM9A-Climbers mix
- Proposed tree/specimen plant

0 10 20 30 40 50 M

Note: All finished levels subject to change +/- 1000mm.

scape DESIGN

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PROJECT

Oakdale West Estate

Kemps Creek, NSW

CLIENT

Goodman Property Services

revision	revision description	by	date
F	REVIEW & COORDINATION	ZZ	1/11/21
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D	REVIEW & COORDINATION	ZZ	13/10/21
C	REVISED ENTRY & CARPARK	ZZ	23/4/21
B	DEVELOPMENT APPLICATION	MF	13/11/20

Planting Plan - Lot 2A

scale	1:750@A1
drawn	MF/ZZ
checked	CH
project no.	163-18
project phase	Development Application

L.SK.03 F

PLANTING SCHEDULE - LOT 2A

	Botanical Name	Common Name	Height (m)	Spread (m)	Pot Size	Rate (m2)	
Trees							
	Corymbia eximia	Yellow Bloodwood	12.0	8.0	75L	As Shown	
	Corymbia maculata	Spotted Gum	30.0	10.0	75L	As Shown	
	Cupaniopsis anacardioides	Tuckeroo	12.0	6.0	75L	As Shown	
	Elaeocarpus eumundii	Eumundi Quandong	10.0	4.0	75L	As Shown	
	Eucalyptus crebra	Narrow leaved Ironbark	30.0	10.0	75L	As Shown	
	Eucalyptus moluccana	Grey Box	25.0	10.0	75L	As Shown	
	Lagerstroemia indica 'Tuscarora'	Tuscarora Crepe Myrtle	6.0	4.5	200L	As Shown	
	Melaleuca linariifolia	Snow-in-Summer	10.0	4.0	75L	As Shown	
PM1A - Car Park Edge Mix - Sun						Area =	1755 sq.m
	Callistemon viminalis 'Little John'	Little John Bottlebrush	0.6	0.8	140mm	2	
	Pennisetum alopecuroides 'Nafray'	Pennisetum Nafray	0.5	0.5	140mm	1	
	Trachelospermum jasminoides	Star Jasmine	0.9	0.3	140mm	2	
PM2A - Car Park Island Mix - Sun						Area =	191 sq.m
	Carex appressa	Tall Sedge	0.7	0.5	140mm	2	
	Gazania tomentosa	Silver Gazania	0.3	1.5	140mm	2	
	Nandina domestica 'Gulf Stream'	Dwarf Sacred Bamboo	0.8	0.8	140mm	2	
	Pennisetum alopecuroides 'Nafray'	Pennisetum Nafray	0.5	0.5	140mm	1	
PM3A - Site Edge Mix Low - Sun						Area =	1368 sq.m
	Callistemon 'Great Balls of Fire'	Bottlebrush	2.0	2.0	140mm	1	
	Callistemon 'White Anzac'	Bottlebrush	1.0	2.0	140mm	1	
	Gazania tomentosa	Silver Gazania	0.3	1.5	140mm	2	
	Pennisetum alopecuroides 'Nafray'	Pennisetum Nafray	0.5	0.5	140mm	1	
PM4 - Site Markers Mix						Area =	65 sq.m
	Nandina domestica 'Gulf Stream'	Dwarf Sacred Bamboo	0.8	0.8	140mm	2	
	Pennisetum alopecuroides 'Nafray'	Pennisetum Nafray	0.5	0.5	140mm	1	
PM5A - Feature Planting Mix						Area =	343 sq.m
	Doryanthes excelsa	Gymea Lily	2.0	1.5	200mm	2	
	Lorapetalum chinense rubrum 'China Pink'	Chinese Fringe Flower	1.5	1.5	200mm	2	
	Photinia x fraseri 'Red Robin'	Red Robin	3.0	2.0	200mm	1	
PM6A - Site Hedge Mix - Sun						Area =	414 sq.m
	Acmena smithii 'Hot Flush'	Lilly Pilly	4.0	2.0	300mm	1	
	Metrosideros thomasii	New Zealand Christmas Bush	4.0	4.0	300mm	1	
	Rhaphiolepis indica 'Oriental Pearl'	Oriental Pearl Indian Hawthorn	1.0	1.0	300mm	2	
	Rhaphiolepis indica 'Snow Maiden'	Snow Maiden Indian Hawthorn	0.5	1.0	300mm	2	
PM7A - Groundcovers Mix A						Area =	540 sq.m
	Gazania tomentosa	Silver Gazania	0.3	1.5	140mm	2	
PM7B - Groundcovers Mix B						Area =	545 sq.m
	Trachelospermum jasminoides 'tricolor'	Tricolor Star Jasmine	0.5	1.0	140mm	2	
PM9A - Climbers Mix						Area =	7 sq.m
	Trachelospermum jasminoides	Star Jasmine	0.9	0.3	140mm	2	
TF1 - General Turf						Area =	1065 sq.m
	Stenotaphrum secundatum 'Sir Walter'	Sir Walter Buffalo			Turf Roll		
TF2 - Feature Turf (Planted)						Area =	133 sq.m
	Zoysia tenuifolia	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.
3. All planting and turf areas to be irrigated with subsurface drip line. Refer to the Oakdale West Estate Landscape Management Plan and Goodman Landscape Guidelines for further information

PLANTING PALETTE

Trees

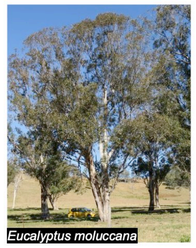

Corymbia eximia


Corymbia maculata


Cupaniopsis anacardioides


Elaeocarpus eumundii


Eucalyptus crebra


Eucalyptus moluccana


Lagerstroemia indica 'Tuscarora'


Melaleuca linariifolia

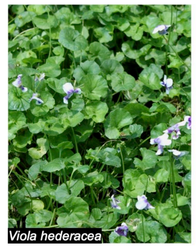
PM1A - Car Park Edge Mix - Sun


Callistemon viminalis 'Little John'


Pennisetum alopecuroides 'Nafray'

PM1B - Car Park Edge Mix - Shade


Trachelospermum jasminoides


Viola hederacea

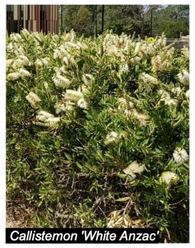
PM2A - Car Park Island Mix - Sun


Carex appressa


Nandina domestic 'Gulf Stream'

PM3A - Site Edge Mix Low - Sun


Callistemon 'Great Balls of Fire'

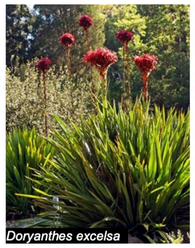

Callistemon 'White Anzac'

PM4-Site Markers Mix


Nandina 'Gulf Stream'


Pennisetum alopecuroides 'Nafray'

PM5A - Feature Planting Mix


Doryanthes excelsa


Loropetalum rubrum chinense 'China Pink'


Photinia x fraserl 'Red Robin'

PM6A - Site Hedge Mix - Sun


Acmena smithii 'Hot Flush'


Metrosideros thomsanii


Rhaphiolepis indica 'Oriental Pearl'

PM7A - Groundcovers Mix A


Gazania tomentosa

PM7B - Groundcovers Mix B


Trachelospermum jasminoides 'Tricolour'

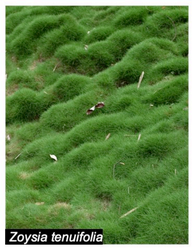
PM9A - Climbers Mix


Trachelospermum jasminoides

TF1 - General Turf


Stenotaphrum secundatum 'Sir Walter'

TF2 - Feature Turf


Zoysia tenuifolia

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Oakdale West Estate
Kemps Creek, NSW

CLIENT
Goodman Property Services

revision	revision description	by	date
F	REVIEW & COORDINATION	ZZ	1/11/21
E	REVIEW & COORDINATION	ND	15/10/21
D	REVIEW & COORDINATION	ZZ	13/10/21
C	REVISED ENTRY & CARPARK	ZZ	23/4/21
B	DEVELOPMENT APPLICATION	MF	13/11/20

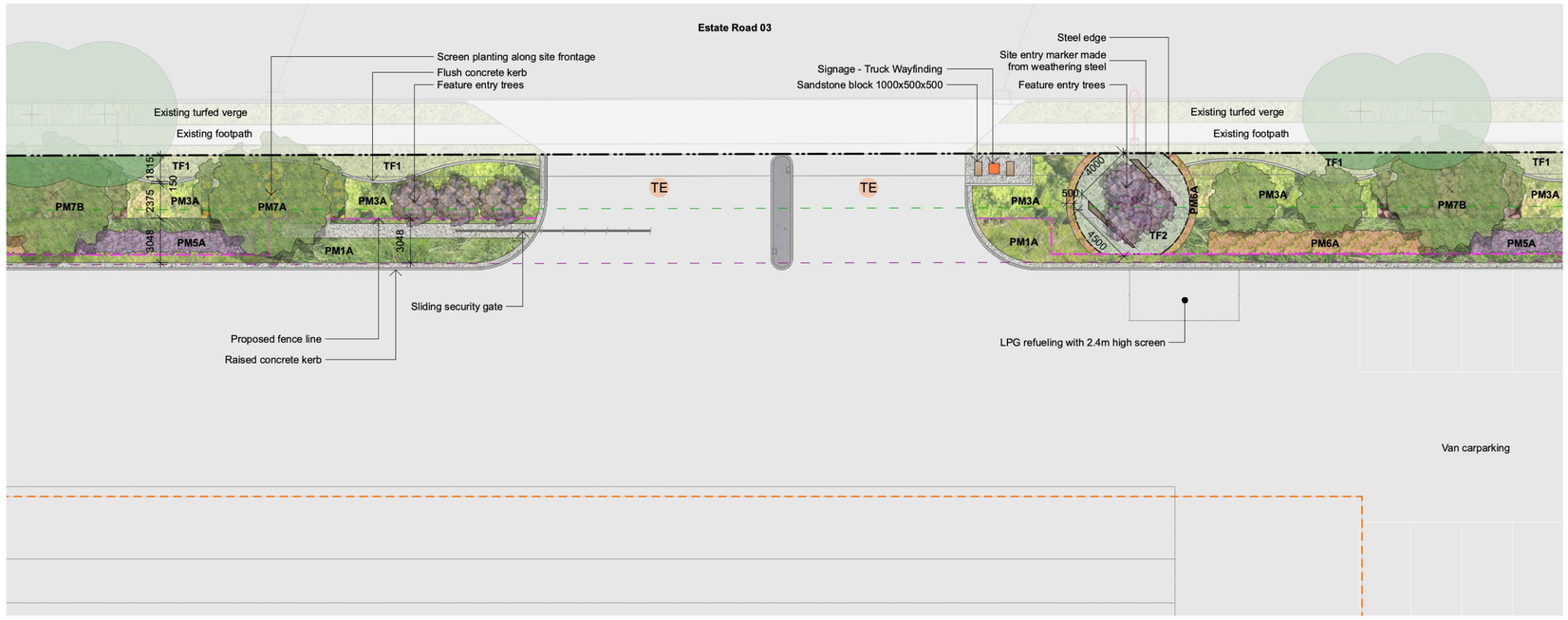
Planting Schedule - Lot 2A

scale	NTS
drawn	MF/ZZ
checked	CH
project no.	163-18
project phase	Development Application

L.SK.05 F

01 Carpark - Site Marker
Detail Plan - Scale 1:200 @ A1

03 Truck and Car Entry
Detail Plan - Scale 1:200 @ A1



02 Truck and Car Entry
Detail Plan - Scale 1:200 @ A1

Note: All finished levels subject to change +/- 1000mm.

0 2 4 6 8 10 M

LEGEND

PROGRAMME

1	Office
2	Entry Feature Trees
3	Site Marker
4	Accessible Parking
5	Waste Enclosure
6	Fire Truck Parking
7	Bicycle Racks
8	Motorcycle Parking
9	Substations
10	LPG Refueling with 2.4M High Screen
11	Hyd Booster
CE	Car entry/exit
CP	Carparking
TE	Truck entry/exit

GENERAL

- Site Boundary
- Lot Boundary
- + FFL 562.00 Finished Floor Level
- + RL 562.00 Reduced Level
- Architecture Above
- Chain Mesh Fence Refer Arch. dwgs.
- Palisade Fence Refer Arch. dwgs.
- Building Setback
- Landscape Setback
- Proposed Ramp

PREPARATION & GROUNDWORKS

- Proposed Stairs
- Building
- Office
- Services

WALLS & EDGES

- Steel Edge
- Flush Concrete Kerb
- Raised Concrete Kerb
- Freestanding Gabion Wall
- Freestanding Insitu Wall
- Freestanding Precast Wall
- Retaining Gabion Wall
- Retaining Insitu Wall
- Retaining Precast Wall
- Steel Wall

PAVEMENTS

- Temporary Recycled Aggregate
- Coarse Aggregate
- Decomposed Granite
- Asphaltic Concrete
- Insitu Concrete
- Precast Concrete
- Stone Tiles
- Feature paving
- Pram Ramp

FURNITURE & FITTINGS

- Proposed Table Setting
- Proposed Bicycle Racks
- Proposed Street Lighting
- Proposed Sleeper Mullion
- Proposed Sandstone Block
- Gate
- Signage
- Proposed Seating
- Proposed Pergola

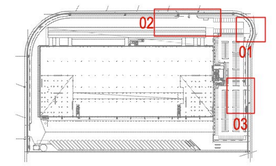
PLANTING

- 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
- PM4-Site markers mix
- PM5A-Feature planting mix-sun
- PM6A-Site hedge mix-sun
- PM7A-Groundcover mix A
- PM7B-Groundcover mix B
- PM9A-Climbers mix

TREES

- Existing Tree to be Removed Refer ARBORISTS REPORT
- Existing Tree to be Retained
- Stage 1 Works - Proposed Tree
- Proposed Tree - General
- Proposed Tree - Entry Marker
- Proposed Tree - Site Marker

KEY PLAN



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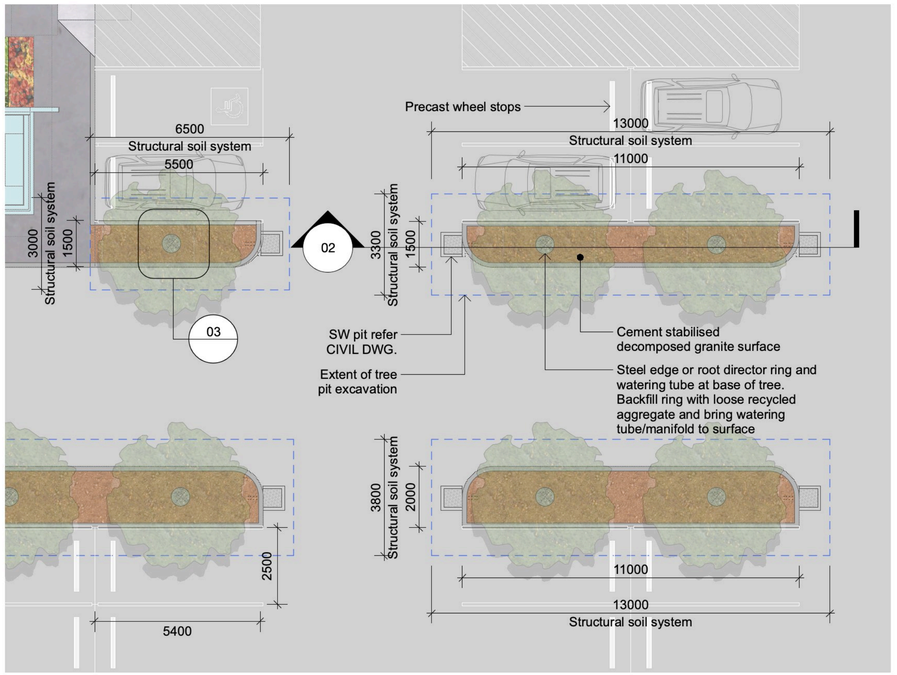
C	REVISED ENTRY & CARPARK	ZZ	23/4/21
B	DEVELOPMENT APPLICATION	MF	13/11/20

Landscape Detailed Plan & Notes - Lot 2A

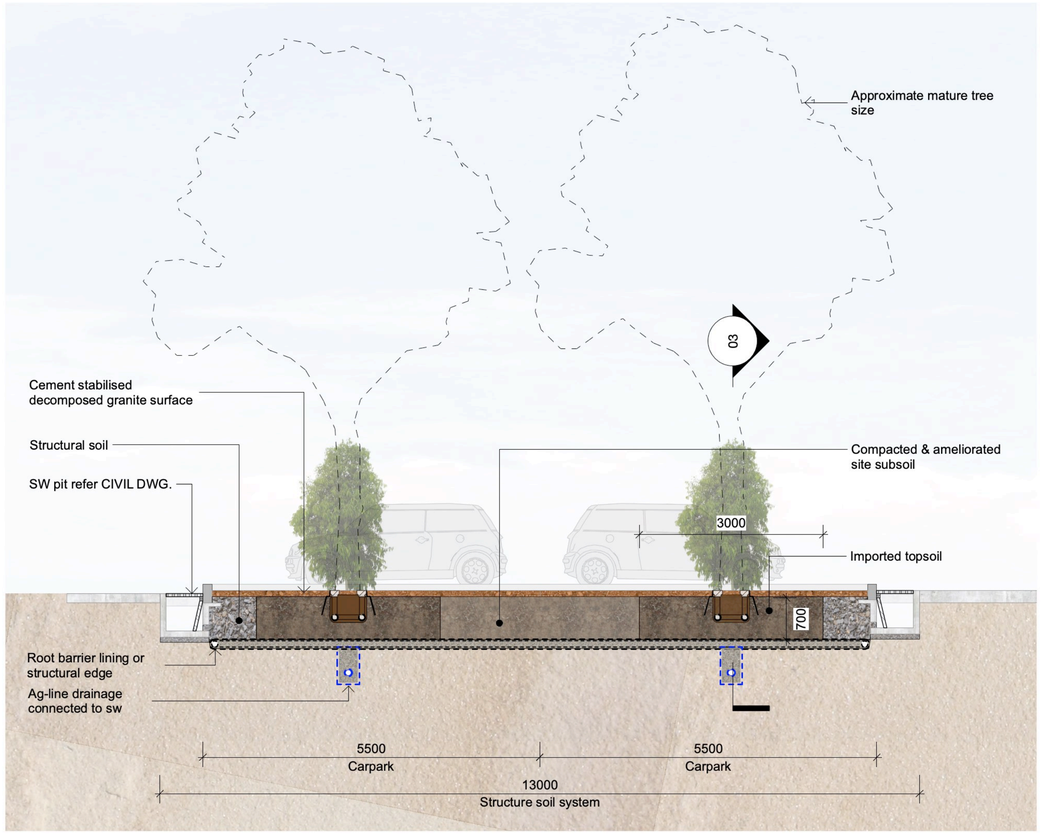
scale	1:200@A1
drawn	MF/ZZ
checked	CH
project no.	163-18
project phase	Development Application

L.SK.105 F



01 Carpark Tree Pit System
Detailed Plan - Scale 1:100 @ A1

0 1 2 3 4 5 M



02 Carpark Tree Pit System
Detailed Section - Scale 1:50 @ A1

0 1 2 3 M

Note: All finished levels subject to change +/- 1000mm.

MATERIALS SCHEDULE

Description		Volume
SOIL STRUCTURE SYSTEM - STRATA CELL OR SIMILAR		
Lot 2A		
Type 1A - Soil Structure System 3000x6500mm		19.5 m3
Paving-Soil Structure System Type 1A	*19.5*	
Type 1B - Soil Structure System 3500x6500mm		68.3 m3
Paving-Soil Structure System Type 1B	*68.3*	
Type 3A - Soil Structure System 3300x13000mm		85.8 m3
Paving-Soil Strucutre System Type 3A	*85.8*	
Type 3B - Soil Structure System 3800x13000mm		592.8 m3
Paving-Soil Strucutre System Type 3B	*592.8*	
Lots 2C & 2D		
Type 1A - Soil Structure System 3000x6500mm		156.0 m3
Paving-Soil Structure System Type 1A	*156.0*	
Type 4 - Soil Structure System Triangle Islands		37.3 m3
Paving-Soil Strucutre System Type 4	*37.3*	
	Total Area	959.7 m3

NOTES:
Full width of excavated tree pit (3000-3800 W x 6500-13000 W x 1000 D) to be back filled with imported topsoil, ameliorated site soil and structural soil. Provide a minimum of 15m3 of topsoil per tree in car park island beds.

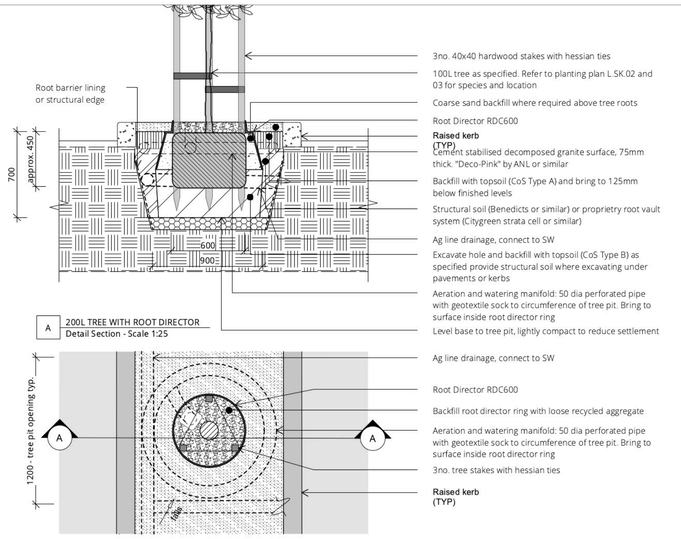
Root Director

Decomposed Granite "Gold"

Notes:
1. Supplier (Root Director): City Green.
Ph: +61 1300 066 949
https://citygreen.com/products/rootdirector-c-series/

Supplier (Decomposed Granite "Pink"): ANL.
Ph: 02 9450 1444
https://anlscape.com.au/landscaping/gravels-and-pebbles-for-pathways-and-driveways/deco-granite-pink-gravel

2. Refer specification for selections



D-CD	TREE PLANTING - 100L TREE WITH ROOT DIRECTOR
08-02-21	Section | Plan - Scale 1:25 @ A1

03 Carpark Island Tree
Detail - Scale 1:25 @ A1

0 0.5 1.0 1.5 M

LEGEND

GENERAL
- Structure Below

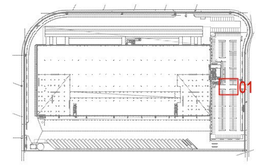
PAVEMENTS
- Concrete Insitu Vehicular
- Coarse Aggregate
- Structural Soil
- Decomposed granite

WALLS & EDGES
- Raised Concrete Kerb

FURNITURE & FITTINGS
- Precast Wheel Stop

TREES
- Proposed Tree - General

KEY PLAN



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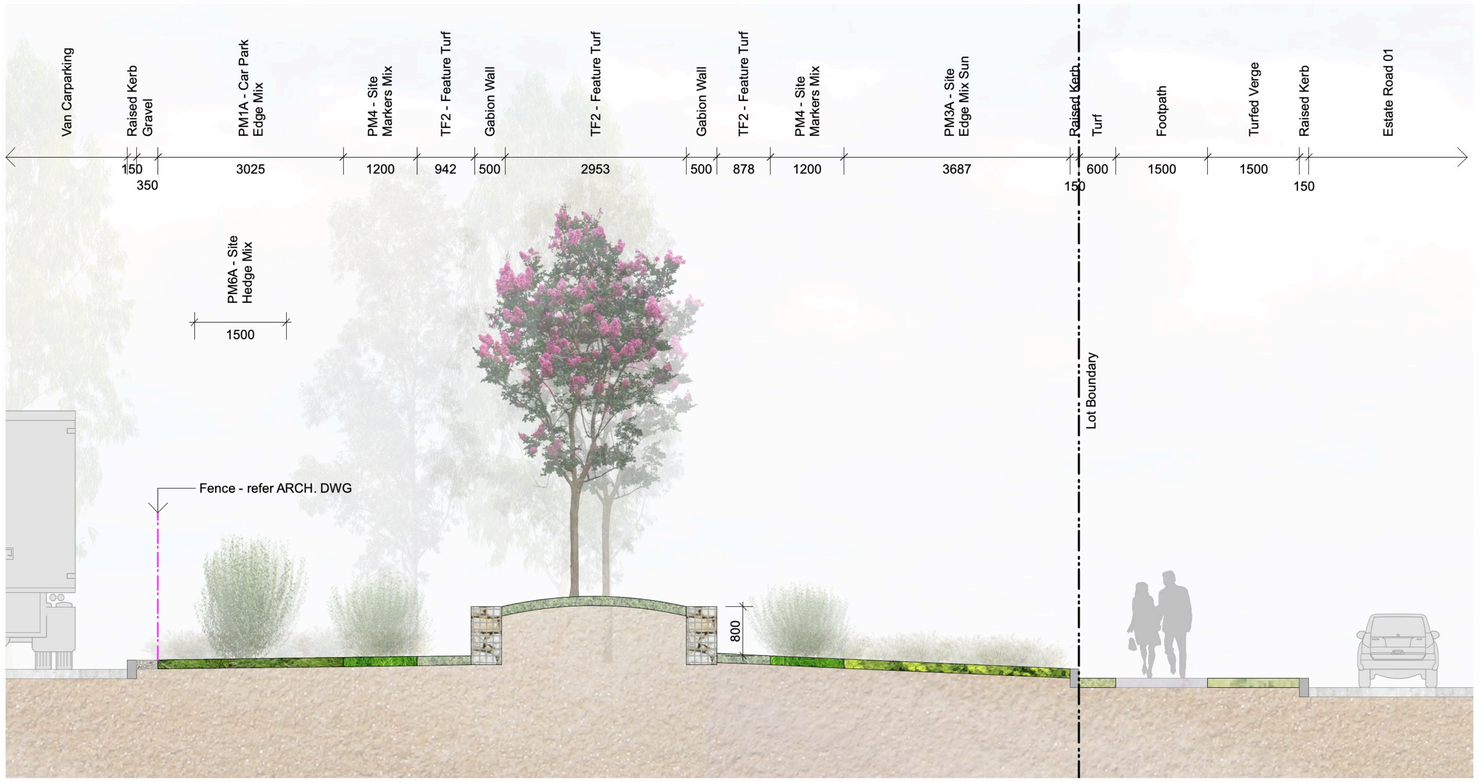
C	REVIEW & COORDINATION	ZZ	13/10/21
B	DEVELOPMENT APPLICATION	MF	13/11/20
A	CLIENT REVIEW	MF	10/11/20

Carpark Details

scale	1:100 & 1:50@A1
drawn	MF/ZZ
checked	CH
project no.	163-18
project phase	Development Application

L.SK.200 E

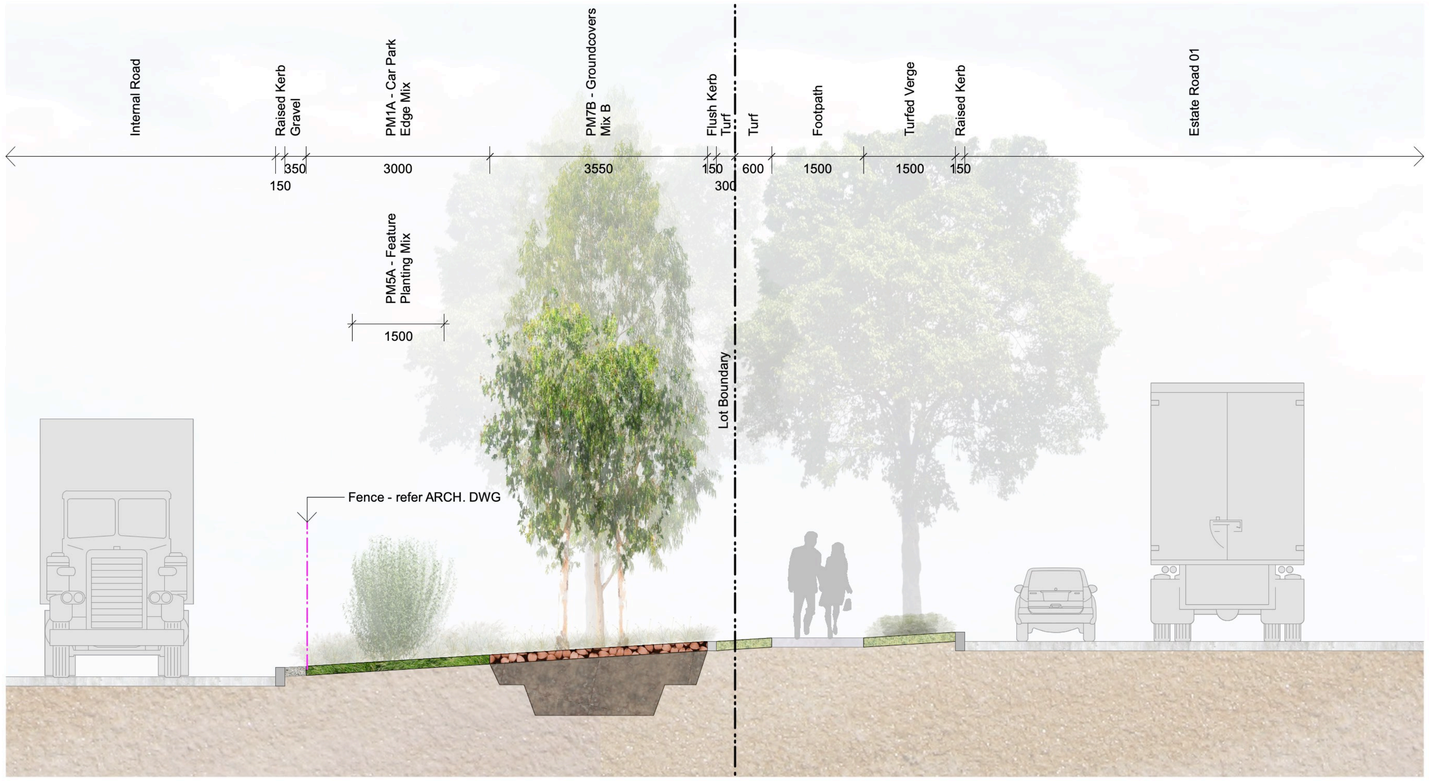


01 Estate Road 01 - Planted Verge
Typical Street Section - Scale 1:50 @ A1

0 1 2 3 M

03 Southern Boundary
Typical Section - Scale 1:50 @ A1

0 1 2 3 M

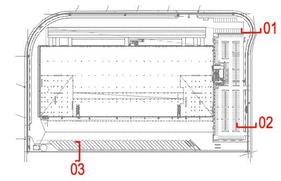


02 Estate Road 01 - Turfed Verge
Typical Street Section - Scale 1:50 @ A1

0 1 2 3 M

Note: All finished levels subject to change +/- 1000mm.

KEY PLAN



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B	DEVELOPMENT APPLICATION	MF	13/11/20
A	CLIENT REVIEW	MF	10/11/20

Landscape - Typical Street Sections - Lot 2A

scale	1:50 & 1:100@A1
drawn	MF/ZZ
checked	CH
project no.	163-18
project phase	Development Application

L.SK.201 E

7.2 REFERENCED LANDSCAPE SPECIFICATION

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

with temperature of around 90ºC 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 – Wood fibre mulch	 3,500 kg 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 – Granulated 'Guar gum'	 2,500 litres 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.

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.

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.

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 should 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 J

Bushfire Emergency Management and Evacuation Plan

BLACKASH
BUSHFIRE CONSULTING

BUSHFIRE EMERGENCY MANAGEMENT AND EVACUATION PLAN

Building 2A - Oakdale West Industrial Estate

RING

'000'

for all emergencies

Prepared for

Goodman Property Services (Aust.) Pty Ltd

Version 1.0

4 August 2022

Document Tracking

Project Name:	**Building 2A - Oakdale West Industrial Estate**
Prepared by	Corey Shackleton
Client Details:	Ms. Stephanie Partridge Senior Development Manager Goodman 1-11 Hayes Road, ROSEBERY NSW 2018
Address	Building 2A, Oakdale West Industrial Estate
Owner	Goodman Property Services (Aust.) Pty Ltd

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Document Control

Version	Primary Author(s)	Description	Date Completed
0.1	Corey Shackleton	Draft	1 August 2022
1.0	Corey Shackleton	Final	4 August 2022

Corey Shackleton | Principal Bushfire & Resilience
Blackash Bush fire Consulting
B.Sc., Grad. Dip. (Design for Bushfire Prone Areas)
Fire Protection Association of Australia BPAD Level 3 – 34603

BLACKASH
BUSHFIRE CONSULTING

Contents

Plan Authorisation & Review

This document has been prepared by Blackash Bushfire Consulting for the Building 2A - Oakdale West Industrial Estate. The Bushfire Emergency and Evacuation Plan complies with the NSW Rural Fire Service requirements for bushfire evacuation.

Responsibility for enacting, testing, and implementing the document rests with the Manager of Building. This document does not include evacuation arrangements for specific hazards (e.g. floods, storm, active shooter, internal structure fire, etc).

This document is to be reviewed through consultation with stakeholders affected by this document:

- no less than every three years; and
- following an emergency resulting in significant evacuations.

The Manager of Building 2A is responsible for authorisation of the plan and review as per Table 1. The Plan is to be reviewed and signed by 1 August in each year, prior to the start of the Bushfire Danger Period (1 October, unless announcement to declare earlier by NSW RFS).

Table 1: Plan authorisation and review

Authorised by	Name	Signature	Date
2023			
2024			
2025			

The Manager of Building 2A is responsible for distributing a current 'Evacuation Plan' in August each year to The Hills Local Emergency Management Committee (LEMC through Council), the Local Emergency Management Officer (LEMO through Council) and other appropriate authorities. (e.g. NSW Rural Fire Services, NSW Police and Fire and Rescue NSW).

Site Details

This plan has been developed for Building 2A within the Oakdale West Industrial Estate (Figure 3). The plan is designed to assist management to protect life and property in the event of a bushfire affecting the site.

This plan outlines procedures for both sheltering (remaining on site) and evacuation to enhance the protection of visitors and staff from the threat of a bushfire.

The site is affected by bushfire prone land. Bushfire prone land is an area of land that can support a bushfire or is likely to be subject to bushfire attack (ember, flame contact, radiant heat).

The primary action to follow under normal bushfire conditions is to:

☒ Shelter ☐ Evacuate/Warehouse Closure

Type	Building 2A - Oakdale West Industrial Estate	
Contact Person	TBA Manager Building 2A	**Mobile:** TBA **Email:** TBA
	After Hours: TBA	**Phone:** TBA
On site shelter Location	Office	
Assembly point for off-site evacuation	Carpark	
Off-site evacuation	St Clair Shopping Centre	
Alternate off-site evacuation	Rooty Hill RSL Club	

Emergency Contacts

Organisation	Office	Phone
Emergency	General emergency number Fire/ Police/ Ambulance	**000**
NSW Police	St Marys Police Station, 38-42 King Street, St Marys	9677 7499 **000**
NSW Rural Fire Service (Cumberland)	8-12 Jeanette Street, Regentville	4734 7777 **000**
NSW Rural Fire Service (Nearest)	367-377 Cnr Mamre Road and Luddenham Road, Luddenham	9670 5353 **000**
NSW Rural Fire Service	Bushfire Information Line	1800 679 737
Fire and Rescue NSW (St Marys)	1 Marsden Road, St Marys	9493 1077 **000**
Fire and Rescue NSW (Mt Druitt)	81 Railway Street, Mount Druitt	9625 4403 **000**
Penrith City Council	Penrith Civic Centre, 601 High Street, Penrith	4732 7777
St Clair Shopping Centre	155 Bennett Road, St Clair	9834 5318
Rooty Hill RSL Club	33 Railway Street, Rooty Hill	9625 5500

Role & Responsibilities

Position	Name of Person	Building/Area of Responsibility	Contact
Chief Warden (CW)	TBC	Site Controller responsible for co-ordination of response procedures and chief communicator with Emergency Services and the Building 2A staff and visitors.	TBC
Deputy Chief Warden	TBC	Site Controller responsible for co-ordination of response procedures and chief communicator with Emergency Services and the Building 2A staff and visitors in absence of Team Leader/ Chief Warden is unavailable	TBC
Management & Administration Warden 1	TBC	On becoming aware of an emergency will take control of all Management and Administration staff and office areas, instructing staff and visitors accordingly.	TBC
Warehouse Warden 2	TBC	On becoming aware of an emergency will take control of the warehouse areas, instructing staff and visitors accordingly.	TBC
Dock Area Warden 3	TBC	On becoming aware of an emergency will take control of the dock and associated areas, instructing staff and visitors accordingly.	TBC

Building 2A - Overview

Occupants	Total (Max)	At any one time
Staff	TBC	TBC
Visitors	Variable	Variable

People with Support Needs

Occupants	Total (Max)	At any one time
Staff with Support Needs	Unknown	Unknown
Visitors with Support Needs	Unknown	Unknown

Occupation Times

Occupants	Open	Close
Staff	TBC	TBC
Visitors	TBC	TBC

Transportation Requirements (Evacuation)

Number of persons likely requiring transport	Nil
Number of vehicles required	Nil
Designated assembly point for evacuation	Carpark
Estimated travelling time to off-site evacuation areas	St Clair Shopping Centre – 9 min / 6.2km Rooty Hill RSL Club – 16 min / 11.7km

1. Introduction

This report responds to the following SSD-9794683 consent condition associated with the development:

> *"Condition B27. Prior to the commencement of operation, the Applicant must prepare a Bushfire Emergency and Evacuation Management Plan for the development, consistent with the NSW RFS' A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan."*

The aim of this document is to inform and enhance emergency management arrangements during forecast extreme to catastrophic fire weather and provide for sheltering or evacuations during actual and or forecast bushfires.

The bushfire evacuation procedures have been completed in accordance with NSW Rural Fire Service *Guide to Developing A Bushfire Emergency Management Plan* and with consideration of Australian Standard AS 3745-2010 – *Planning for Emergencies in facilities* and NSW Government *Evacuation Management Guidelines (March 2014)*.

2. Bushfire Risk

Bushfire is a normal part of Australia's natural environment, particularly in eucalypt forests. However, the frequency and intensity of bushfires varies throughout the landscape and seasons. Bushfires are a common occurrence during drier parts of the year.

Climate change is expected to bring longer bushfire seasons to parts of Australia, an increasing number of extreme fire weather days, and increasing fire intensity.

Bushfires of low or moderate intensity often pose little threat to life, property and community assets, but the potential for changes in wind direction can be a significant hazard. However, bushfires that burn in heavy fuels, steep terrain or on hot, dry and windy days often spread rapidly, crown in forests, produce powerful convection columns and create extensive spot fires ahead of the fire front, often making their control impossible until weather conditions moderate.

The intensity of a bushfire, which determines to a large extent how much damage it will do, is a product of the fuels burning (quantity, arrangement, size, moisture content), the weather at

the time (temperature, wind speed and direction, relative humidity, atmospheric stability) and the topography of the land where the fire is burning (slope and aspect).

Vulnerability to bushfire risk is a combination of the physical location of the persons under threat and the understanding and ability that person has that enables them to deal with the risk.

As the fire danger reaches "extreme', bushfires are often described as firestorms and become impossible to control. When the fire danger reaches 'Catastrophic", the risk of serious injury or death to people in the path of a bushfire increases significantly, and many properties and other community infrastructure can become difficult or impossible to defend.

It is the position of Australian fire agencies that the safest action to protect life is for people to be away from the bushfire or threat of bushfire as early as possible.

Figure 1: Site Location.

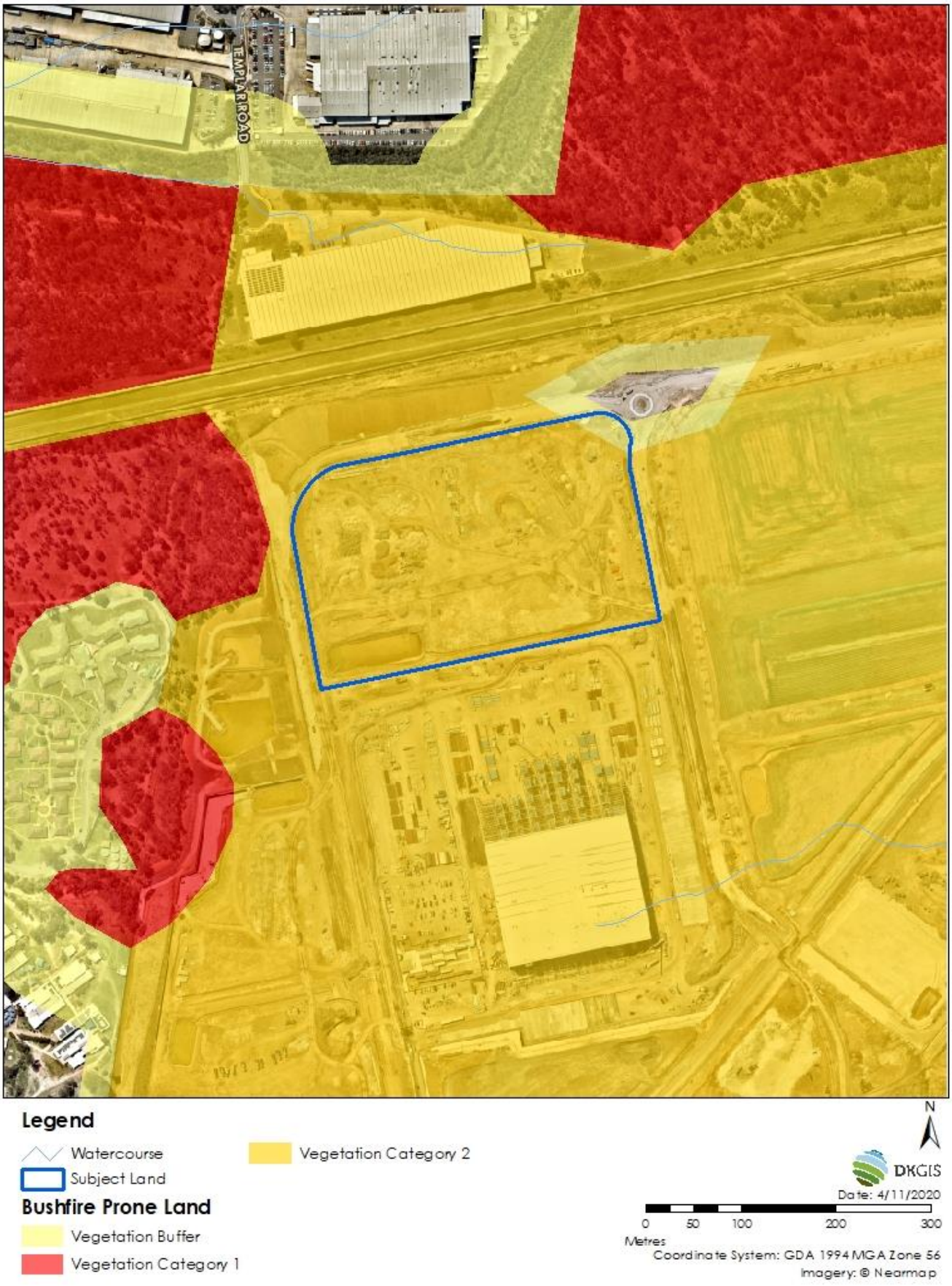


Figure 2: Bush Fire Prone Land Map showing location of the site

3. Preparation for bushfires

The official Bushfire Danger Period generally starts on 1 October and extends through to the following April. However, the fires season has been starting earlier and finishing latter. During this period, bushfires can occur at any time.

3.1. Before the commencement of the Bush Fire Danger Period

Before the commencement of the Bush Fire Danger Period, the Manager of Building 2A will:

- Review and update the Bushfire Emergency Management Plan and Evacuation Plan;
- Liaise with emergency service agencies about emergency procedures;
- Ensure appropriate maintenance of APZ and other bushfire protection measures has appropriate maintenance of APZ, and other bushfire protection measures has been completed prior to 1 October each year;
- Certification should be received prior to October that the work has been completed in accordance with RFS Standards for Asset Protection Zones to Inner Protection Zone standard;
- Communicate the sites bushfire preparedness arrangements with staff including their responsibilities at a staff meeting in September each year;
- Test and verify fire protection systems (fire hydrants, evacuation alarms, fire extinguishers);
- Check emergency equipment and first aid resources are available and operational (battery radio, mobile telephone);
- Provide updated contact details including a mobile number for emergency contact;
- Conduct practice fire evacuation drills; and
- Make the Evacuation Plan available to staff of the Warehouse.

3.2. During the bushfire danger period

During the bushfire danger period including during periods of increased fire danger, the Manager of Building 2A will monitor information sources for bushfire conditions by:

- Listening to the local radio station, TV and/or monitoring the NSW Rural Fire Service website at www.rfs.nsw.gov.au for information on bushfire activity or fire danger ratings;
- Knowing the Fire Danger Ratings for the area;
- Staying alert for warnings such as Bush Fire Alert Levels issued by the RFS;
- Watching for signs of fire, especially smoke or the smell of smoke;
- Calling the RFS Bush fire Information Line on 1800 NSW RFS (1800 679 737); and
- Downloading the free iPhone application from NSW Rural Fire Service – Fires Near Me NSW and keeping aware of fire in the vicinity of the site.

3.3. Hazard reduction burning

Land managers will often undertake hazard reduction burns in the cooler months of the year. Hazard reduction burns are planned fires in specific areas.

Agencies undertaking planned hazard reduction burns near the site may notify the Manager of the 2A Building. However, some hazard reduction burns will be undertaken that may cause smoke drift onto the site. Until it is confirmed that a hazard reduction burn is being undertaken, all fires should be considered as uncontrolled.

4. Fire Danger Ratings

Fire Danger Ratings give an indication of the consequences of a fire, if one was to start. The higher the fire danger, the more dangerous the conditions. The Fire Danger Ratings should act as a trigger to take action.

Fire Danger Ratings are based on predicted weather conditions such as temperature, humidity, wind and the dryness of the landscape. Bushfires are more likely to spread and cause damage on days when the weather is very hot, dry and windy. The higher the fire danger rating, the more dangerous the conditions. Figure 1 describes each of the Fire Danger Ratings.

Fire Danger Rating	Description
CATASTROPHIC FDI 100+ (Code Red)	• Fires will be uncontrollable, unpredictable and fast moving – flames will be higher than roof tops. • People will die and be injured. Thousands of homes and businesses will be destroyed. • Well prepared, well constructed and defended homes may not be safe during the fire. Construction standards do not go beyond a Fire Danger Index of 100. • Thousands of embers will be blown around. • Spot fires will move quickly and come from many directions, up to 20 km ahead of the fire. **Leaving is the best option.**
EXTREME FDI 75-99	• Fires will be uncontrollable, unpredictable and fast moving – flames will be higher than roof tops. • People will die and be injured. Hundreds of homes and businesses will be destroyed. • Only well prepared, well constructed and actively defended houses are likely to offer safety during a fire. • Thousands of embers will be blown around. • Spot fires will move quickly and come from many directions, up to 6 km ahead of the fire. **Leaving is the safest option for your survival.**
SEVERE FDI 50-74	• Fires will be uncontrollable and move quickly– flames may be higher than roof tops. • There is a chance people may die and be injured. Some homes and businesses will be destroyed. • Well prepared and actively defended houses can offer safety during a fire. • Expect embers to be blown around. • Spot fires may occur up to 4 km ahead of the fire **Leaving is the safest option for your survival. Your home will only offer safety if it and you are well prepared and you can actively defend it during a fire.**
VERY HIGH FDI 25-49	• Fires can be difficult to control – flames may burn into the tree tops. • There is a low chance people may die or be injured. Some homes and businesses may be damaged or destroyed. • Well prepared and actively defended houses can offer safety during a fire. • Embers may be blown ahead of the fire. • Spot fires may occur up to 2 km ahead of the fire. **Leaving is the safest option for your survival. Your home will only offer safety it is and you are well prepared and you can actively defend it during a fire.**
HIGH FDI 12-24	• Fires can be controlled • Loss of life is highly unlikely and damage to property will be limited • Well prepared and actively defended houses can offer safety during a fire. • Embers may be blown ahead of the fire. • Spot fires can occur close to the main fire. **Know where to get more information and monitor the situation for any changes**
LOW-MODERATE FDI 0-11	• Fires can be easily controlled • Little to no risk to life and property **Know where to get more information and monitor the situation for any changes**

Figure 1: Fire Danger Ratings and what they mean (Source AFAC www.fireandbiodiversity.org.au/_literature.../AFAC_Fire_Danger_Ratings_explained).

The NSW Rural Fire Service provides a map of the Fire Danger Ratings at: https://www.rfs.nsw.gov.au/fire-information/fdr-and-tobans.

The site is within the Greater Sydney Region Fire Weather Forecast Area.

4.1. Catastrophic Fire Weather

The Warehouse must stay abreast of weather forecasts and where a Catastrophic Fire Danger Rating is predicted the Manager should undertake initial preparation. If a Catastrophic Fire Danger Rating be issued and any fires are within 10kms of the site, staff and visitors should move to the onsite shelter and consideration should be given to temporarily ceasing operations.

4.2. Total Fire Ban

To reduce the risk of fires damaging or destroying life, property and the environment the NSW RFS Commissioner may declare a Total Fire Ban (TOBAN). A TOBAN is a day of elevated bushfire danger potential and is declared by the NSW RFS on days when fires are likely to spread rapidly and will be difficult to control.

In a Total Fire Ban no fire may be lit in the open and all fire permits are suspended. This includes incinerators and barbecues which burn solid fuel, e.g. wood, charcoal or heat beads. No general-purpose welding, grinding, soldering or gas cutting can be done in the open.

Total Fire Bans are normally declared by 5pm on the day before a ban but can be declared or revoked at any time. Always check the NSW RFS web page for latest information at: http://www.rfs.nsw.gov.au/fire-information/fdr-and-tobans.

Fire Danger Ratings are updated twice daily by the NSW RFS at 6.00am and 4pm.

On TOBAN days, the Building 2A Manager must be vigilant in maintaining situational awareness. This should be done through regular monitoring of local conditions, local radio and the NSW RFS website and 'Fires Near Me'.

5. Bushfire Emergencies

"*A bushfire can be a terrifying situation. Strong gusty winds, intense heat and flames will make you tired quickly. Thick heavy smoke will sting your eyes and choke your lungs. It will be difficult to see and breathe*" (NSW RFS).

Clear advice from emergency services is that people who are at higher risk, such as children, elderly, disabled or with medical problems, should always leave early and move to an area that is not at risk. However, in the context of the Building 2A, where the building is well constructed (compliant with NCC, PBP 2019, etc) with over 90 trained staff, evacuation is considered a more appropriate primary action.

5.1. Emergency Alerts

Emergency Alert is a national telephone warning system that aims to save lives by letting people know about threats such as bushfire as early as possible. When danger is imminent, authorised groups such as NSW Rural Fire Service, NSW Police or the NSW SES can send a warning message to residents in high risk areas.

Emergency Alerts are sent in the form of:

- recorded voice messages to landline numbers based on handset location; and
- text messages to mobile phones based on billing address.

If the site receives an Emergency Alert, follow the instructions in the message.

5.2. Bushfire Alert Levels

During a bush fire, Alert Levels are used to give an indication of the level of threat from a fire.

Don't wait for a warning. Some fires start and spread quickly, there may not be time for a warning. If you get a Bush Fire Alert, you must take it seriously. Failure to take action can result in death or injury.

There are three levels of Bush Fire Alerts:

Advice

A fire has started. There is no immediate danger. Stay up to date in case the situation changes.

Watch and Act

There is a heightened level of threat. Conditions are changing and you need to start taking action now to protect staff and visitors.

Emergency Warning

An Emergency Warning is the highest level of Bush Fire Alert. The site may be in danger and need to take action immediately. Any delay now puts the lives of staff and visitors at risk.

Figure 2: Bushfire Alert Levels

6. Emergency Management & Evacuation

The focus of the Emergency Management and Evacuation Plan is to put in place strategies that do not expose the Building 2A occupants to the effects of bushfire attack and focus on eliminating exposure to bushfire threat by providing a framework for decisions to be made regarding the safest options if there are fires in the vicinity.

The plan is based on the premise that:

1. On Total Fire Ban days and above, the Facility Manager must maintain good situational awareness in order to determine the Triggers for Action (Section 8);
2. On days of Total Fire Ban the NSW RFS may liaise with the Facility Manager should the need arise to evacuate or limit occupation;
3. Given the relatively low bushfire risk to the site and the adequate protection incorporated into the design of the development visitors and staff can safely shelter in place (on-site) during a bushfire emergency;
4. Off-site evacuation can generally be done from the site into safer areas of the Oakdale West Estate or pre-identified areas if done early, but should only be done when and as directed by the NSW Police or Combat Agency.

6.1. Shelter in Place

Given the nature of Building 2A and its use, shelter in place is considered the primary and optimal bushfire emergency response. This is primarily because the site is only exposed to a relatively low bushfire risk and given the design and construction of the building, the Office in the north of the site is well outside the 2kW/m^2 threshold.

The Office (see Figure 3) has been identified as the shelter in place location due to its size and separation from the bushfire hazard. Figure 4 shows the radiant heat mapping across the site, identifying the 10kW/m2 and 2kW/m2 areas. The Triggers for Action, including shelter in place are detailed in Section 8.

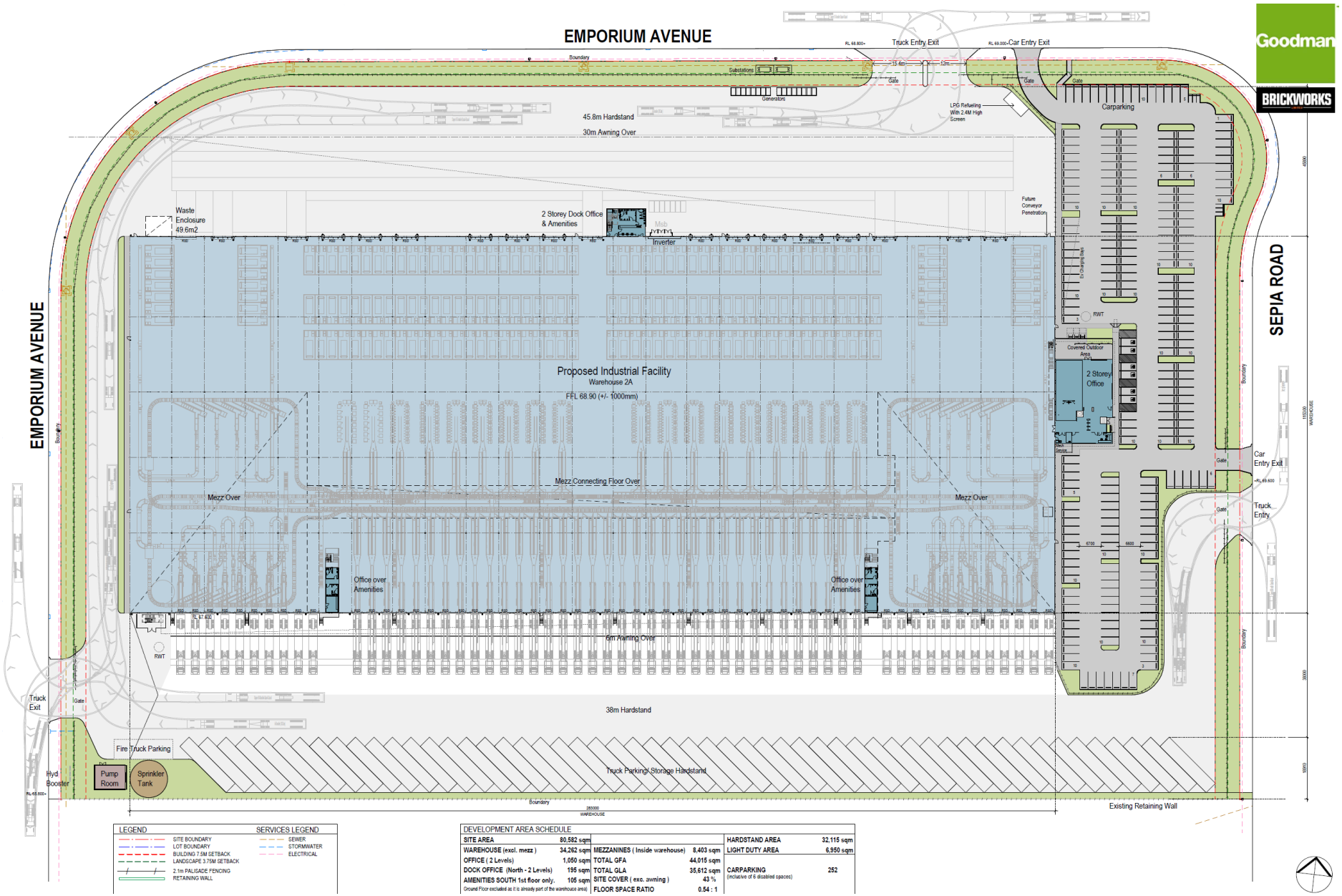


Figure 3: Building layout

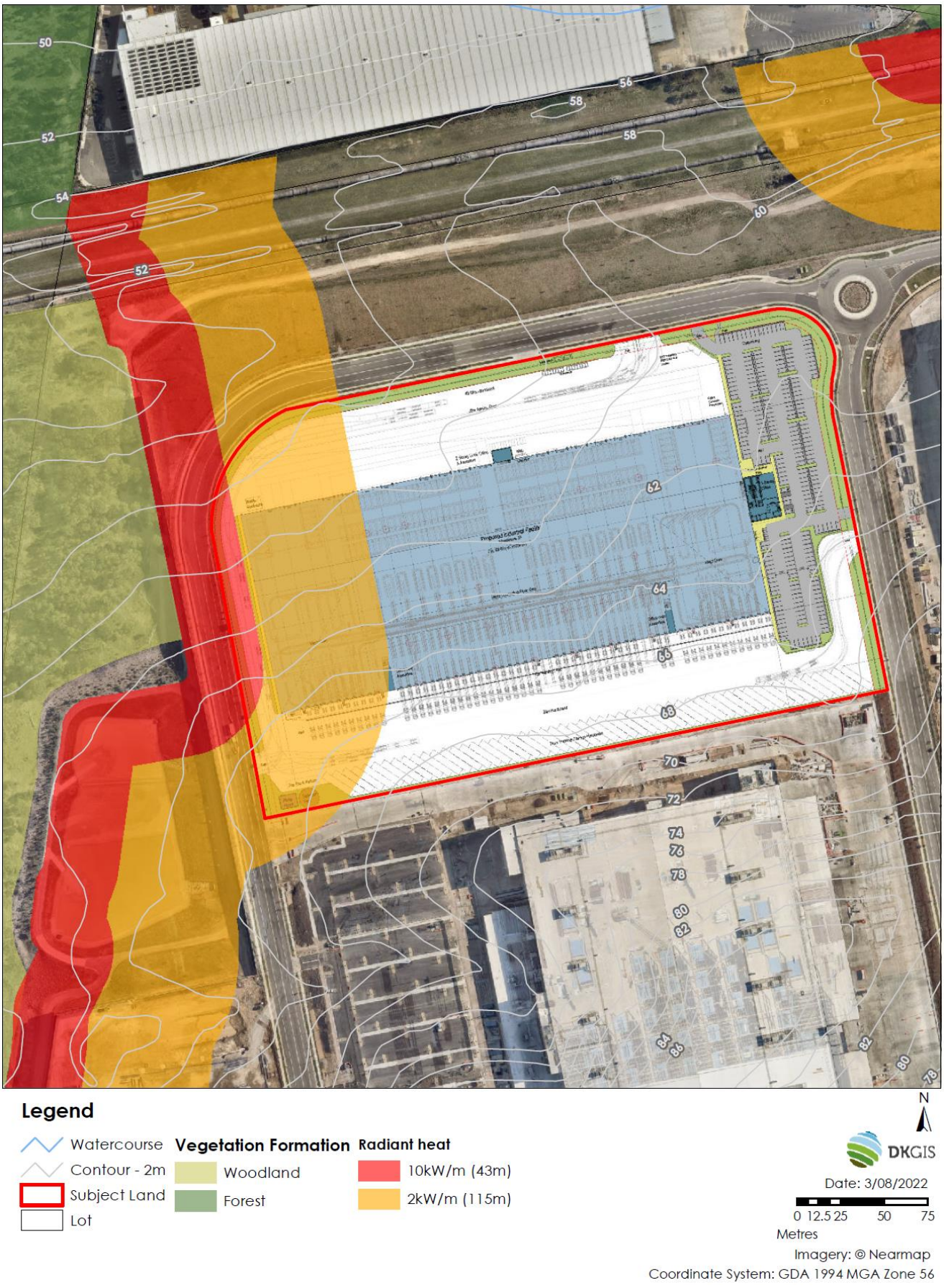


Figure 4: Radiant heat mapping across the site.

6.2. Closure of the Facility

The building 2A Manager should regularly monitor the Fire Danger Ratings and bushfire conditions. A series of trigger points (Section 8) have been identified to inform the closure and evacuation of the warehouse.

Given the potential consequences, while the facility should remain open during periods of 'Catastrophic' Fire Danger, situational awareness is paramount to ensure swift action is taken should a fire start nearby or threaten the site. Clear notification procedures should be developed including signage to inform staff during these periods.

6.3. Evacuation

Evacuation is a risk management strategy that may be used to mitigate the effects of an emergency on a community. It involves the movement of people to a safer location. The types of evacuation and alternatives to evacuation include[1]:

Immediate Evacuation *This results from a hazard impact that forces immediate action, thereby allowing little or no warning and limited preparation time.*

Pre-Warned/Managed Evacuation *This follows the receipt of sufficient and reliable information which prompts a decision to evacuate ahead of a potential hazard impact.*

Self-Managed Evacuation/Relocation *This is a spontaneous type of evacuation involving the self-initiated movement of people as individuals, families or community groups. This may include circumstances where visitors and staff are advised to leave early ahead of dangerous conditions*

Shelter in Place *Shelter in place should be considered as an alternative when the risk associated with evacuation is seen as being greater than that of sheltering in place or as an outcome of an immediate threat to individuals where evacuation cannot be initiated in a safe manner.*

6.3.1. Off-site Evacuation

The Evacuation Plan has been completed such that it does not rely on the immediate availability of emergency service personnel to undertake the evacuation. Given the nature of the warehouse and its use, shelter in place is considered the primary and optimal bushfire

[1] NSW Evacuation Management Guidelines (March 2014)

emergency response. As such, the decision to move staff and visitors to the shelter in place area must be undertaken confidently and without hesitation by the Manager.

If determined necessary, the off-site evacuation point has been determined as the St Clair Shopping Centre which is located 9 minutes' drive to the north (Figure 5).

The alternative off-site evacuation point is the Rooty Hill RSL Club, an 16 -minute drive to the northeast (see Figure 5).

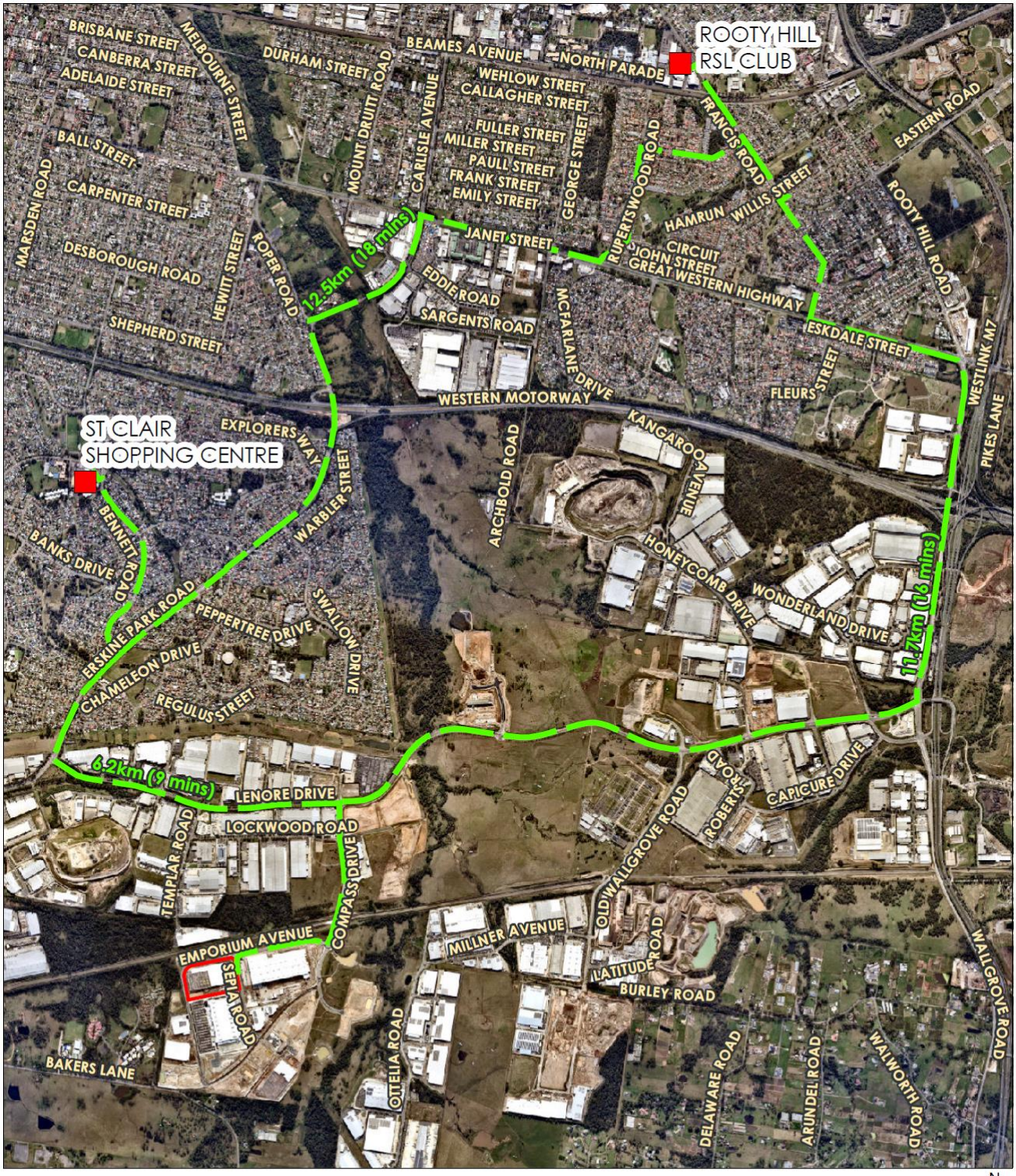


Figure 5: Offsite evacuation points and routes.

6.4. Authority to Evacuate

The Manager of Building 2A can initiate the emergency management procedures.

Authority to evacuate can be directed by:

- Instructions from the NSW Police or Fire Authority (NSW Rural Fire Service or Fire and Rescue NSW).

NSW Agencies with legislated authority to order an evacuation are:

a) Combat Agencies with appropriate legislation; and
b) the NSW Police Force.

A Combat Agency generally issues an order to evacuate; consideration should be given to how affected people may respond to such an order. Police Officers generally enforce such orders.

NSW Police Force may issue an evacuation order under Section 60L *State Emergency & Rescue Management Act 1989*. A senior police officer may, if satisfied that there are reasonable grounds for doing so for the purpose of protecting persons from injury or death threatened by an actual or imminent emergency, direct, or authorise another police officer to direct, a person to do any or all of the following once a danger areas is declared:

a) to leave any premises and to move outside the danger area,
b) to take any children or adults present in any premises who are in the person's care and to move them outside the danger area,
c) not to enter the danger area. A 'danger area' means the areas specified by a senior police officer as the area affected by an emergency.

Fire & Rescue NSW under Section 19 *Fire Brigades Act 1989* through the officer in charge at a fire or hazardous material incident may cause to be removed any person, vehicle, vessel or thing the presence of whom or which at or near a fire or hazardous material incident might, in the officer's opinion, interfere with the work of any fire brigade or the exercise of any of the officer's functions.

NSW Rural Fire Service Section 22A of the *Rural Fires Act 1997* provides that an officer of a rural fire brigade or group of rural fire brigades may cause to be removed any person, vehicle, vessel or thing the presence of whom or which at or near a fire, incident or other emergency might, in the officer's opinion, interfere with the work of any rural fire brigade or the exercise of any of the officer's function.

6.5. Evacuation Process

The evacuation process has been adapted from *NSW Evacuation Management Guidelines* (March 2014).

The decision to advise or direct evacuation should be considered whenever there is a potential need to move people to a safer place. This process should be constantly reviewed in changing circumstances.

The decision to evacuate people who are at immediate risk during an emergency is not always straightforward, as it is often based on incomplete or unverified information in a rapidly developing and dynamic situation. Timing of the decision is a significant factor.

The Manager of Building 2A must closely monitor conditions and act in accordance with the Triggers for Action in Section 8. Given the nature of the warehouse and its use, shelter in place is considered the primary and optimal bushfire emergency response and can also function as the assembly area for an evacuation.

Off-site evacuation should only be done when and as directed by the NSW Police or Combat Agency.

7. Emergency Management Procedures

7.1. Evacuation Preparedness

The Manager of Building 2A is responsible for implementing the following procedures to facilitate the objectives of this Plan:

- Ensure all staff are alerted of the Fire Danger Rating during the bushfire danger period;
- Ensure staff are trained and familiar with the shelter in place location (Office) and the Evacuation/Shelter Plan necessary for their efficient and effective operation in an emergency;
- Ensure staff and visitors are provided/shown the location of the shelter in place location and the written evacuation/shelter procedures; and
- Ensure evacuation/shelter procedures are displayed in strategic locations.

7.2. When to Evacuate

Off-site evacuation should only be done long before fires are near the warehouse or when and as directed by the NSW Police or Combat Agencies.

The decision when to evacuate is to be determined by the likelihood that a bushfire may impact the warehouse in a manner that may cause injury, undue stress, or other significant adverse effects (e.g., smoke induced medical problems).

7.3. Procedures for Evacuations

Evacuation involves relocating people to where they are safer and by a route that is relatively safe. Given the nature of the warehouse and its use, shelter in place is considered the primary and optimal bushfire emergency response. The Office have been identified as the shelter in place location and can also function as the assembly area for an evacuation.

The decision to evacuation is largely determined by the nature of the fire threat, the people involved and their location. Welfare of evacuees following evacuation is also an important consideration. Such procedures require careful and timely consideration of all factors.

Every bushfire attack scenario will be different. The response to each must therefore be specific and include consideration of the following:

- Location of fire;
- Fire behaviour including;
    - Rate and direction of spread;

    - Embers affecting the area;
    - Smoke affecting the area;
- Numbers of potential evacuees; and
- Availability of access.

The Manager of Building 2A, on becoming aware of a bushfire emergency, will take the following steps:

1. Ascertain the nature of the emergency or potential emergency situation and determine appropriate response using the Bushfire Emergency Management and Evacuation Plan;
2. Ensure each room is checked to ensure all visitors and staff are accounted for;
3. Utilise PA systems or the emergency system to alert all staff and visitors that a bushfire emergency has been declared;
4. Brief and co-operate with the Emergency Services personnel if/as required;
5. Check triggers for shelter in place and if appropriate move all staff and visitors to the designated area (office) and shut all windows and doors and activate air-conditioning;
6. If directed by NSW Police or the Combat Agency, evacuate off site to the St Clair Shopping Centre or alternative area as directed; and
7. If evacuation off site is not being undertaken, diligently maintain situational awareness and keep all staff and visitors within the Office until safe.

Evacuation Preparedness

1. Chief Warden (CW) is made aware of situation;
2. CW to consult the NSW RFS website or call NSW RFS for fire situation and updates;
3. CW has charged mobile phone and is contactable;
4. CW to arrange for fire situation to be communicated to staff and visitors; and
5. CW request visitors consider relocating to onsite shelter or another safe place offsite.

7.4. Observations / Situations

It's important that the Manager of Building 2A is aware of the various observations/situations and the associated triggers. These various situations each present a different level of risk to the site and when coupled with the Fire Danger on a particular day, trigger different management responses (see Section 8).

Figure 6 shows the key observation areas for the site.

Out of control fire <2km from site

Due to its proximity, any fires within 2km of the site are of concern and trigger immediate action. Depending on the weather, these fires have the potential to impact the site in a very short period of time and therefore make evacuating the site dangerous. In this scenario visitors and staff should be seeking shelter on-site.

Out of control fire within 10km of the site

While not currently close enough to cause immediate concern, gaining and maintaining good situational awareness is essential. On days of elevated fire danger, fires can move quickly through the landscape and can create spot fires a long way ahead of the main fire. On these elevated fire danger days, it may be safest to keep staff inside the warehouse.

Bushfires within region but not within 10km of site

No immediate threat to the warehouse, but good situation awareness is important. Monitoring the location of the fire and any new ignitions ensures quick and decisive action can be taken if required. On days of Catastrophic fire danger, the Manager may consider closing the Warehouse.

No Fires within Region

Nothing of concern, although good situation awareness is important, particularly on days of elevated fire danger as any new ignitions can quickly become a major threat to the site if quick and decisive action is not taken.

Figure 6: Observation areas.

8. Triggers for Action

The following is provided as a guide for action.

The staff and visitors to the warehouse should shelter on-site and only evacuate if safe to do so. Continued situational awareness is essential as is following instruction from emergency services.

Observation/ Situation	Fire Danger Rating						
	Low/ Moderate	High	Very High	TOTAL Fire Ban Declared	Severe	Extreme	Catastrophic
Out of control fire <2km from site	- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area	- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area	- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area		- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area	- Move staff and visitors to Shelter in Place area - Situational awareness	- Move staff and visitors to Shelter in Place area - Situational awareness
Out of control fire within 10km from site	- Normal operation - Situational awareness	- Normal operation - Situational awareness	- Normal operation - Situational awareness		- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area	- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area	- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area
Fires within Region but not within 10kms of site	- Normal operation - Situational awareness	- Normal operation - Situational awareness	- Normal operation - Situational awareness		- Normal operation - Situational awareness	- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area	- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area
No Fires within Region	- Normal operation	- Normal operation	- Normal operation		- Normal operation - Situational awareness	- Normal operation - Situational awareness	- Normal operation - Situational awareness

9. Post-bushfire Event Actions

The Manager of Building 2A decides when to re-open/ resume normal operations in the Warehouse, in consultation with local emergency services and based on review and confirmation of the safety of the site including:

- Confirm with Fire and Rescue NSW that utilities (water, electricity and gas) are safe to use;
- The air quality is safe and does not trigger health issues in visitors or staff; and
- All burnt areas and structures should be avoided until they have been checked for safety issues by a qualified person.

General housekeeping should include:

- Review buildings/structure integrity;
- Review tree integrity;
- Telecommunications/IT/equipment checks;
- Implement procedures to resume workplace activities including providing counselling and support to those affected by the incident; and
- Review Emergency Management and replenish First Aid stocks.

9.1. Debriefing

Debriefing after the event is critical to identify lessons learnt and to tighten procedures that will facilitate a better activation in future.

The aim of debriefing is to ensure that lessons learnt (both positive and negative) are applied for future bushfire events, not to lay blame on people for mistakes.

Debriefing should be conducted by an independent third party and should include key stakeholders activated during the event. The debrief should consider (at minimum):

- Fire behaviour and impact on the site and evacuation pathways;
- Activation procedures and trigger points;
- Communications;
- Implementation of the Evacuation Plan;
- Logistics;
- Performance of fire systems;
- Identification of training needs; and
- Information that can enhance the lessons learnt.

Debriefings should include a discussion of:

1. What you set out to do?
2. What actually happened?
3. Why things happened the why they did?
4. What could be done better next time?
5. What lessons can be applied across sites as a vulnerable community?

If the fire involved a critical incident, arrange for critical incident counselling.

Ensure injuries are recorded and reported.

Appendix 1 - Roles and Responsibilities

In accordance with Australian Standard AS 3745-2010, an Emergency Control Organisation (ECO) is to be established for the planning, preparation and implementation of the on-site evacuation and emergency procedures and is to consist of staff and or specialist providers with the following skills:

- Physical capability to perform the duties required;
- Strong leadership qualities;
- Maturity of judgement, good decision-making skills and capability to remain calm under pressure;
- Sound knowledge of the local area;
- Ability to be on site during the fire danger period; and
- Ability to complete the required training.

The ECO does not have a 'statutory standing'. It is to follow any instructions or advice from authorised Emergency Service personnel related to evacuation.

Each person in the ECO shall have clearly defined duties and responsibilities.

Implementation of the Evacuation Plan is the responsibility of the Manager of Building 2A with assistance and support from staff and NSW RFS and Emergency Services when required. The Manager of Building 2A will ensure that:

- The evacuation plan is updated annually;
- All staff are made aware of the existence of the Evacuation Plan and the Evacuation procedures to be adopted in the event of an emergency. Yearly training is to be provided for all staff in the implementation of the Evacuation Plan;
- The 'Evacuation Procedure' and map are displayed in strategic locations throughout site;
- Evacuation procedures are tested regularly. Evacuation Drills conducted twice a year and recorded;
- Deficiencies in the Evacuation Plan/evacuation management systems are reviewed, and changes implemented to address these deficiencies;
- Sirens (alarm system) on Fire units are tested and maintained on a regular basis; and
- A copy of the current plan is distributed to the Local Emergency Management Committee (LEMC) and emergency services.

The **Chief Warden** (Manager of Building 2A) is responsible for the following:

- Implementation of evacuation preparedness procedures;
- Management and overseeing of any evacuation; until relieved of this responsibility by the attending commanding officer of Emergency Services, or the Police;
- Supervision of the ECO;
- Ensuring the ECO achieves its responsibilities;
- Liaising with Emergency Services and maintaining the Emergency Service contact lists;
- Maintaining and displaying a current list of contact telephone numbers;
- Distributing a current 'Evacuation Plan' in August each year to the Local Emergency Management Committee (LEMC), the Local Emergency Management Officer (LEMO) and other appropriate authorities. (e.g. NSW Rural Fire Services, Fire and Rescue NSW); and
- Maintaining Chief Warden and Deputy Chief Wardens rosters.

Deputy Chief Warden

The appointment of the Deputy is to ensure continuity of the Chief Warden's functions during absences. The selection of the Deputy should be consistent with the selection criteria for the Chief Warden. The deputy should be fully trained and prepared to take over the primary role of the Deputy Chief Warden.

The Deputy Chief Warden is responsible for the following:

- Assisting with the notification and implementation of the evacuation;
- Assisting the Emergency Service personnel on their arrival, unless otherwise directed; and
- The Deputy Chief Warden will also be responsible for onsite evacuation and assembly areas, including setting up evacuee's registration system to check people into and out from Evacuation Areas.

Appendix 2 - Glossary

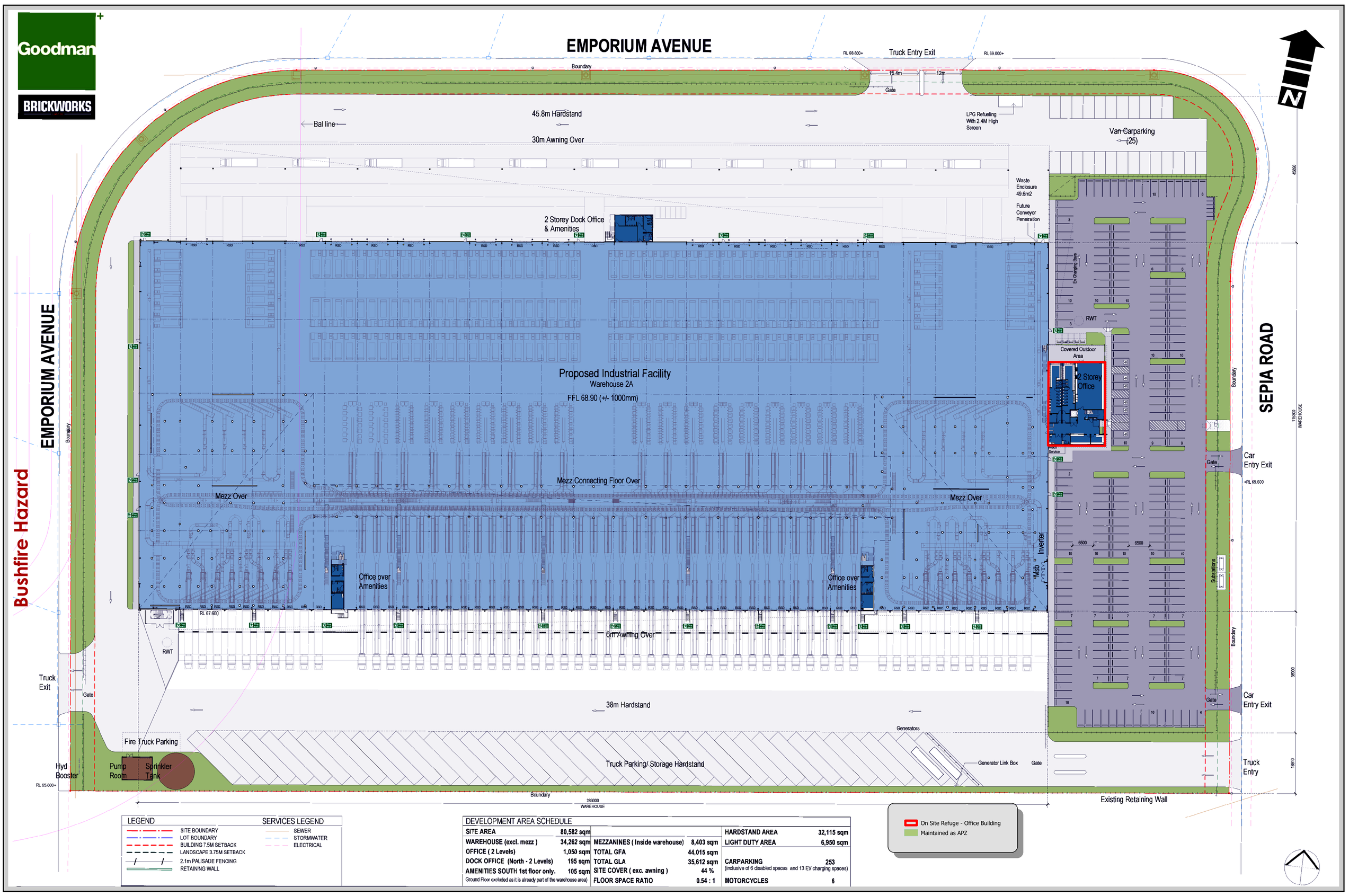
assembly point	An area or building/structure that is used to assemble people for evacuation or that have evacuated from a site in an emergency situation.
Bushfire Attack	Attack by burning embers, radiant heat or flame generated by a bush fire.
District Emergency Management Officer (DEMO)	For emergency management purposes, NSW is divided into emergency management districts. Each Emergency Management District has a District Emergency Management Committee. The Committee is chaired by the District Emergency Operations Controller (DEOCON), supported by the District Emergency Management Officer (DEMO). The DEMO is also responsible for assisting local committees and communities within the relevant District on emergency management matters.
Emergency	An event that arises internally, or from external sources, which may adversely affect the occupants or visitors in a building, and which requires an immediate response.
Emergency Control Organisation (ECO)	The organisation formally responsible for managing a designated emergency or natural disaster incident
Emergency Planning Committee (EPC)	Persons responsible for the documentation and maintenance of an emergency plan.
Emergency warning and intercommunication system (EWIS)	A combined emergency warning and intercommunication system that facilitates both way communications and control during an emergency.
Evacuation	The orderly movement of people from a place of danger.
Fire Danger Index (FDI)	The chance of a fire starting, its rate of spread, its intensity and the difficulty of its suppression, according to various combinations of air temperature, relative humidity, wind speed and both the long- and short-term drought effects.
Local Emergency Management Officer (LEMO)	The State is divided into Local Government areas with a Local Emergency Management Committee for each area. This Committee is chaired by a senior representative of the council and is supported by a Council appointed Local Emergency Management Officer (LEMO).
Occupant	A person attending a building on a permanent or temporary basis, such as an employee, contractor, student, or resident, but not a visitor
On-site refuge	A building or open space within the premises that is able to accommodate the people that will shelter. The place is not under threat from a bushfire. The site provides a temporary refuge point within the site. Off-site evacuation should always be the first option.
Off-site evacuation point	A venue at another location some distance away that is able to accommodate all the people being evacuated. The place is not under threat from a bushfire.
Relocation	Movement of persons and/or organisations to an alternate area
State Environmental Planning Policy (SEPP)	State Environmental Planning Policy (SEPP) is a legislated policy that deals with issues significant to the state and people of New South Wales.
Sheltering	Procedures for a relevant situation where the safest course of action is to remain in a building or location.
Support needs	People with physical, intellectual, visual, or auditory disabilities or impairments, either temporary or permanent who require support. It also includes juveniles who are dependent on others for their care and wellbeing.

APPENDIX K

Fire Management Plan

Fire Management Plan
Building 2A Oakdale West

BLACKASH BUSHFIRE CONSULTING



LEGEND

- SITE BOUNDARY
- LOT BOUNDARY
- BUILDING 7.5M SETBACK
- LANDSCAPE 3.75M SETBACK
- 2.1m PALISADE FENCING
- RETAINING WALL

SERVICES LEGEND

- SEWER
- STORMWATER
- ELECTRICAL

DEVELOPMENT AREA SCHEDULE

SITE AREA	**80,582 sqm**			**HARDSTAND AREA**	**32,115 sqm**
WAREHOUSE (excl. mezz)	**34,262 sqm**	**MEZZANINES (Inside warehouse)**	**8,403 sqm**	**LIGHT DUTY AREA**	**6,950 sqm**
OFFICE (2 Levels)	**1,050 sqm**	**TOTAL GFA**	**44,015 sqm**		
DOCK OFFICE (North - 2 Levels)	**195 sqm**	**TOTAL GLA**	**35,612 sqm**	**CARPARKING** (inclusive of 6 disabled spaces and 13 EV charging spaces)	**253**
AMENITIES SOUTH 1st floor only.	**105 sqm**	**SITE COVER (exc. awning)**	**44 %**		
Ground Floor excluded as it is already part of the warehouse area)		**FLOOR SPACE RATIO**	**0.54 : 1**	**MOTORCYCLES**	**6**

On Site Refuge - Office Building
Maintained as APZ

☒ Shelter ☐ Evacuate/Warehouse Closure

Type	Building 2A - Oakdale West Industrial Estate	
Contact Person	Michael Trotnar Senior Building Manager	**Mobile:** 0409 999 447
24 Hr Emergency Contact	**Call '000'**	
On site shelter Location	Office	
Assembly point for off-site evacuation	Carpark	
Off-site evacuation	St Clair Shopping Centre	
Alternate off-site evacuation	Rooty Hill RSL Club	

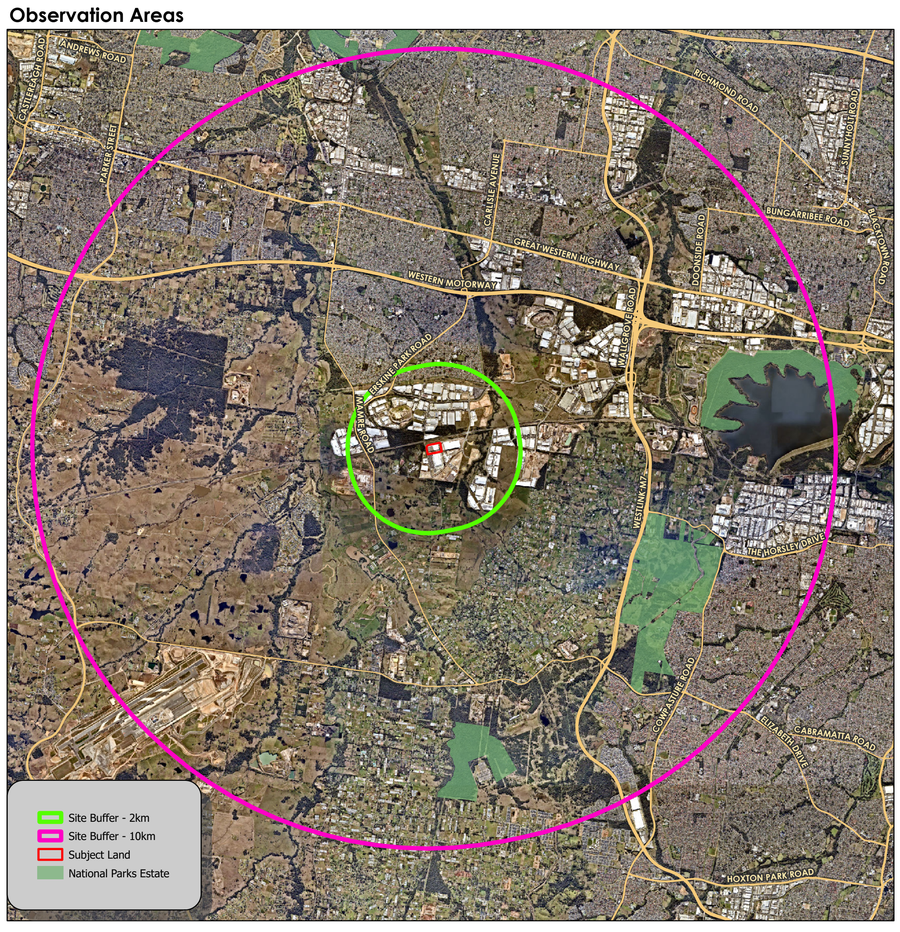
Item	Action Required/Performance	Timing
	MONITORING	
	Ongoing monitoring to ensure fuel loads and vegetation structure meet IPA standards. Ongoing fuel management to be monitored annually (August -September prior to maintenance works).	Annually (prior to bushfire season)
	MAINTENANCE	
	• Tree canopies should not create a continuous canopy with the adjoining bushfire hazard. • Shrubs are not underneath windows. • Groundcover to be kept mown (indicatively no more than 100mm height). • Leaf and other debris removed as required.	Twice annually

Emergency Contacts

Organisation	Office	Phone
Emergency	General emergency number Fire/ Police/ Ambulance	**000**
NSW Police	St Marys Police Station, 38-42 King Street, St Marys	9677 7499 **000**
NSW Rural Fire Service (Cumberland)	8-12 Jeanette Street, Regentville	4734 7777 **000**
NSW Rural Fire Service (Nearest)	367-377 Cnr Mamre Road and Luddenham Road, Luddenham	9670 5353 **000**
NSW Rural Fire Service	Bushfire Information Line	1800 679 737
Fire and Rescue NSW (St Marys)	1 Marsden Road, St Marys	9493 1077 **000**
Fire and Rescue NSW (Mt Druitt)	81 Railway Street, Mount Druitt	9625 4403 **000**
Penrith City Council	Penrith Civic Centre, 601 High Street, Penrith	4732 7777
St Clair Shopping Centre	155 Bennett Road, St Clair	9834 5318
Rooty Hill RSL Club	33 Railway Street, Rooty Hill	9625 5500

Offsite Evacuation Locations

Observation Areas



Triggers for Action

Observation/ Situation	Fire Danger Rating			TOTAL Fire Ban Declared			
	Low/ Moderate	High	Very High		Severe	Extreme	Catastrophic
Out of control fire <2km from site	- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area	- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area	- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area		- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area	- Move staff and visitors to Shelter in Place area - Situational awareness	- Move staff and visitors to Shelter in Place area - Situational awareness
Out of control fire within 10km from site	- Normal operation - Situational awareness	- Normal operation - Situational awareness	- Normal operation - Situational awareness		- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area	- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area	- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area
Fires within Region but not within 10kms of site	- Normal operation - Situational awareness	- Normal operation - Situational awareness	- Normal operation - Situational awareness		- Normal operation - Situational awareness	- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area	- Normal operation - Situational awareness - Be ready to move staff and visitors to Shelter in Place area
No Fires within Region	- Normal operation	- Normal operation	- Normal operation		- Normal operation - Situational awareness	- Normal operation - Situational awareness	- Normal operation - Situational awareness

Decreasing risk - **Increasing risk**

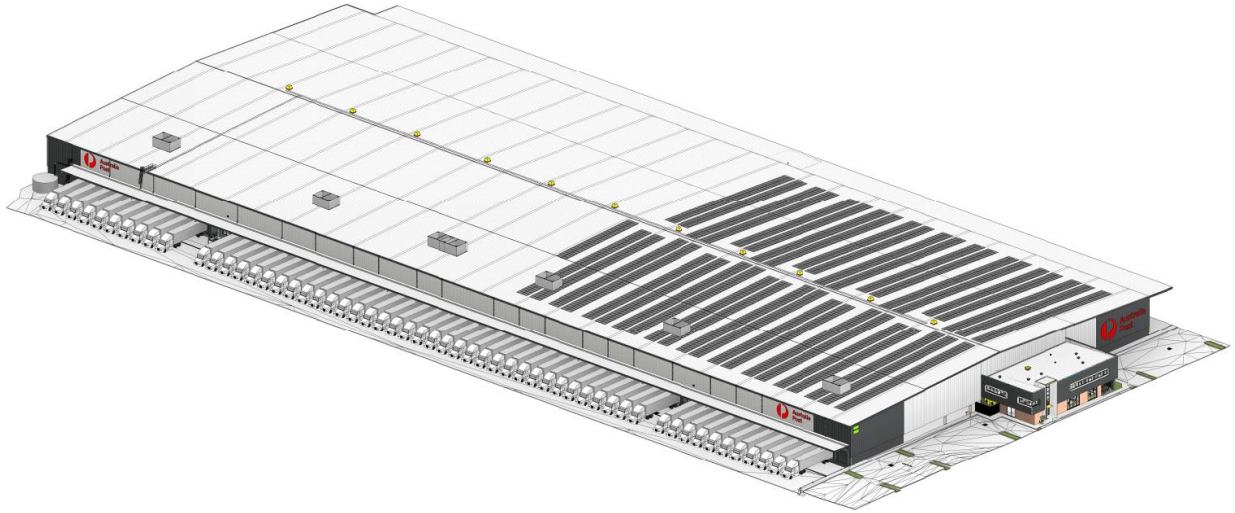
APPENDIX L

Building User's Guide

Building 2A Oakdale West Estate

Building User Guide

Prepared for Goodman Property Services (Aust) Pty Ltd



global **environmental** and **advisory** solutions

SLR

PURPOSE OF THIS GUIDE

Building Users Guide:
Oakdale West Estate Building 2A

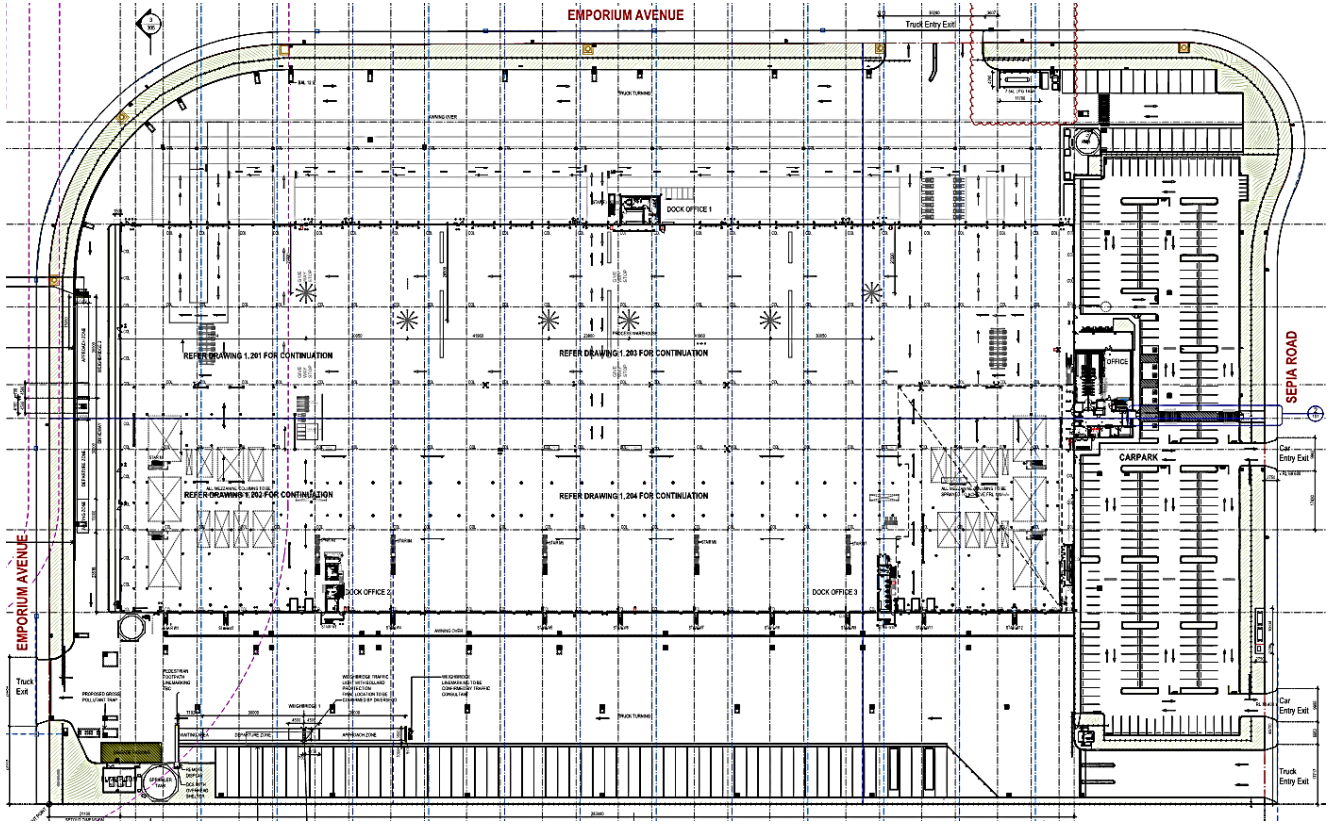
This Building User Guide is intended for the use of the tenants and occupants of the buildings. It will provide the reader a source of up-to-date information for the users of the building including the following:

- Energy and water use efficiency initiatives and management;
- Alternative transport initiatives;
- Public transport information;
- Environmental and Waste Management commitments;
- Information to occupants to understand the building and any limitations that they must work within to maintain the design performance.
- Information to facility managers to understand operational requirements of building services for efficient performance and any further tuning necessary to continuously improve and respond to changes in the future.

It is imperative that the building is operated in support of the design intent. This will ensure continued environmental performance during the building's entire life cycle. This guide should be used by building users to enhance their understanding of the basic functions and features of the building and site to allow for efficient use, minimising waste and conserving energy and protecting the local natural environment.

Green Buildings are not solely about reducing energy. They are also about consuming less water, using less materials and resources, reducing waste, improving air and light quality, the restoration of habitat, reducing our dependency on the automobile, and much more.

BUILDING 2A DESCRIPTION



Building 2A is situated within the Oakdale West Industrial Estate, Kemps Creek. The site will comprise an industrial warehouse and commercial office facilities.

The building is one of many warehouses within the Oakdale Estate distribution park. It comprises one warehouse and two offices. The site will operate as a warehouse and distribution centre 24 hours per day, 7 days per week.

Access

Warehouse 2A movements will be facilitated via an access onto Emporium Avenue to the northern boundary of the OWE precinct.

A truck entry is provided from Sepia Road on the eastern boundary and a truck exit is provided onto Emporium Avenue to the north and Sepia Road to the east. Two car entry/exit points will be provided directly onto Emporium Avenue and Sepia Road to facilitate access to the proposed car parking areas.

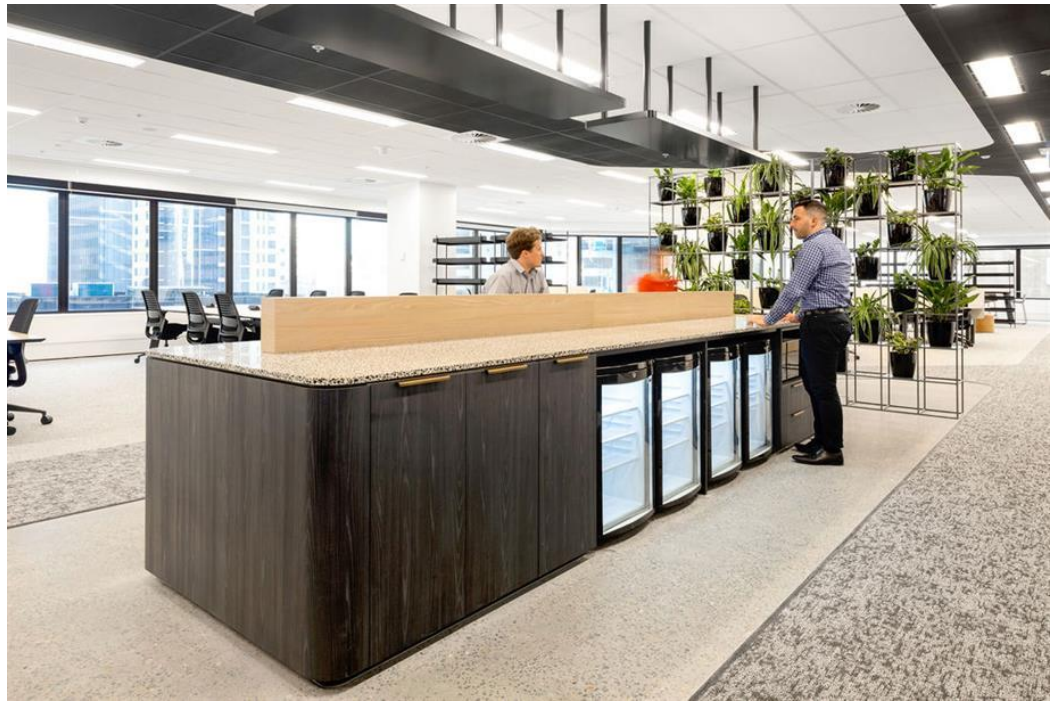
A Green Travel Plan has been developed to identify alternative and sustainable modes of transport and to reduce single-occupancy car travel for journeys to and from the Site.

ENERGY AND ENVIRONMENTAL STRATEGY

In partnership with the project team, SLR endeavours to reduce pressure on natural resources, including energy utilities consumed by the building, and integrate well with the surrounding environments in the local area by striving to meet national best practice benchmarks.

The efficient operation of this building comes from an efficient design and environmental strategy, of which a selection of initiatives are listed below.

- **Construction Waste**: At least 70% of predicted construction waste arising from the development can be re-used either on-site or off-site.
- **Materials:** Jointless fibre reinforced slab and pre-cast concrete panels with recycled content.
- **Health & Wellbeing:** Space flexibility for future configurations; Low VOC paints, carpets & sealants to reduce internal pollutants; occupant user control for A/C systems, lighting etc; maximising daylight via rationalised glazing to offices and translucent roof sheeting to warehouses; HVAC system designed for optimal thermal comfort.
- **Energy Conservation:** Insulation to Roof and walls; reduced glazing area to avoid associated heat loss in winter; energy efficient lighting with high illumination efficacy and controls; appropriate sub-metering.
- **Water Conservation:** Low flow fixtures and fittings; endemic and low maintenance landscaping; rainwater tank for harvesting and re-use for irrigation and /or toilet flushing.
- **Waste Recycling:** Bins or containers are provided for users that allow for separation of the applicable waste streams.
- **Transport:** Cycle storage and end of trip facilities; access to EV charging points.



ENERGY AND CO2 EMISSIONS INITATIVES

Dynamic energy modelling was undertaken during design stages indicating an annual energy consumption of approximately 46MWh for the base building's regulated energy. A 1,500 kW PV solar system is installed on the roof which is capable of offsetting approximately 2,080,500 kWh/yr.

Initiatives implemented in to reduce energy consumption in this fit out are as follows:

- 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;
- Translucent roof sheeting to warehouse areas;
- Roof and external wall insulation as per the 2019 NCC requirements;
- High performance glazing to all air-conditioned areas or minimum NCC requirements;
- Passive solar design for external outdoor areas;
- Efficient air conditioning system; and
- Power sub-metering to enable continued review of power consumption for the offices, and warehouse.

Green Tip: REDUCE ENERGY CONSUMPTION
Everybody can help to save energy. Switch off all artificial lighting when not required. Switch off business machines (e.g. computers, monitors, screens, printers and copiers) overnight. Unplug the power supplies and all other items not in use, (e.g. phone chargers)

WATER

Water is a precious and declining resource, and our buildings can greatly assist to reduce the use of potable water by including water efficient fittings, fixtures and appliances.

Initiatives implemented in to reduce water consumption in this fitout are as follows:

- Tenant water are monitored via the base building BMCS.
- Tenant water meters have been provided to monitor the tenant supplementary water supply. These meters are digital pulse meters and are accessible via doors into the meter enclosures.
- All toilets, urinals, taps and dishwashers are to include a minimum of 4-star WELS rating.

The more stars the more water efficient

WATER RATING

www.waterrating.gov.au

REDUCE WATER USE

Always ensure that taps are closed properly before leaving the kitchen or bathroom and leaking taps fixed. A dripping tap can waste as much as one liter of water per hour. In one week, that is enough to fill a bathtub!

HEATING, VENTILATION AND AIR-CONDITIONING (HVAC)

The following HVAC information has been obtained from the Mechanical Services Brief prepared by Paramount Airconditioning (Aust) Pty Ltd.

Warehouse

- No air conditioning is included within the Warehouse
- Ventilation for the warehouse includes:
- an automatic smoke exhaust system (with fire trip and override controls) operating via:
    a. General ventilation mode, manual override and night purge controlled via timeclock.
    b. Automatic mode controlled via CO/NO2 levels at the north of the warehouse.
- Additional fans provide air movement including high level and low level pivot type mounted from walls / columns.

Main Offices

- The main office is served by an air-cooled heat recovery VRF system.
- Temperature control is via local controllers per unit/zone. A central controller is provided to group the units for BMS connectivity.
- VRF condensing units are located in the dedicated plant enclosure at ground level.
- The L1 Comms room is served by 2No. air cooled downflow type CRAC units configured in a duty/standby arrangement.
- Condensing units for the CRAC units are located on a dedicated platform on the office.
- Outside air will be provided to the occupied office areas via louvres (GF) and roof mounted cowls (L1), connected to each ducted AC mixing plenum.

Dock Offices

- The dock offices is served by air-cooled ducted split type air conditioning units**.**
- Condensing units are located at ground level adjacent to each dock office.
- Outside air is provided via louvres connected to each ducted AC mixing plenum.
- Each office will be provided with a toilet exhaust system discharged via the façade.

Fire Pump Room

- No air conditioning is included within the Fire Pump Room
- Ventilation for the fire pump room includes:
- An exhaust fan to discharge heat.
- Make-up air provided via louvers.

Mechanical System Operation

SUSTAINABILITY INITIATIVES

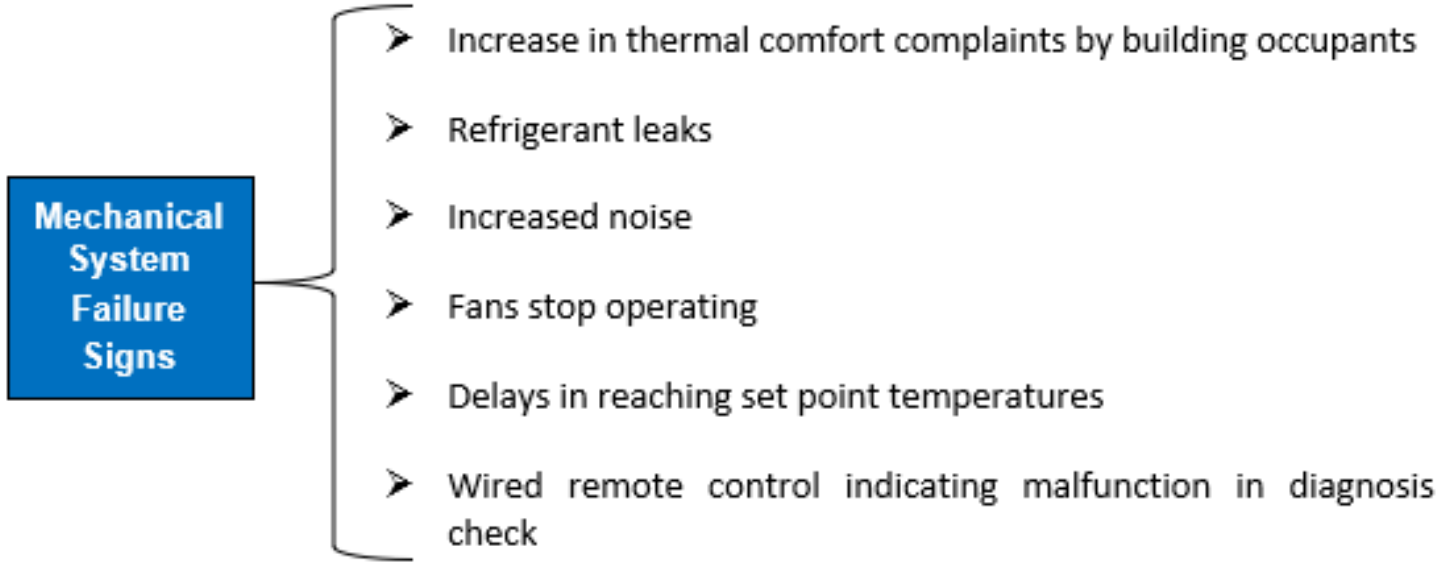
- The proposed system will use an inert refrigerant with ozone deletion potential of zero.
- Improved system efficiencies with minimum SCOP/EER = 4.0
- Lower predicted greenhouse gas emissions are achieved from all mechanical systems which are designed to exceed minimum NCC Section J Requirements.
- A control strategy incorporating Variable Speed Drives (VSD), CO and NO2 sensors to conserve energy within the warehouse ventilation system.
- BMS monitoring and controlling the mechanical systems.

Mechanical System Operation

SYSTEM NOTICE FAILURE

The tell-tail signs of system failure for the HVAC systems is summarised in below Figure

Tell-tail signs of HVAC System Failure



ELECTRICAL SYSTEM

ENERGY EFFICIENCY STRATEGIES

- Intelligent Lighting Control Solution based upon the Dynalite Lighting Control System across the Office, Warehouse & External Areas.
- BMS Control System

ELECTRICAL CONTROLS OF HVAC SERVICES

Warehouse

- Smoke exhaust fans will be powered from an essential mechanical services switchboard, located in a fire rated cupboard in the warehouse adjacent to the north Dock Office.
- HVLS fans will be powered from a non-essential mechanical services switchboard, located in the warehouse adjacent to the north Dock Office.

Main Office

- The main office HVAC systems will be fed from a non-essential mechanical services switchboard, located in the warehouse adjacent the office.
- Level one comms room CRAC units will be fed from an essential electrical distribution board.

Dock Offices

- The north dock office mechanical services will be fed from a non-essential mechanical services switchboard, located in the warehouse adjacent the dock office.
- The 2No. south dock offices will be fed from non-essential electrical distribution boards. Electrical trade to provide isolators adjacent condensers and fans.

Fire Pump Room

- The fire pump room exhaust fan will be powered by the electrical trade from a control panel located within the pump room.

LIGHTING CONTROL METHODLOGY

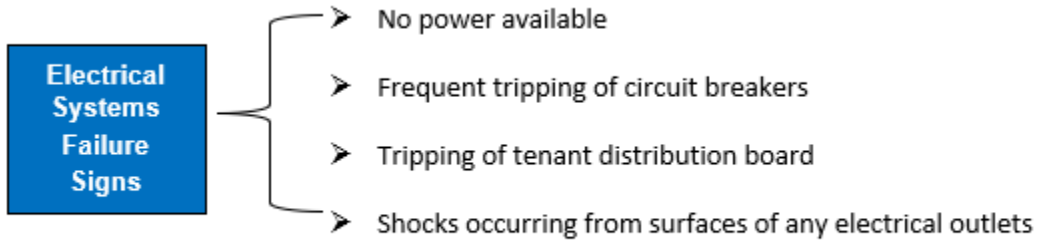
- System based on Dynalite
- Programmable and incorporates time clock, photo electric and movement control
- The Dynalite system serves External Lighting, Main Office (ground & first floor), Warehouse (split into 7 zones), Dock Offices and Mezzanines.
- The Dynalite system incorporates Relays, Dali Control, Switches, Motion Detectors, Time Clocks and PE Cells where required.
- Integration & reporting to the BMS.
- The system will use a distributed architecture design and advance windows based graphical programming to enable the lighting operation to be centrally programmed & adapted, but also to ensure full operation of the system should any central communications fail.

Electrical System Operation

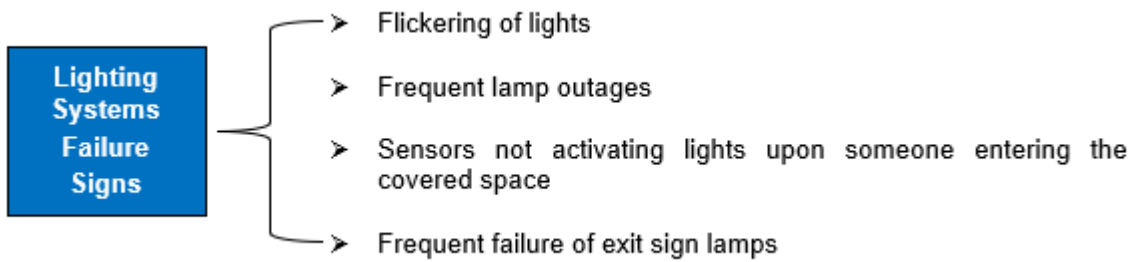
System Notice Failure

The tell-tail signs of system failure for the HVAC systems is summarised in below Figure

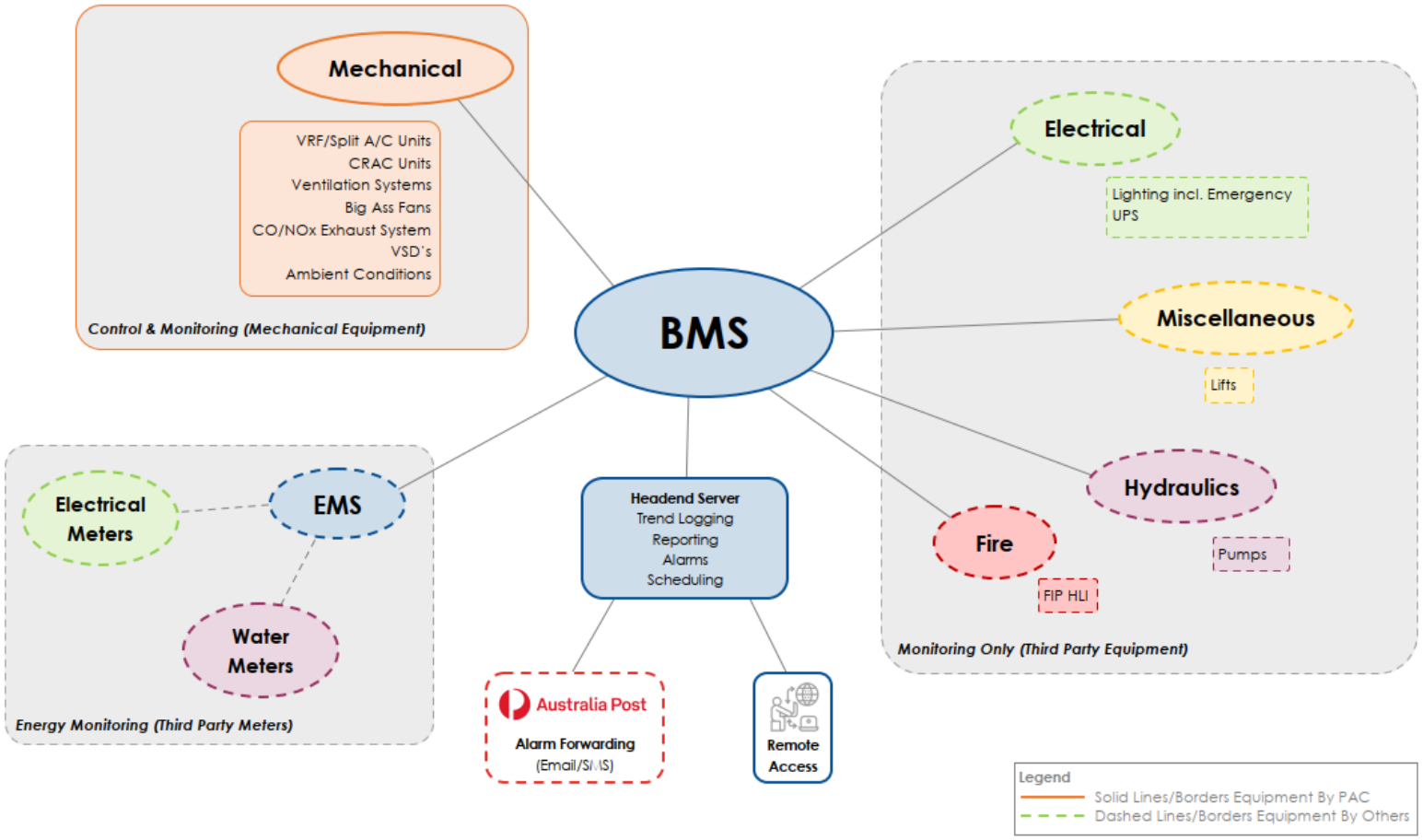
Tell-tail signs of Electrical System Failure



Tell-tail signs of Lighting System Failure



BMS Control


Mechanical
VRF/Split A/C Units
CRAC Units
Ventilation Systems
Big Ass Fans
CO/NOx Exhaust System
VSD's
Ambient Conditions
Control & Monitoring (Mechanical Equipment)
BMS
Electrical
Lighting incl. Emergency
UPS
Miscellaneous
Lifts
Hydraulics
Pumps
Fire
FIP HLI
Monitoring Only (Third Party Equipment)
Electrical Meters
EMS
Water Meters
Energy Monitoring (Third Party Meters)
Headend Server
Trend Logging
Reporting
Alarms
Scheduling
Australia Post
Alarm Forwarding
(Email/SMS)
Remote Access
Legend
Solid Lines/Borders Equipment By PAC
Dashed Lines/Borders Equipment By Others

HYDRAULIC SYSTEM

All hydraulic services will be designed and installed with the objective to economise the installation- and maintenance costs, while still providing an appropriate level of comfort to the occupants.

On each of the office levels, male, female and accessible bathrooms are available. Furthermore, End of Trip facilities are available.

All materials, plant or equipment will be installed with appropriate access for ease of operation, maintenance and replacement.

DOMESTIC HOT WATER

The system includes new Hot Water Units and/or Boiling/Chilled Water Units to the sinks.

SANITARY FIXTURE EFFICIENCY

The project has specified the fixtures and fittings to contribute to reductions in potable water demand. These fixtures and fittings are all rated within high WELS ratings.

MECHANICAL SERVICE WORKS

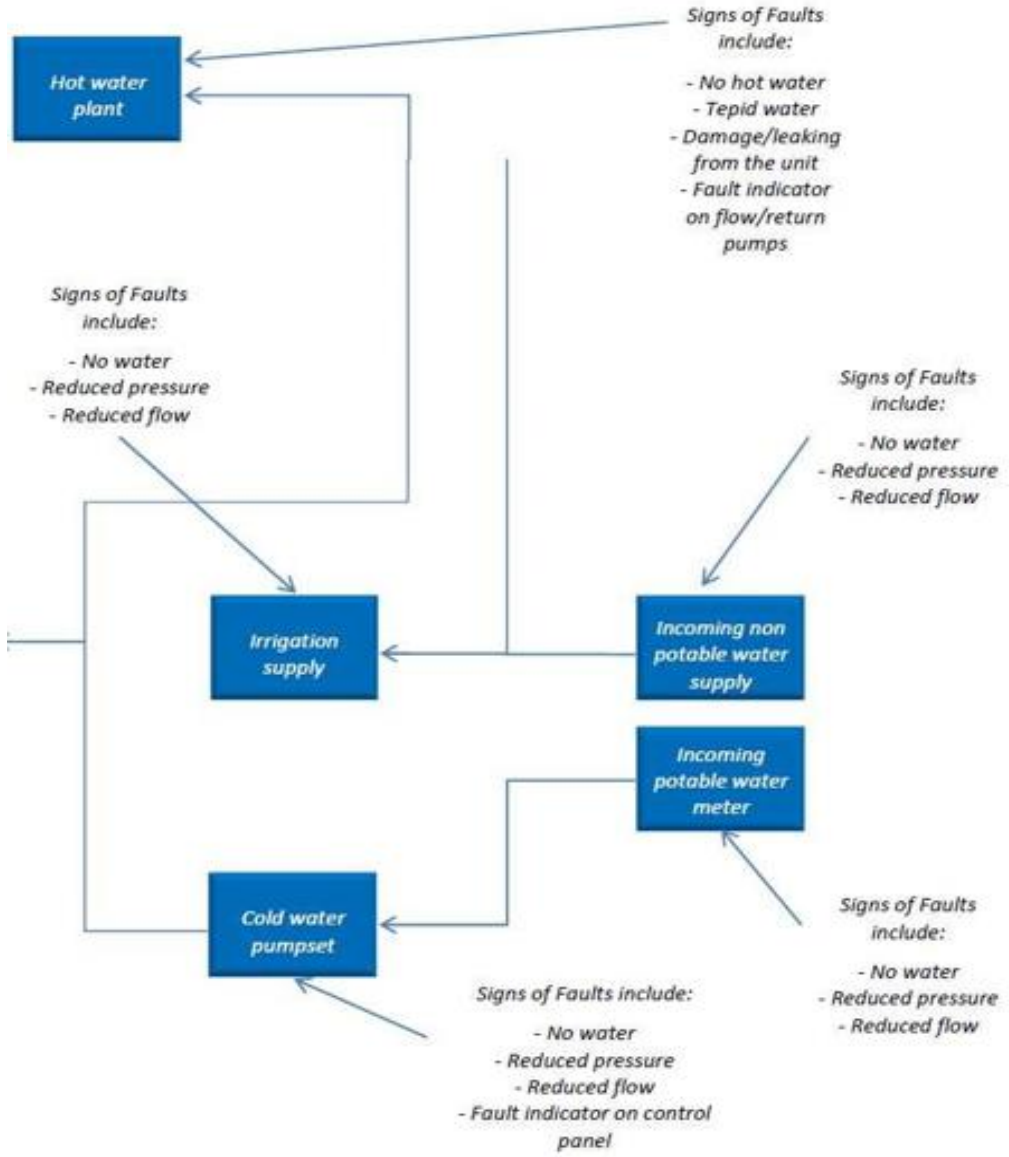
The project will incorporate the following hydraulic services to accommodate the mechanical service works:

- Trapped floor wastes and tundishes.
- New valved and metered (with pulse output) cold water supplies.
- Cold water supply and drain point to each rooftop PAC unit.
- BMS points and control sequences commissioned by the hydraulic contractor ensuring compatible designs and control interfaces.

HYDRAULIC SYSTEM

SYSTEM NOTICE FAILURE

The tell-tail signs of system failure for the domestic hot water systems is summarised in the line diagram adjacent.



MONITORING AND REPORTING

To enable effective review of energy usage by the project, sub-metering was implemented for all major energy consuming processes or items of equipment including:

- Whole tenancy parent meter (covering all end uses below)
- Warehouse lighting
- Warehouse power
- Office lighting
- Office power
- Office HVAC
- Domestic hot water
- Solar photovoltaic system
- EV charge points
- For loads over 100kVA, the energy meters are designed to connect to the building EMS/BMS system for ease of monitoring and collection of data

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. It is recommended that 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. All electricity and water meters will be connected to a monitoring system to allow data analysis.

The monitoring system is designed to have the capability to generate reports on a monthly and/or as required basis for energy and water meters.

The following information can obtained from the Building Management Control System (BMCS):

- Tenant / Use
- Metering Schedule – identifying the location and types of meters
- FCU information
- Outside Air Conditions
- Meter No,
- Billing Address and Contact
- Monthly use
- Graph of previous 12 months usage (rolling time scale)
- Average daily use
- Actual versus target; and
- Cost.

Further information including Monitoring, Faults and Alarms can be found within the BMCS Functional Description prepared by Control Works.

FIRE SAFETY & EMERGENCY

All fire protection services will be designed with the primary objective to provide an appropriate level of fire safety and comfort, to minimise the risk of a fire developing and spreading, to limit the spreading of smoke and to enable the occupants of the building to evacuate safely in the event of an emergency / fire. The fire services work included in the fitout (additional to the base building installation) included the following:

- Automatic Wet Pipe Fire Sprinkler System
- Smoke Detection and Alarm System in accordance with the existing base building system requirements fully compatible with existing
- EWIS – Emergency Warning and Intercom System
- Portable Fire Extinguishers

The following codes, design guidelines, norms and statutory requirements have been utilised where applicable:

- The current Building Code of Australia 2019 and Australian Standards referenced therein. The following standards and reports are referred to in this specification:
    - AS 1668.1 -2015 Fire and smoke control in buildings
    - AS 1670.1 - 2018 Fire detection, warning, control systems
    - AS 1670.4 - 2018 Fire detection, warning, control and intercom systems
    - AS 2118.1 - 2017 Automatic fire sprinkler system
    - AS 2444 - 2001 Portable fire extinguishers and fire blanket
    - Fire Management Plan (FMP)
    - Bushfire Emergency Management and Evacuation Plan (BEME) by Blackash

Bushfire Management Offsite Evacuation Points and Routes

SLR

ALTERNATIVE TRANSPORT INITITIAVES

PUBLIC TRANSPORT CONNECTIVITY

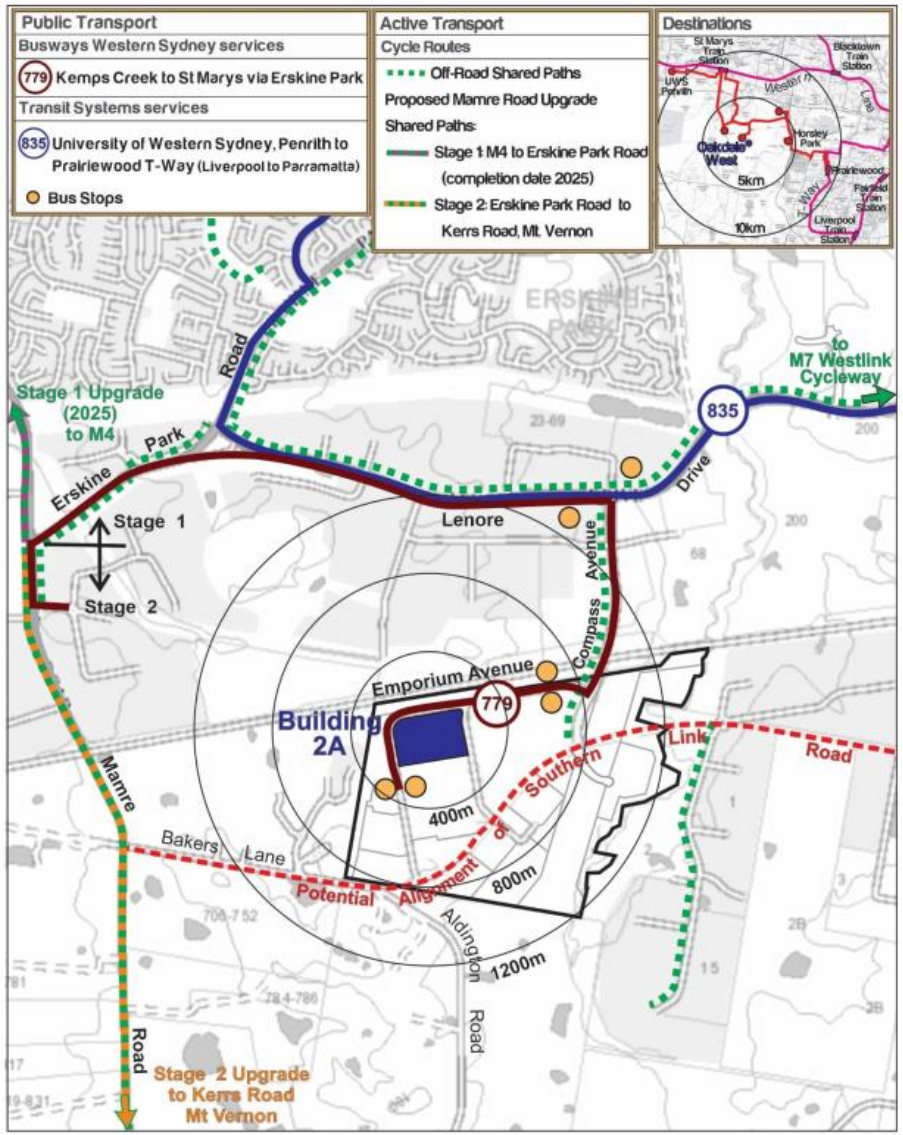
The introduction of a new bus route provides additional access for workers / visitors within OWE. This new bus service (Route 779) commenced operations on 24 October 2021 and provides direct access to and from St Marys Train Station.

For up-to-date maps and time timetables refer to NSW Transport website: https://transportnsw.info/

CARPOOLING & ELECTRIC VEHICLE USE

Throughout the carparking facilities, the following infrastructure is provided:

- 255 x total parking spaces
- 13 x Electric Vehicle (EV) charging stations as per the sustainability management plan
- **Open Car Sharing** can include anyone in a defined geographical area can join a ride sharing scheme. Fuel costs can be arranged and split equitably by those involved and is encouraged for all staff where possible.
- Additional car sharing services such as **Closed Car Sharing,** and **Third Party Car Sharing Programs** (e.g. Liftshare) are encouraged to be organised by staff and tenants where practical.



ALTERNATIVE TRANSPORT INITIATIVES

ACTIVE TRANSPORT FACILITIES

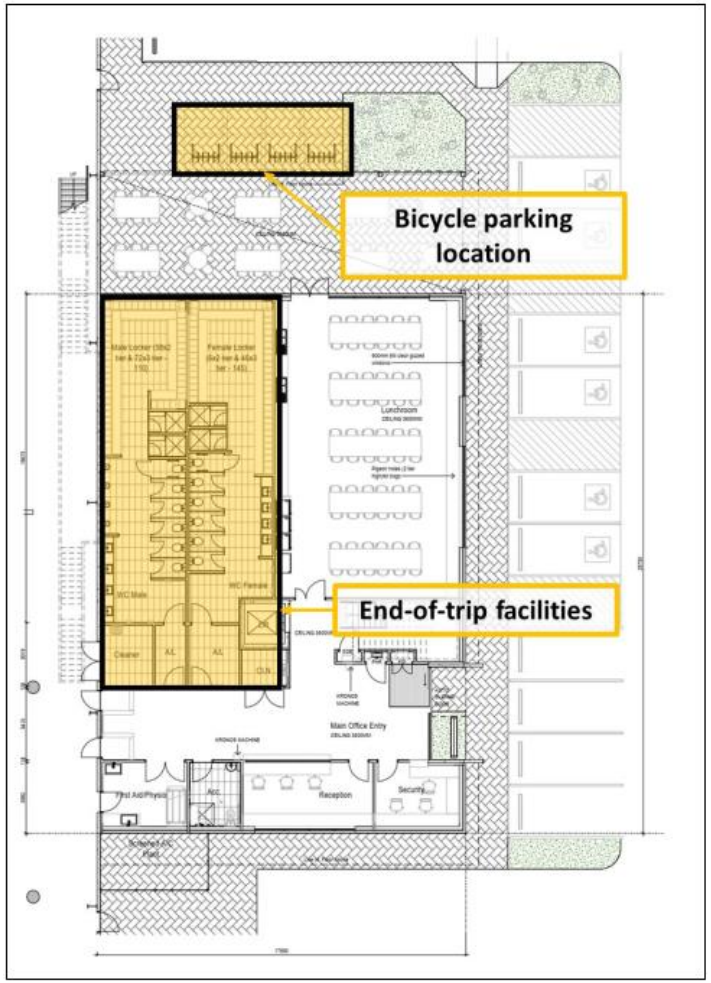
A Shared Path (cyclists and pedestrians) is provided along the northern side of Lenore Drive and western side of Old Wallgrove Road, providing connections to the regional pedestrian and cycle networks. Compass Drive and the internal roads will include a 2.5-metre shared path for both pedestrians and cyclists. Refer to the trip planner on the NSW Transport web page for more guidance and information:

https://transportnsw.info/trip#/trip?travelMode=cycle

END OF TRIP FACILITIES

A bike storage area and end-of-trip facilities have been provided to the regular building occupants, and visitors. The end of trip facilities include:

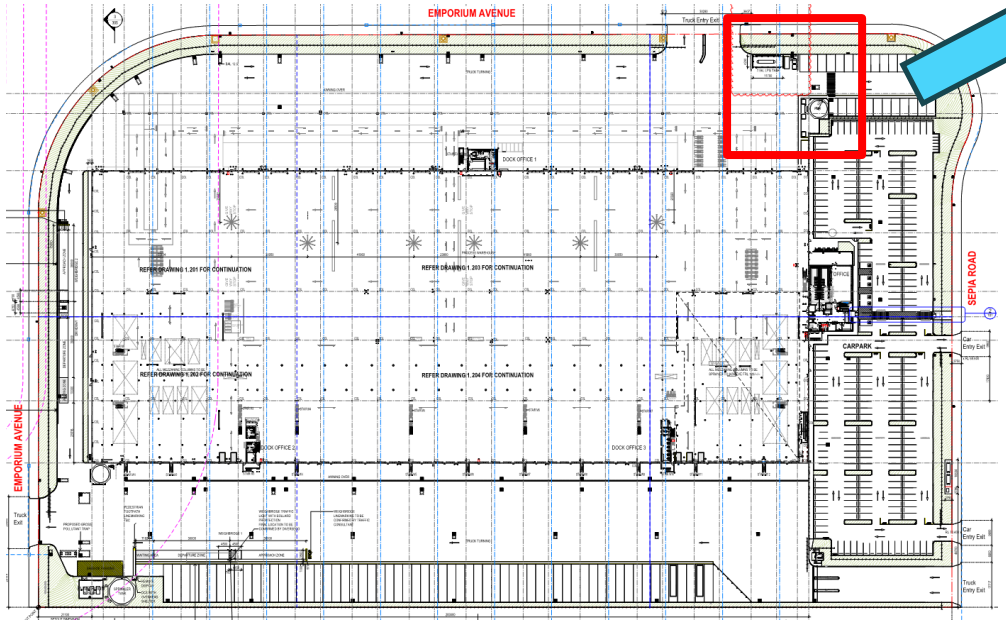
- 24 x bicycle parking provisions
- 195 x lockers
- 4 x showers

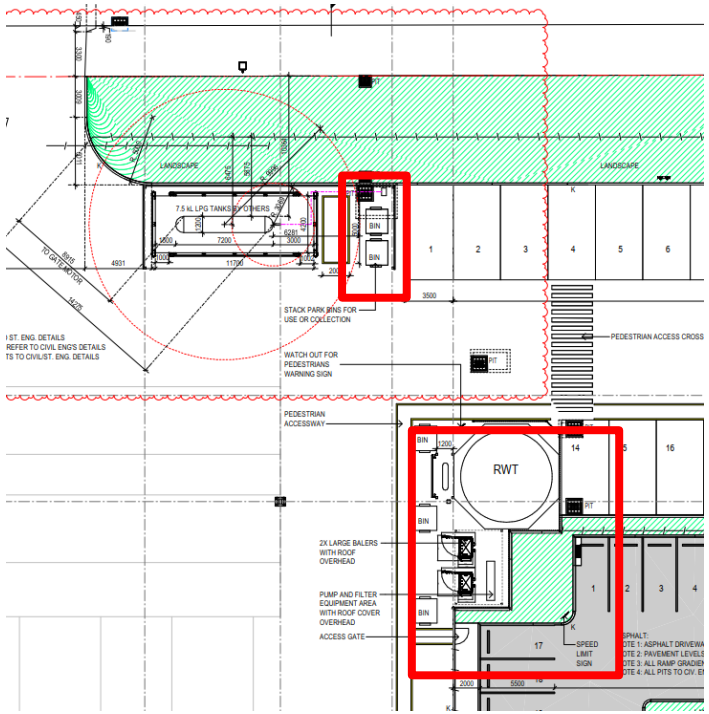


OPERATIONAL WASTE

On site waste storage for the warehouse include two locations on ground level, both near the northeast corner of the site adjacent to the carpark. The waste storage room will include three bins and two large balers. An additional two bins are stored adjacent to the LPG tanks.

Waste disposal streams within the offices will be separated where possible and identified through clear signage on the bins.





Visual assessments of bins and bin storage areas should be conducted by the building manager, at minimum:

- Weekly, in the first two months of operation to ensure the waste management system is sufficient for the operation, and
- Every six months, to ensure waste is being managed to the standards outlined in this OWMP.

In addition, audits are to be conducted on a half-yearly basis to ensure WMP provisions are maintained

New Equipment and Basic Maintenance

NEW EQUIPMENT

New equipment should all be selected from the Energy and Water Star range. For energy efficient office equipment including computers, printers and photocopiers, and home electronics such as TVs, audio products and DVD players refer to: http://www.energystar.gov.au

For energy efficient appliances refer to: http://www.energyrating.gov.au

For water efficient fixtures and other appliances refer to: http://www.waterrating.gov.au

NEW PAINTS

All new paints should be low Volatile Organic Compound (VOC). The aim of this is to minimise the detrimental effects for occupant health of internal air pollutants. All new paints should meet the maximum TVOC content limits as outlined in Table below

Product Category	Max TVOC Content in Grams per Litre (g/L) of ready to use product
General purpose adhesives and sealants	50
Interior wall and ceiling paint, all sheen levels	16
Trim, varnishes and wood stains	75
Primers, sealers and prep coats	65
One and two pack performance coatings for floors	140
Acoustic sealants, architectural sealant, waterproofing membranes and sealant, fire retardant sealants and adhesives	250
Structural glazing adhesive, wood flooring and laminate adhesives and sealants	100

References and Further Consideration

ENERGY AND GREEN HOUSE GAS EMISSION

Air conditioning and ventilation: Australian Government, Department of Climate Change
www.greenhouse.gov.au

Lighting Efficiencies
www.lightcorp.com/FAQs.cfm

Energy efficiency and ratings for electronics
www.greenhouse.gov.au/education/tips/home.html
www.energystar.gov.au/about/australia.html

WATER

Water efficiency appliances and access to database of water efficiency
www.waterrating.gov.au

General Water saving
www.watersaving.gov.au

WASTE AND CLEANING

www.environment.nsw.gov.au/waste

CONTACTS

BUILDING MANGER

Contact person: Michael Trotnar
Company: Goodman
Telephone/email: 0409 999 447
Michael.Trotnar@goodman.com

APPENDIX M

Sustainability Management Plan

OAKDALE WEST ESTATE

Building 2A Australian Post Office

Sustainability Management Plan

Prepared for:

Goodman Property Services (Aust) Pty Ltd
Level 17, 60 Castlereagh Street
SYDNEY NSW 2000

SLR Ref: 630.30081-00400-R01
Version No: v1.0
October 2021

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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
630.30081-00400-R01-v1.2	7 October 2021	Dr Neihad Al-Khalidy	Horatio Cai	Dr Neihad Al-Khalidy
630.30081-00400-R01-v1.0	6 November 2020	Dr Neihad Al-Khalidy	Horatio Cai	Dr Neihad Al-Khalidy

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DOCUMENT REFERENCES

TABLES

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FIGURES

APPENDICES

1 INTRODUCTION

SLR Consulting Australia Pty Ltd (SLR) has been previously engaged by Goodman Property Services to prepare a Sustainability Management Plan (SMP) for the proposed warehouse and distribution facilities of Stage 3, Building 2A of Oakdale West industrial Estate (the Project).

Australia Post has now been confirmed as the tenant for Building 2A. This requires a modification to the project approval and a revised sustainability management plan. The key changes since the last report issued include:

- Inclusion of updated fit-out layout;
- Office area amendment and Insertion of dock office and amenity blocks;
- Awning to north to be 30m wide with structural support; and
- Dock height will now be 1.3m, not 1.35m.

The current SMP has been undertaken in accordance with the Secretary's Environmental Assessment Requirements (SEARs) for the State Significant Development SSD-9794683 and SSD-7348 MOD 6.

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 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 Sustainability Management Plan Requirements

The sustainability management plan for the Oakdale Site is prepared in accordance with the following SEARs requirement:

- **Greenhouse Gas and Energy Efficiency** – including an assessment of the energy use on-site and all reasonable and feasible measures that would be implemented on-site to minimise the development's greenhouse gas emissions.
- **Ecologically Sustainable Development** – including a description of how the development will incorporate the principles of ecologically sustainable development in the design, construction and operation of the development.

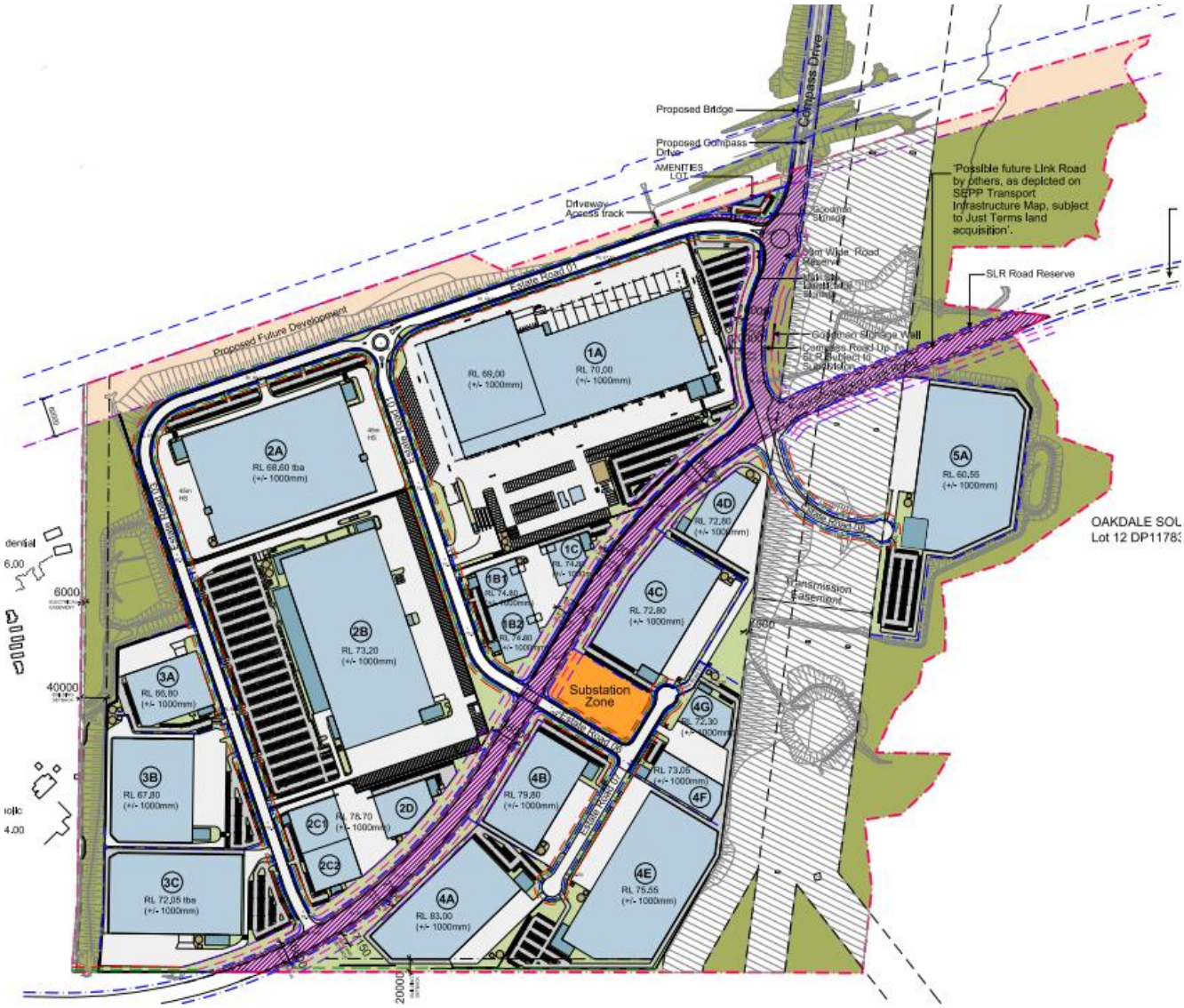
3 DESCRIPTION OF THE PROJECT

The Development Site, which is known as Oakdale West Industrial Estate, Kemps Creek, is located within the Penrith Local Government Area (LGA) in the Western Sydney Employment Area (WSEA). It is situated within an approved Concept Plan area, which forms part of the broader Oakdale Industrial Precinct.

The project is a staged development which includes bulk earthworks, civil works and the construction of infrastructure and stormwater management. The overall Oakdale West Masterplan is shown in **Figure 1**.

The current study covers the sustainability management plan and greenhouse gas reduction for the proposed warehouse and distribution facilities of Stage 3, Building 2A (the Project).

Figure 1 Oakdale West Estate Master Plan – Mod 6



3.1 Overview of Proposed Development

Goodman Property Services (Aust) Pty Ltd is developing the Oakdale West site at Lot 11 in DP 1178389 in Kemps Creek. This site 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 Post Office Building 2A comprises 80,582 m^2. Overall building areas are outlined in **Table 1**.

Table 1 Post Office - Building 2A Areas

Site Area	Building 2A
Warehouse	34,262 m^2
Mezzanine inside Warehouse	8,403 m^2
Offices	1,050 m^2
Dock office	82
Amenities	105
Total GFA	43,902 m^2
Awning	3,321 m^2
Hardstand Area	32,115 m^2
Light Duty Area	6,950 m^2
Car Parking	252

Further details of the Post Office Building 2A development are shown in **Figures 2 - 3.**

Figure 2 Oakdale West Estate: Building 2A – Post Office

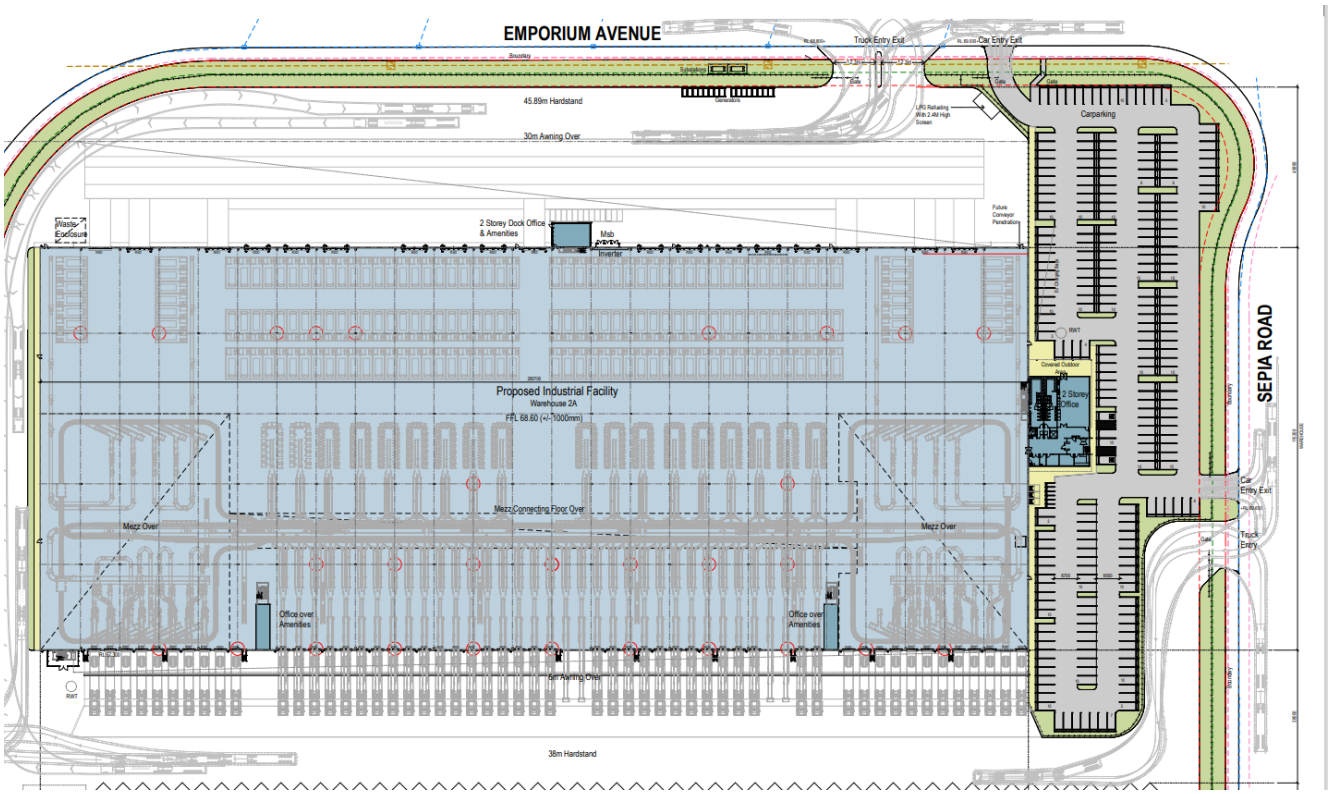
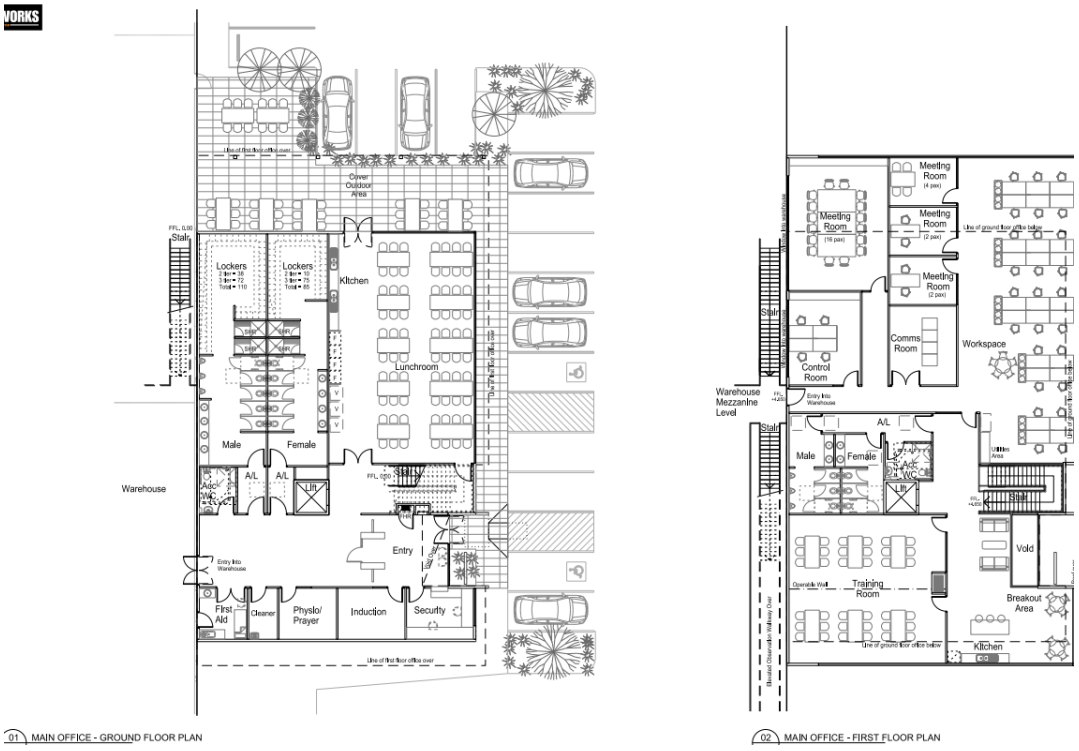


Figure 3 Oakdale West Estate: Building 2A – Main Office



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.

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	OAL 2A DA 10 (F)	06/10/2021
	OAL 2A DA 201 (A)	06/10/2021
	20188_OWE_MOD 6_Drawing_Set	05/05/2020
Goodman - Industrial - Design Brief - Base Building Rev 06	Project no 190119	04/06/2019

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	• Documentation of design intent and expected outcomes. • Appropriate commissioning.	• Communicate sustainability initiatives and operation to building users. • Commissioning and building tuning required by contractors and reviewed for 12 months after completion.	• Provision of Building Users Guide. • Investigate costs and viability of commissioning and building tuning requirements and appointing an independent commissioning agent. • Independent consultant to perform quarterly tuning of fire, mechanical, electrical, hydraulic services.	✓ ✓ ✓	• 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.
Façade Performance	• Optimised façade performance.	• Achieve minimum performance requirements under NCC Section J1 and J2. • Reduce heat gain through the warehouse façade.	• Meet or exceed NCC Section J1 and J2 façade performance for conditioned spaces. • Light coloured roofing with high reflectivity and appropriate insulation to reduce solar heat gain into the warehouse. • Daylight: evenly spaced translucent roof sheeting to warehouses areas. • Performance glazing in office spaces appropriate to the window size and orientation.	✓ ✓ ✓ ✓	• 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.

Category	Objective	Proposed Target	Proposed Strategy	Commitment	Comment
Social Sustainability	• Consider design with due regard to occupant satisfaction in accessibility, usability, Indoor air quality and public space utility.	• High level of occupant satisfaction. • Provide external as well as internal comfort.	• Flexibility of space for potential future configurations.	✓	• The design will incorporate open plan workspaces, offices, client rooms, meeting rooms, lunch room and outdoor seating area
			• Use of Low VOC paints, carpets and sealants.	✓	• Low VOC paints, carpet and sealant will be used
			• Consider Landscaping and dense planting.	✓	• Refer proposed landscaping, Architectural Drawings • Selection of endemic and low maintenance landscaping species
			• Consider occupant user control eg A/C systems, glare reducing strategies, lighting etc.	✓	• Both AC and lighting control is provided to offices and warehouses.
Minimising Transport Impact	• 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.	• 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 close proximity to major arterial roads. • Reduce the impact of operational traffic on local communities.	• Consider providing 10% of total parking spaces for small cars and 5% for motorbikes situated near the office entrance. • The site is located within close 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.	✓ ✓	• 13 electrical vehicle parking spaces with charging stations. Refer **Figure 2**. • 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 4 disabled parking are provided be in accordance with Consent Authority requirements.

Category	Objective	Proposed Target	Proposed Strategy	Commitment	Comment
Optimising IEQ	• 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.	• 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.	• Daylight: rationalised glazing to offices; high performance glass. • Daylight: evenly spaced translucent roof sheeting to warehouse 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.	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	• High performance glazing to all air-conditioned areas to satisfy Section J requirements • Shown on the Architectural Drawings • Refer **Section 5.5** of this report for proposed set up temperatures • Insulation as per the NCC requirements • Low VOC finishes and low-formaldehyde wood products will be used • Refer Architectural Drawings • 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	• 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.	• 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.	• 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 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.	✓ ✓ ✓ ✓ ✓ ✓ ✓	• Awning Shown on the Architectural Drawing. Insulation as per the NCC requirements • Design brief sets the temperature - Refer Section 5.5 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 light colour is proposed. • As per project NCC Section J report.

Category	Objective	Proposed Target	Proposed Strategy	Commitment	Comment
Choosing Materials	• With consideration to energy inputs in manufacture. • Toxicity. • Consequential impacts – rain forest timbers. • Regional or local manufacturer employment support.	• 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.	• Jointless fibre reinforced slab. • Use pre-cast concrete panels with recycled content.	✓ ✓	To minimise the environmental impacts of materials used by encouraging the use of materials with a favourable lifecycle assessment based on the following factors: • 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	• 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.	• 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.	• 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.	✓ ✓	• 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: - Provision of take back services to clients to reduce waste further along the supply chain.
Water Conservation and Reuse	• 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.	• Reduce potable water in internal fixtures. • Reduce potable water for irrigation. • Water efficient operation of appliances. • Utilise rainwater and/or recycled water.	• 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.	✓ ✓ ✓ ✓	• Low flow fixtures and fitting including taps and shower heads • Selection of endemic and low maintenance landscaping species • SLR recommends water efficient dishwashers • 100 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	• Consider local biodiversity impacts of flora and fauna. • Look to specialist advice on land in development.	• 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.	• Install indigenous plating appropriate to the area and the adjacent biodiversity lots. • Design external lighting to avoid emitting light into the night sky or beyond the site boundary. • 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. • Consider permeable concrete/paving for staff parking areas and footpaths, etc.	✓ ✓ ✓ ✓	Selection of endemic and low maintenance landscaping species LED lights have been proposed for all external lights to avoid emitting light The warehouse sustainability objectives include: • 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 12.4% energy reduction - refer **Section 5.8** 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; and
- Efficient air conditioning system.

All building information and associated parameters are listed in the following sections of this report.

5.3 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 2019 Volume One). The maximum illumination density for a storage warehouse is 4 W/m² as per Table J6.2a of the NCC 2019 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.

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 = 4 W/m^2
- Offices = 4.5 W/m^2

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 3.5 W/m^2
- Offices 4 W/m^2

Therefore, the proposed building is likely to achieve a 12% lighting energy reduction when compared with reference building. Detailed calculation is shown in **Appendix A.**

5.4 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

2019 NCC Section J5.11 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	2.9	4
Heating	2.9	4

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 variable speed fan when its supply air quantity is capable of being varied.

Details or NCC Section J5 certification demonstrating compliance will need to be submitted with the application for a Construction Certificate

5.5 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.

5.6 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 hot water system for DHW. The actual energy consumption will be reduced once solar hot water or electrical heat pump is adopted for the proposed building.

5.7 Estimated Energy Efficiency Consumption

- The proposed building is likely to achieve a 12% lighting energy reduction when compared with reference building. Refer Section 5.3
- At least 500 kW of PV solar system has been proposed.
    - The proposed 500 kW PV solar system will offset 554,800 kWh/year of energy usage.
- The design of the air conditioning system for the proposed post office development is not progressed at this stage. SLR has previously modelled the previous design scheme for the building 2A. The predicted energy usage for air-conditioning and mechanical ventilation was approximately 28.6 kWh/m^2 for the reference building and 19.3 kWh/m^2 for the proposed building.

The estimated Total Annual Energy Consumption of the NCC Reference Building and the Proposed Post Office is summarised in **Table 6**.

Table 6 Comparison of Annual Energy Consumption Between the Reference and Proposed Building

Electricity Usage	Reference Building (MWh)	Proposed Building (MWh)
Heating	8.38	6.01
Cooling	18.46	12.80
Auxiliary	5.61	5.21
Lighting	836.94	34.96
Equipment	assumed identical	assumed identical
DHW	assumed identical	assumed identical
PV System	-	-693.5
Total	**849.17**	**45.95**

Note 1 these items are specific to a tenant's Fitout -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 95.8 % GHG emission reduction when compared with 2019 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 35%.

The quantities of each water fittings are assumed from the drawing and listed in **Appendix B**.

7 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.

7.1 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.

7.2 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.

7.3 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.

8 CONCLUSIONS

Australia Post has now been confirmed as the tenant for Building 2A. This requires a modification to the project approval and a revised sustainability management plan. The key changes since the last report issued include:

- Inclusion of updated fit-out layout;
- Office area amendment and Insertion of dock office and amenity blocks;
- Awning to north to be 30m wide with structural support; and
- Dock height will now be 1.3m, not 1.35m.

This study has been prepared in accordance with the following Secretary's Environmental Assessment Requirements (SEARs) for the State Significant Development (SSD-9794683 and SSD-7348 MOD 6.

- **Greenhouse Gas and Energy Efficiency** – including an assessment of the energy use on-site and all reasonable and feasible measures that would be implemented on-site to minimise the development's greenhouse gas emissions.
- **Ecologically Sustainable Development** – including a description of how the development will incorporate the principles of ecologically sustainable development in the design, construction and operation of the development.

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:

- 500 kW PV Solar system;
    - The proposed 500 kW PV solar system will offset 693,500 kWh/year of energy usage;
    - The estimated greenhouse gas CO2 emission saving is approximately 568,670 kgCO2/annum
- 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;
- Translucent roof sheeting to warehouse areas;
- Roof and external wall insulation as per the 2019 NCC requirements;
- High performance glazing to all air-conditioned areas or minimum NCC requirements;
- Passive solar design for external outdoor areas;
- Efficient air conditioning system;
- Power sub-metering to enable continued review of power consumption for the offices, and warehouse;
- Selection of endemic and low maintenance landscaping species;
- 100 kL rainwater tanks for rainwater harvesting and re-use for landscape irrigation and toilet flushing;
- 13 electrical vehicle parking spaces with charging stations;

- 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 95.8% GHG emission reduction when compared with 2019 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 35%.

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 2A - Post Office								
BCA Comply Building	**BCA Requirements**		**Area**	**Operating Hrs**	**Lighting Control**			**Total Annual Energy Consumption (kWh)**
	Warehouse W/m2	4	32262	Monday to saturday 24 hours	Motion Detector, Daylight Sensor	0.9	0.6	608776
	Mezzanine W/m2	4	8403	Monday to saturday 24 hours	Motion Detector	0.9	0.6	158563
	Offices W/m2	4.5	1050	Monday to saturday 24 hours	Motion Detector	0.9	1	37150
	Dock Office and Amenities W/m2	4.5	187	Monday to saturday 24 hours	Motion Detector	0.9	1	6616
			41902				**Total**	**804489**
							kWh/m2	**19.20**

Proposed Lighting Requirements Oakdale West 2A - Post Office								
BCA Comply Building	**BCA Requirements**		**Area**	**Operating Hrs**	**Lighting Control**			**Total Annual Energy Consumption (kWh)**
	Warehouse W/m2	3.5	32262	Monday to saturday 24 hours	Motion Detector, Daylight Sensor	0.9	0.6	532679
	Mezzanine W/m2	3.5	8403	Monday to saturday 24 hours	Motion Detector	0.9	0.6	138742
	Offices W/m2	4	1050	Monday to saturday 24 hours	Motion Detector	0.9	1	33022
	Offices W/m2	4	187	Monday to saturday 24 hours	Motion Detector	0.9	1	5881
			41902				**Total**	**704444**
							kWh/m2	**16.81**

APPENDIX B

Water Saving Recommendations

WATER SAVINGS CALCULATION OAKDALE WEST, BUILDING 2A - Post Office

Table B1 - Number of fixtures

Area	Toilets	Urinal	Basins	Showers
Amenities	30	10	34	4
Total	30	10	34	4

Assume 70% of toilet water usage is supplied by rainwater

Fraction not supplie	0.3

Table B2 - Results

No water saving measures		**Max water usage rate** [1]	
Toilet	Adopt 3* Average Flush Usage in Table C3	120	L/s
Tap	Adopt 3* Tap Usage in Table C3	306	L/s
Urinal	Adopt 3* Urinal Usage in Table C3	20	L/s
Water reuse measures (4*) with RWH		**Max water usage rate** [1]	
Toilet	Adopt 4* Average Flush Usage in Table C3	105	L/s
Tap	Adopt 4* Tap Usage in Table C3	255	L/s
Urinal	Adopt 4* Urinal Usage in Table C3	15	L/s
Water reuse measures (5*) with RWH		**Max water usage rate** [1]	
Toilet	Adopt 5* Average Flush Usage in Table C3	90	L/s
Tap	Adopt 5* Tap Usage in Table C3	204	L/s
Urinal	Adopt 5* Urinal Usage in Table C3	10	L/s
	3* with RWH	**4* with RWH**	**5* with RWH**
Improvement Percent	**22**	**35**	**48**

Calculation Notes

[1] *Water usage rate per use = Number of items in Table C1 x Usage rate in Table C3*

[2] *Assume total water usage is proportional to max water usage rate*

[3] *Improvement percentage = % difference between 3* rated fixtures max water usage rate with no rainwater harvesting and design fixture max water usage rate with 70% of toilet and*

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