Goodman Property Services (Australia) Pty Ltd

Oakdale West Industrial Estate Concept Plan and Stage 1 Modification (MOD 3 SSD 7348) and Stage 2 Development Application (SSD 10397)

Environmental Impact Statement

January 2020

Table of contents

Table index

Figure index

Appendices

Submission of Environmental Impact Statement

Prepared under the *Environmental Planning and Assessment Act 1979*, Section 4.12(8)

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	In respect of:	Oakdale West Industrial Estate development		

Development Application	Applicants' name:	Goodman Property Services (Australia) Pty Ltd
	Applicants' address:	Goodman Property Services (Aust) Pty Ltd 17/60 Castlereagh Street Sydney NSW 2000
	Land to be developed:	The Project is to be carried out on land as shown in the Environmental Impact Statement
	Lot no, DP/MPS, vol/fol etc	Lot 11 DP 1178389

Environmental Impact Statement

An Environmental Impact Statement is attached.

Certificate

I certify that I have prepared the contents of this Environmental Impact Statement and to the best of my knowledge:

- It is in accordance with the requirements of Part 4;
- It contains all available information that is relevant to the Environmental Impact Statement of the development; and
- That the information contained in the Environmental Impact Statement is neither false nor misleading.

Signature:			
Name:	Karl Rosen	Sarah Mitchell	Sam Horsley
Date:	15/01/2020	15/01/2020	15/01/2020

Executive summary

Background

Goodman Property Services (Australia) (Goodman) received approval on 13 September, 2019 for the state significant development of Oakdale West Industrial Estate (OWE). OWE comprises a warehousing and distribution hub located at Kemps Creek in Western Sydney, NSW. The development consent (SSD 7348) provided approval for a Concept Proposal for the staged development of the OWE and approval of the first stage of OWE (the 'Stage 1 Development').

Goodman is now seeking consent for the Stage 2 Development, which involves establishing a warehouse and distribution facility within a portion of Precinct 2 of the OWE. In accordance with section 4.22 of the *Environmental Planning and Assessment Act 1979* (the EP&A Act) and Clause B1 in SSD 7348, each stage of the Concept Proposal (excluding Stage 1) is to be subject to future development applications and be consistent with SSD 7348 consent.

A new DA (SSD 10397) is therefore proposed for the Stage 2 development of the OWE. The proposal is permissible with development consent and is declared state significant development (SSD) in accordance with Division 4.7 of the EP&A Act. Modification 3 to the Concept Proposal and Stage 1 Development approved as SSD 7348 will also be required under section 4.55 of the EP&A Act to facilitate the Stage 2 development.

GHD Pty Ltd (GHD) has been engaged by Goodman (the proponent) to prepare an environmental impact statement (EIS) to assess potential impacts arising from the Stage 2 DA and Modification 3 to SSD 7348. A single assessment process has been undertaken as part of the EIS to assess potential impacts arising from the proposal as a whole.

This EIS describes the site and proposed development and assesses the proposal against relevant legislation, environmental planning instruments, planning policies and the Secretary's Environmental Assessment Requirements (SEARs) as well as the relevant conditions of SSD 7348 as they apply to the proposed modifications and the Stage 2 DA.

This EIS has been informed by a range of specialist technical studies commissioned by Goodman. These studies have provided a detailed assessment of the potential environmental impacts of the proposed development and have provided recommendations to mitigate any potential impacts on the site and surrounding environment.

Existing approval

The Concept Proposal includes approval for 16 warehouse buildings, offices and associated infrastructure and Stage 1 Development Application (DA) for bulk earthworks across the site, construction and operation of the first three warehouse buildings (Precinct 1), and construction of Estate Road 01 and 02) and construction of the Western North South Link Road (WNSLR).

Modification 1 and Modification 2 are currently being assessed by the NSW Department of Planning, Industry and Environment (DPI&E). Modification 1 will seek approval for minor civil and stormwater amendments and other minor layout changes within the approved Master Plan. Modification 2 will seek approval for amendments to the approved building layout, and tenancy number in Precinct 1 and building height of Building 1A.

It is noted that the proposed amendments under this application, have been designed to accord with the changes proposed under Modification 1 and Modification 2 to ensure consistency of plans for the OWE.

Proposal Overview

As part of the staged development of OWE, Goodman is seeking approval for modification of the Concept Proposal and Stage 1 Development under SSD 7348 (Modification 3) and a new DA (SSD 10397) for the Stage 2 Development.

- Modification 3 involves the following 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 28 m and applicable noise limits for the development.
- Modification 3 involves the following amendment to the Stage 1 Development:
  - 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.
- The Stage 2 Development of OWE involves the development of Lot 2B incorporating:
  - 24 hours / 7 days per week operation
  - use approval for warehouse and distribution use
  - construction of Building 2B; a four level (ground + 3) warehouse and one level office building, with a footprint of 56,365 m^2 and 200,668 GLA and 206,968 GFA.
  - fit-out approval including racking and automation within the warehouse and office fit-out
  - parking for cars, trucks and motorcycles and associated landscaping
  - construction hours from 3 am through to 10 pm for the period of earthworks and infrastructure works, building construction through to construction completion
  - construction access via Bakers Lane whilst WNSLR is being constructed, with the use of Aldington Road in period of school peak periods (drop-off and pick-up)
  - subdivision of Lot 2B.

Findings of the environmental assessment

The majority of physical site constraints and required impact management measures have been previously addressed in the EIS for the approved Concept Proposal and Stage 1 DA for the OWE. Key assessment matters identified in the SEARs as requiring further assessment are outlined below.

Visual impacts

OWE is located on land being developed as an industrial precinct within the Western Sydney Employment Area. There are three principal sensitive receptors within the immediate visual catchment of the proposal including Emmaus College, the aged care facility and the Bakers Lane residences.

Stage 2 of OWE will be visible from the identified receptors and detailed visual assessments including photomontages have been completed to assess the proposal.

The visual impacts of the proposal without mitigation range from Moderate to High. However the implementation of the proposed landscape buffer zones with trees and planted understorey will considerably reduce the visual impact ratings to Moderate/Low and Moderate/High.

Overall the Stage 2 development is considered visually integrated with the broader developments within the Western Sydney Employment Area and application of the proposed landscape buffer will reduce visual impacts to acceptable levels.

Traffic and Transport

There is not expected to be any additional traffic impacts to the estate road network or the regional road network as a result of construction activities for the proposal. This is a result a reduction in the quantum of cut to fill required to deliver the site plan and anticipated pad levels has reduced from the Stage 1 development resulting in a reduction to the number of construction vehicles on the road network (specifically the change to the bulk earthworks levels for pad 2B). There will still be a restriction on construction vehicle use of Bakers Land during peak hour periods corresponding to school pick-up and drop off. It is proposed that for construction and earthworks these vehicles utilise Aldington Road.

The proposal includes amendments to the estate road network to service the revised subdivision layout including a realignment of Estate Road 3 and construction of a roundabout at the intersection of Estate Road 1 and 3.

The proposal will result in amendments to estate roads within Precinct 2 and Precinct 3. The amendments to the estate road network was required as a result of the revised subdivision layouts and will include the following changes to the estate road network:

The proposal will result in an increased traffic generation of 333 (585 during peak season) and 104 (269 during peak season) veh/hr during AM and PM peak period and additional of 784 (2,322 during peak season) veh/day during the weekday. The precinct-wide modelling demonstrates that the cumulative traffic generation will not present worsening impacts to the road network, inclusive of the wider estate's internal roads and connections to the Link Roads. This demonstrates that the road network has sufficient capacity to cater for Building 2B traffic whilst maintaining operation at a satisfactory level. The design of Lot 2B has been undertaken to ensure adequate access and parking provisions in accordance with the provisions of SSD 7348.

Noise and vibration

The existing ambient noise environment surrounding the proposal site is typical for a rural environment, with the natural environment dominating the background noise. Detailed acoustic assessments were undertaken as part of the development of the Concept Proposal and Stage 1 Development and noise limits were designated for surrounding sensitive receivers primarily located to the west and south of OWE.

A noise barrier on the western edge of the site and has been redesigned due to the change in design of Bio-Retention Basin No. 2 and to extend its length and height to ensure satisfactory acoustic screening compared to the barrier proposed as part of SSD 7348 and subsequent modifications. The noise barrier will be established as part of the commencement of construction at OWE and the design of the facility will incorporate all feasible and reasonable noise mitigation including acoustic treatment of mechanical plant required as part of the proposal.

The assessment of construction noise and vibration has identified no material change to the assessment of the OWE approved for SSD 7348. Noise predictions indicate general compliance with the EPA's Interim Construction Noise Guideline (ICNG) with marginal exceedance of less than 5dB during out of hours evening and day periods and are not predicted to be particularly significant or intrusive.

The operational noise assessment has considered scenarios for both the fully developed OWE and staged development where Building 2B will initially be operating in isolation and then with Precinct 1 buildings prior to the completion of the remainder of the estate. The modelling indicates that with implementation of the proposed noise barrier design and acoustic treatment of mechanical plant, noise limits would be met for receivers to the west of the site with residual exceedance for receivers to the south. The residual exceedances are expected to occur at night under noise enhancing conditions. A noise agreement between the applicant and the nearest residential receiver to the south (N3) has been put in place and submitted to the Planning Secretary and an agreement is also currently being sought with the next closet receivers (N4 and N5). The Applicant continues to consult with these parties and has advised them about the current applications under assessment and this proposed application.

An amendment to the noise limits included is included as part of the Modification 3 to the Concept Proposal to incorporate limits that can realistically be achieved following the adoption of all feasible and reasonable mitigation. It is noted that Modification 2 to SSD 7348 proposed a variation to the $L_{A1,1min}$ night-time noise limits to accord with the provisions of the NSW Noise Policy for Industry with a level of $L_{A1,1min}$ 52 dBA proposed for all residential receivers.

Soil and water

The proposal will result in a net fill of 679,620 m^3 which is less than the initially approved by SSD 7348 (2,105,362 m^3). Pad levels will be reduced by 1.8 m from the approved SSD 7348 Concept Proposal.

The proposal will have no effect on the overall strategy to direct stormwater through the Estate Road 03 stormwater system. The overflow paths are unchanged from the Concept Proposal. The proposed Lot 2B storm water drainage will be directed into Bio-Retention Basin No. 3. The stormwater will then be discharged through a gross pollutant trap (GPT) before draining through a single point to the north west of the lot. The discharge point connects the Lot 2B stormwater to the Estate Road 03 stormwater system.

The risk of erosion or sedimentation will not change significantly due to the proposal from the assessment and strategy provided for approved SSD 7348.

A potable water strategy has been developed in order to implement a sustainable integrated approach to water cycle management to minimise demand of potable water supplies. Rainwater harvest tanks will be implemented to meet a minimum of 80 per cent of all non-potable water demand and will increase the water sustainability of the site through water recycling and limiting the usage of water mains.

Waste management

A waste management plan has been developed to identify all waste streams applicable to the proposal during construction and operation, as well as provide a management advice. The specific objectives 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 proposal comply with consent conditions and other relevant regulatory authorities

Biodiversity

The OWE is largely cleared of native vegetation with approximately 96% of the vegetated cover on the site cleared. The remaining 4% vegetated cover on the site is limited to small remnant patches and sparsely scattered trees through the paddocks. There are also areas of regenerating woodland connecting to larger patches of woodland to the west and south of the site.

The condition of vegetation across the OWE is degraded due to persistent impacts from grazing even within areas of native vegetation; the ground layer is frequently dominated by exotic species, and the shrub layer is almost absent. Some of the remnant native vegetation on the site has been assessed as being associated with Threatened Ecological Communities (TECs) listed under the Biodiversity Conservation Act and one Critically Endangered Ecological Community (CEEC) listed under the EPBC Act

The SSD 7348 approved the removal of approximately 4.41 hectares (ha) of remnant native vegetation and approximately 3.0 ha of regenerating or planted (derived) native woodland

The change in footprint associated with Modification 3 and Stage 2 Development have marginally impacted on vegetation clearing along the western boundary of Oakdale West. Vegetation that will be impacted is PCT Grey Box - Forest Red Gum grassy woodland on shale of the southern Cumberland Plain, Sydney Basin Bioregion (PCT 850). However there is no net change in clearing of the community as a result of the proposal and the biodiversity strategy remains in accordance with SSD 7348 and subsequent modifications

The proposal will not result in any increase in clearing nor affect the 172 ecosystem credits required to offset native vegetation removal. The proposal will not result in any additional impacts to that already approved by DoEE on the EPBC Act listed ecological community.

Air Quality

An air quality impact assessment was completed as part of the development of the Concept Proposal and Stage 1 of the OWE (SSD 7348). The assessment concluded that air quality impacts during construction of the OWE proposal could be adequately managed using best practice mitigation and management measures. The risk of any residual impacts after the implementation of mitigation measures was concluded to be low.

The magnitude of construction impacts is unlikely to change associated with the proposal and therefore the residual risk of dust emissions during construction associated with Modification 3 and the Stage 2 Development remains low.

Revisions to the estate road network and vehicle numbers have the greatest influence on air quality during operation of the facility. The initial assessment was based on significantly higher peak and daily traffic estimates than currently proposed for Stage 2. The distribution of emission sources within the OWE will be modified in comparison with the approved concept plan, however the change in downwind concentration attributed to the source location is considered negligible due to the separation distance between the modelled source and the receptors.

The predicted dispersion modelling results are well below guideline levels, and provide a very conservative assessment of the expected worst case air quality impacts at the sensitive receptor locations. Therefore there is not predicted to be a decrease in air quality as a result of the proposal.

Sustainability

A sustainability management plan has been prepared the proposal. Although the energy consumptions of equipment and warehouse operations will be specific to a tenant's application, the precincts and future buildings are assumed to meet where possible, the recommendations set out in the sustainability management plan.

This plan considers Section J of the Building Code of Australia (2016) and includes the following objectives:

- 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 proposal
- 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 the relevant development consent conditions
- to ensure the long term sustainability of resource use through more efficient and cost effective energy use practices for the life of the development.

By implementing all the energy efficiency measures described in the Sustainability Management Plan, the proposal is predicted to achieve a 51.4 per cent GHG emission reduction when compared with the reference building. By installing 4 star rated toilet facilities and the proposed rainwater harvesting facility, the proposal will reduce its potable water demand by approximately 33 per cent (comparable to a base building meeting Section J minimums).

Other matters

Other matters assessed as part of the EIS included

- Compliance with Building Code of Australia
- Flooding
- Heritage
- Fire safety
- Bushfire risk

Consideration of each aspect was considered acceptable and would not preclude the approval of the Stage 2 development.

Conclusion

The findings of this EIS and the appended technical reports have concluded the proposal can be accommodated within substantially the same environmental footprint as assessed within the Concept and Stage 1 SSDA 7348.

The proposed development generates the need for a positive assessment and determination of the project given:

- The proposed development will result in a land use that is consistent with the zoning of the land and contribute an employment generating use in line with strategic goals for the Western Sydney Employment Area.

- The proposal demonstrates consistency with the relevant environmental planning instruments including strategic planning policy, and State and local planning legislation, regulation and policies.
- The proposed modifications are substantially the same the Concept Proposal and Stage 1 consents issued by way of SSD 7348
- The proposal will operate within most of the operational bounds assessed and considered to be satisfactory as determined in the approval of the Stage 1 SSDA 7348.

It has been demonstrated that the proposed works will result in minimal environmental impacts, all of which can be managed or mitigated through the recommendations outlined in the sections of this report.

It is requested that the Minister approve the proposal subject to the mitigation measures outlined in this report and the accompanying technical studies being appropriately implemented.

Abbreviations and definitions

Abbreviation	Definition
ADG	Australian Dangerous Goods Code
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
Ambient noise	The all-encompassing noise associated within a given environment. It is the composite of sounds from many sources, both near and far.
AS	Australian Standard
AS/NZS	Australian and New Zealand Standard
Background noise	The underlying level of noise present in the ambient noise, excluding the noise source under investigation, when extraneous noise is removed. This is described using the LA90 descriptor.
bar	Barometric pressure
BC Act	*Biodiversity Conservation Act 2016* (NSW)
BCD	NSW Department of Planning Industry and Environment – Biodiversity Conservation Division
Biosecurity Act	*Biosecurity Act 2015* (NSW)
cm	Centimetre
°C	Degrees Celsius
DA	Development Application
dB	Decibel is the logarithmic unit used for expressing the sound pressure level or power level in acoustics.
dBA	Frequency weighting filter used to measure 'A-weighted' sound pressure levels, which conforms approximately to the human ear response, as our hearing is less sensitive at very low and very high frequencies.
dBC	Frequency weighting filter used to measure 'C-weighted' sound pressure levels, which is designed to be more response to low frequency noise
DECC	(former) NSW Department of Environment and Climate Change
DoEE	Department of Environment and Energy
DoP	Department of Planning
DPIE	NSW Department of Planning Industry and Environment
DPI	NSW Department of Primary Industries
EA	Environmental Assessment
EIS	Environmental Impact Statement
EP&A Act	*NSW Environmental Planning and Assessment Act, 1979*
EP&A Regulation	*NSW Environmental Planning and Assessment Regulation 2000*
EPA	Environmental Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act, 1999*
EPL	Environmental Protection License
ESD	Ecological Sustainable Development
GFA	Gross Floor Area
GHD	GHD Pty Ltd
GLA	Gross Lettable Area
GPT	Gross Pollutant Trap
Goodman	Goodman Property Services (Australia) Pty Ltd
Heritage Act	*Heritage Act 1997*
LGA	Local Government Area

Abbreviation	Definition
m^2	Square metres
MNES	Matters of National Environmental Significance
NPW Act	*National Parks and Wildlife Act 1974*
OWE	Oakdale West Estate
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SLR	Southern Link Road
SSD	State Significant Development
SRD	State and Regional Development
VPA	Voluntary Planning Agreement
WNSLR	Western North South Link Road
WSEA	Western Sydney Employment Area

1. Introduction

1.1 Overview

1.1.1 Background

Goodman Property Services (Australia) Pty Ltd (Goodman) received development consent on 13 September 2019 for the staged development of the Oakdale West Industrial Estate (OWE) under Division 4.7 of the *Environmental Planning and Assessment Act 1979* (NSW) (the EP&A Act). OWE comprises a warehousing and a distribution hub located at Kemps Creek in Western Sydney, NSW. The development consent (SSD 7348) was granted for a Concept Proposal for the staged development of the OWE and development of the first stage of OWE (the 'Stage 1 Development').

Goodman is now seeking consent for the Stage 2 Development (SSD 10397), which involves establishing a warehouse and distribution facility within a portion of Precinct 2 of the OWE. Modification 3 to SSD 7348 includes amendments to the Concept Proposal and Stage 1 Development which are required to facilitate the Stage 2 Development. Modification 3 has been be assessed concurrently with the Stage 2 Development.

Stage 2 Development and Modification 3 are collectively referred to as 'the proposal' for the purposes of this assessment. An overview of the proposal is provided in Section 1.2 and detailed description of the Stage 2 development and modifications to the Concept Proposal and Stage 1 Development are described in detail in Section 4.

GHD Pty Ltd (GHD) has been engaged by Goodman (the proponent) to prepare an environmental impact statement (EIS) to assess potential impacts arising from the proposal.

1.1.2 Project terminology

This proposal relates to the second stage of the OWE, known as the Stage 2 Development. The Stage 2 Development falls within part of the proposed Precinct 2 of the OWE. For the purpose of this report, the site will be referred to as the Stage 2 Development site.

- The Stage 2 Development refers to the proposal to be submitted for approval under SSD 10397
- Precinct 2 refers to a subdivision of the OWE as shown in Appendix S. Precinct 2 is used for marketing purposes to identify the location of the building. Precinct 2 is the next focus area for development at the estate, and will house Stage 2, 3 and 4 development.

1.1.3 Objectives

The objectives of the proposal are to:

- continue the development of the OWE as outlined in the approved Concept Proposal
- deliver infrastructure to lure investment into Western Sydney
- deliver 206,968 m^2 of gross floor area (GFA) and 200,668 m^2 of gross lettable area (GLA) for an automated warehouse and distribution centre
- support the employment market of Western Sydney by providing an additional 1,500 jobs to the area
- support future growth of Western Sydney.

1.1.4 Location

The proposal is located at 2 Aldington Road, Kemps Creek (Lot 11 in DP 1178389) in the Penrith City Council Local Government Area (LGA). The site is also located in the Western Sydney Employment Area (WSEA).The location is shown on Figure 1-1.

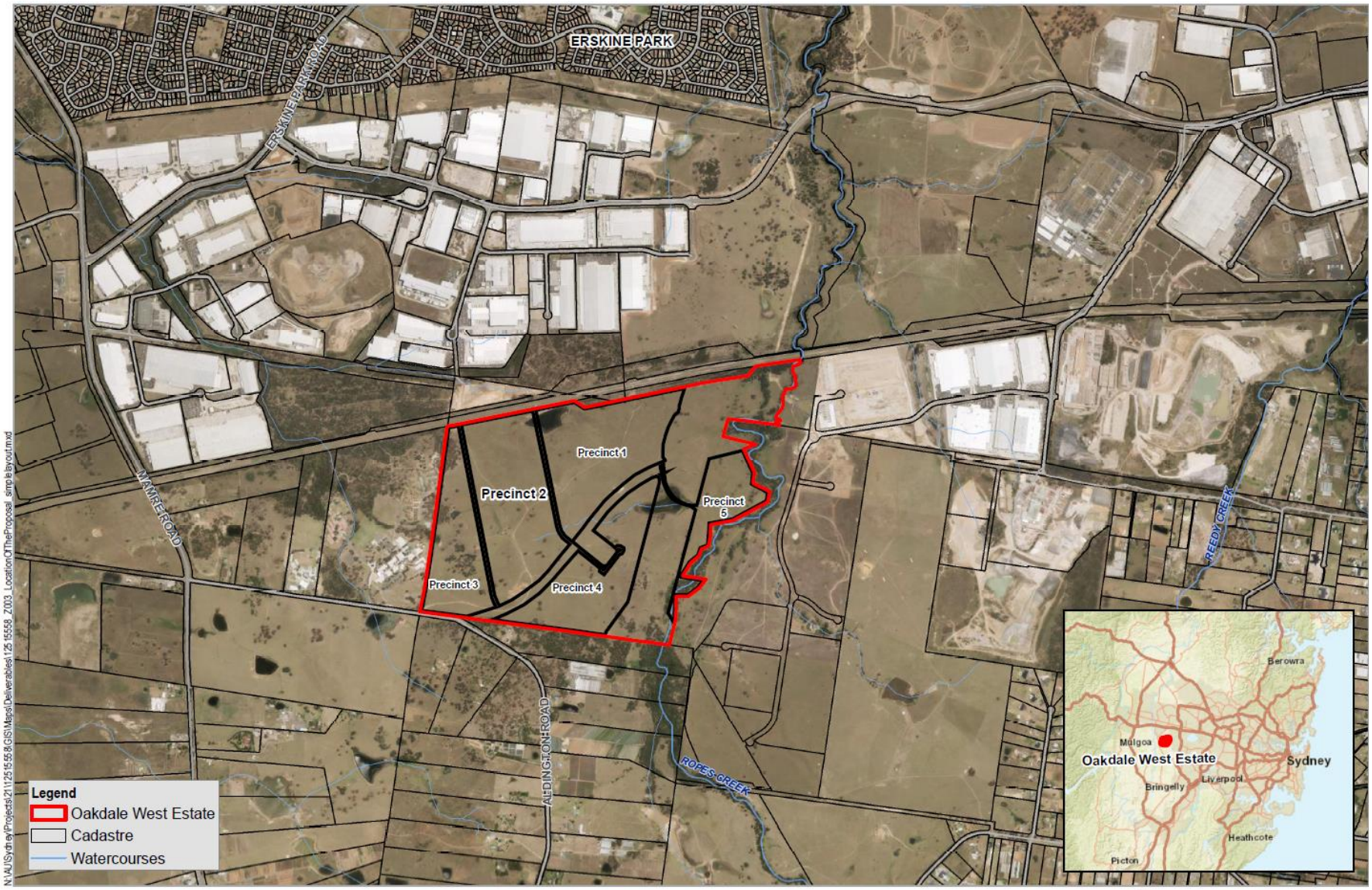


Figure 1.1
Location of the proposal

Figure 1-1 Location of the proposal

1.2 The proposal

A detailed description of the proposal is included in Section 4 of this EIS with an overview of each component of the proposal provided below.

1.2.1 Modification 3 (SSD 7348)

Concept Proposal Modification

To facilitate the Stage 2 Development, a modification to the approved Concept Proposal will be required. The modification would involve amendments to

- the OWE layout and staging
- precinct boundaries
- reconfiguration of the 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 28 m.

Specific conditions requiring amendment include B5, B9, B10, B11 and B18.

Stage 1 Modification

Modification 3 will also involve amendments to the approved Stage 1 Development, including;

- construction of estate road 03, roundabout, retaining wall, noise wall, basins and infrastructure
- subdivision of estate roads
- extension to the western noise wall
- change to pad levels, bulk earthworks and landscaping and construction hours.

1.2.2 Stage 2 Development (SSD 10397)

The Stage 2 Development (SSD 10397) will involve construction and operation a warehouse and distribution facility within part of Precinct 2 of the OWE. The Stage 2 Development will have a site area of 149,266 m^2, and comprise these key components:

- develop Lot 2B within Stage 2 of OWE ('the Stage 2 Development')
  - 24 hour / 7 days a week operation
  - approval for warehouse and distribution use
  - construction of Building 2B; a four level (ground + 3) warehouse and one level office building, with a footprint of 56,365 m^2
  - fit-out including racking and automation within the warehouse and office fit-out
  - car parking 1,127 vehicles and associated landscaping as well as spaces for trucks and motorcycles
  - construction hours from 3 am through to 10 pm for the period of earthworks and infrastructure works, building construction through to construction completion

  - construction access via Bakers Lane whilst the Western North South Link Road (WNSLR) is being constructed, and the use of Aldington Road in period of school peak periods (drop-off and pick-up).
- approval of subdivision of Lot 2B as shown in Appendix S

1.3 The proponent

Goodman is an Australian commercial and industrial property group that owns, develops and manages real estate around the world. Goodman acquired the OWE to develop as part of their broader Oakdale industrial estate. Goodman is the applicant of the proposal for the purposes of the development application.

The relevant postal address for Goodman is:

Goodman Property Services (Aust) Pty Ltd
17/60 Castlereagh Street
Sydney NSW 2000

Goodman is one of the world's largest industrial land owners and developers, with a significant portfolio of properties across Australia and worldwide. In the Sydney Metropolitan Area (SMA), Goodman owns and manages close to 200 industrial and commercial properties and therefore has a depth of experience and understanding of the key issues, challenges and drivers of employment lands and industrial development across the Sydney Region.

Within the WSEA itself, Goodman owns a number of industrial estates including the M7 Hub Estate, Westpark Industrial Estate, Interlink Industrial Estate, the Interchange Park Estate and the broader Oakdale Estate lands. The majority of this land is now developed, largely for warehousing and distribution uses with key customers in the WSEA including TOLL, DHL, Coca Cola and Woolworths.

1.4 Planning Framework

1.4.1 Approvals process

The principal environmental planning instrument applying to the OWE is the State Environmental Planning Policy (Western Sydney Employment Area) 2009 (WSEA SEPP). Under WSEA SEPP the site is zoned a combination of IN1 – General Industry and E2 – Environmental Protection. Within the IN1 zone, 'warehouse and distribution centres' are permissible with consent. Within the E2 zone, only limited development is permitted. The OWE Concept Proposal has responded to the zone boundaries on the site and the development is entirely permissible with consent.

In accordance with section 4.22 of the EP&A Act and Clause B1 in SSD 7348, each stage of the Concept Proposal (excluding Stage 1) is to be subject to future development applications and be consistent with SSD 7348 consent.

A new DA (SSD 10397) is therefore proposed for the Stage 2 development of the OWE. The proposal is permissible with development consent and is declared State significant development in accordance with Division 4.7 of the EP&A Act. As State significant development, the approval of the NSW Minister for Planning and Public Spaces is required and an EIS is required to support the application for approval.

A modification to the Concept Plan and Stage 1 Development approved as SSD 7348 will be required under section 4.55 of the EP&A Act to facilitate the Stage 2 development. As the modification is intrinsically linked to the Stage 2 development, a single assessment process has been undertaken as part of this EIS to assess potential impacts arising from the proposal as a whole.

A description of the approval requirements for the proposal, including relevant legislation and planning instruments, is provided in Section 5.

1.5 Purpose of this report

This EIS has been prepared to support the application for approval of the proposal in accordance with Part 4 of the EP&A Act. The EIS assesses potential impacts arising from the Stage 2 Development (SSD 10397) and Modification 3 to SSD 7348.

The EIS is supported by a range of technical studies and investigations (provided as appendices to the EIS) that provide more detailed information on potential impacts associated with the proposal.

The EIS and supporting studies have been prepared to address the requirements of the Secretary of the Department of Planning, Industry and Environment (the Secretary's environmental assessment requirements (SEARs)), dated 15 November 2019. A copy of the SEARs is provided in Appendix A, together with a table detailing the matters identified by the SEARs and where these are addressed in the EIS.

2. Site and surrounds

2.1 Western Sydney Employment Area

The OWE is located within the WSEA which is strategically identified as an economic growth area in western Sydney. The New South Wales Government established the WSEA to provide businesses in the region with land for industry and employment, including transport and logistics, warehousing and office space. The Stage 2 Development will provide a total of 1,500 operational jobs and 700 construction jobs in western Sydney. It is consistent with the strategic objectives of the WSEA SEPP and the Western City District Plan to deliver employment generating development in western Sydney, close to key transport links.

2.2 Oakdale Estates

The OWE site is owned by Goodman as part of a larger regional development industrial estate, 'Oakdale Industrial Estate', covering 421 ha within the WSEA (refer Table 2-1). Along with the broader Oakdale Industrial Estate, OWE is intended to be subdivided and leased as a regional warehousing and distribution hub. Goodman will continue to own, develop and manage the site to prepare it for use by industrial distribution companies. Figure 2-1 shows the location of OWE in relation to the surrounding landuse.

The Oakdale Industrial Estate commenced in 2009 with the Oakdale Central Estate Concept Approval (ref. MP08_0065) and Project Approval (ref. MP08_0066). The Oakdale South Estate was approved in October 2016 (SSDA 6917) and Oakdale East will soon issue DA. At full completion, the broader Oakdale Estate will have an end value in excess of $3 billion.

Oakdale Central has completed construction works and Oakdale South is nearing completion. Oakdale East will shortly commence the development process and will form part of the large industrial precinct. The progressive development of Goodman's Oakdale Industrial Estate will continue to meet the WSEA objective of employment opportunities through development of warehousing and distribution facilities in an environmentally sensitive and cost effective manner.

Table 2-1 Goodman's Oakdale estate

Estate	Area	Planning Approvals	Stage of Development
Oakdale Central	61 ha	• Concept Plan Approval 08_0065 (as modified) for employment park for warehousing, distribution and light industrial uses. • Project Approval MP08_0066 (as modified) for DHL Logistics Hub consisting of 2 warehousing and distribution buildings. • Project Approval SSD 6078 for development of remainder of the Oakdale Central Estate.	• Development complete
Oakdale South	117 ha	• SSDA ref. 6917 approved for Concept Proposal (as modified) and Stage 1 development. • SSDA ref. 16_7663 approval for Toyota Spares Parts Warehouse and Distribution Centre. • SSDA ref. 16_7719 approval for Sigma Pharmaceutical Warehouse and Distribution Facilities. • SSDA ref. 17_8209 approval for Costco.	• Infrastructure works completed, with several pads remaining for building construction

Estate	Area	Planning Approvals	Stage of Development
Oakdale West	154 ha	• SSD 7348 Concept Proposal (as modified) and Stage 1 Development. • SEARs issued for Stage 2 Development	• Stage 1 Development to commence imminently • Stage 2 Development to commence once approved
Oakdale East	88 ha	• VPA and DA currently being finalised • Site specific DCP being finalised to enable assessment of Das in accordance with SEPP WSEA.	• First stage of estate due to commence in early 2020

2.3 Site context

OWE is located in the Penrith LGA on land zoned IN1 General Industrial and E2 – Environmental Protection under the WSEA SEPP as shown on Figure 2-1. The site is located immediately south of the WaterNSW Sydney Warragamba pipelines. Other industrial developments are located to the east (Oakdale South and Central) and north (Erskine Park Industrial Estate). Immediately to the west are three schools (Emmaus Catholic College, Trinity Primary School, Mamre Anglican School) and a retirement village (Emmaus Retirement Village). To the south is one rural-residential property on Aldington Road. Ropes Creek runs along the eastern site boundary and a high voltage transmission line easement runs through the eastern part of the site.

The OWE site comprises predominantly cleared, rural land currently used for low intensity cattle grazing. Remnant native vegetation remains along the eastern site boundary along the riparian corridor, with some small remaining patches of vegetation in the north-west corner of the site.

Landform across the site is relatively uniform with undulating rises and alluvial flats and no significant topographic features. Notable site features include:

- the presence of waterways/drainage lines on the site including Ropes Creek on the eastern site boundary
- trees and remnant native vegetation along the creek line
- two large farm dams in the central and western areas of the site
- house and associated outbuildings in the south-west of the site.

The OWE comprises the progressive development of five precincts. The Stage 1 Development is about to commence and will initially comprise the following activities:

- preparatory works including estate wide bulk earthworks, lead-in services, retention and detention basins for the OWE
- service provisions for Precinct 1
- infrastructure provision including the proposed WNSLR
- construction of Estate Road 01.

Stage 2 is proposed to be located in the western area of OWE within Precinct 2 and is located directly to the north of the proposed Southern Link Road as shown on Figure 2-1.

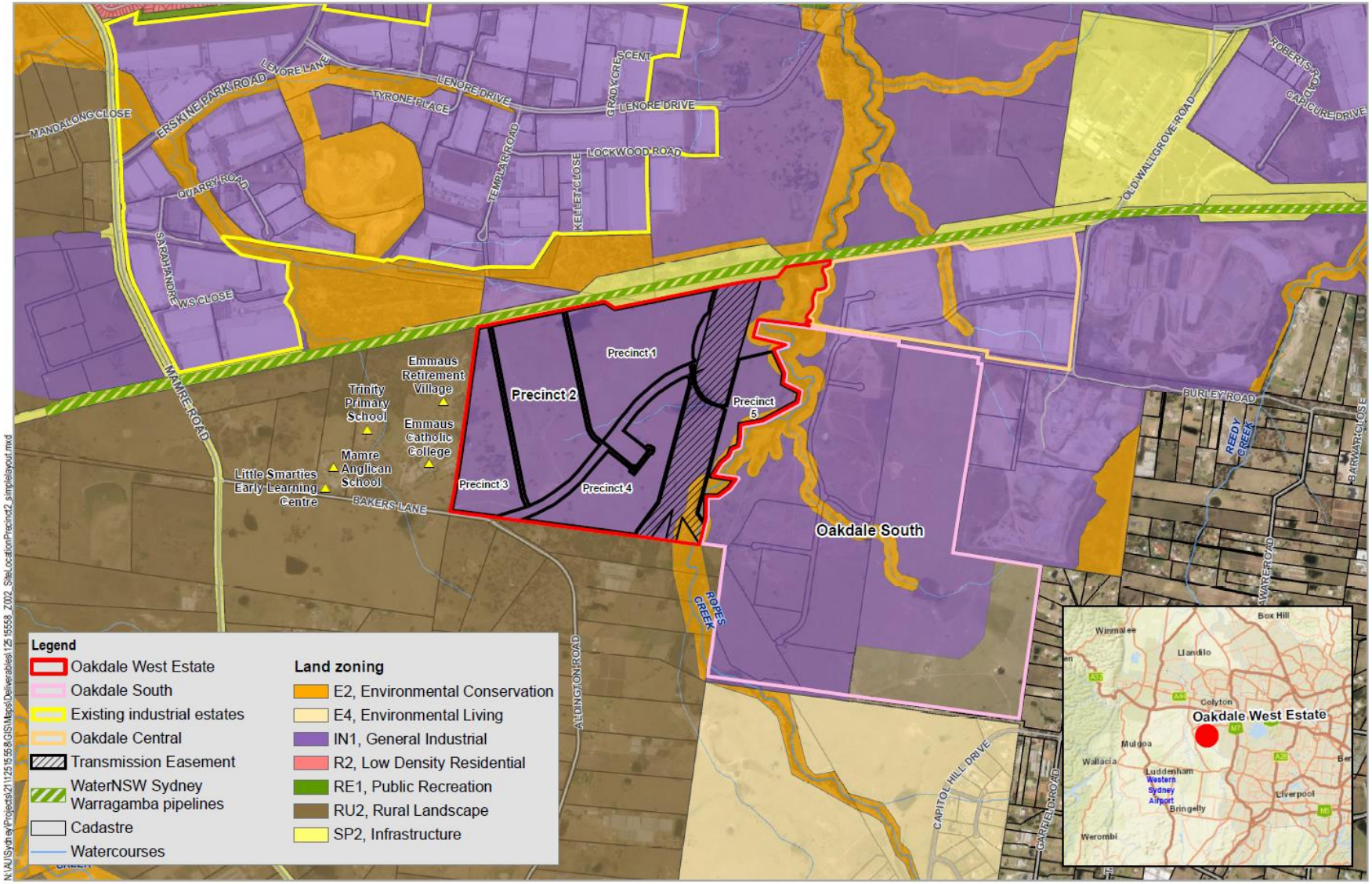


Figure 2.1
Site setting

Figure 2-1 Site setting

2.4 Site access

A road network will be established to service all precincts within the OWE and provide a link to the WSEA road network at the north-eastern corner of the site. This WSEA road network would in turn link to the regional road network in Western Sydney.

The proposed WNSLR provides direct access to the OWE from Lenore Drive, Erskine Park. The WNSLR is a 1.3km long dual carriageway regional classified road that is being completed by Goodman as part of the initial SSD 7348 application. A Voluntary Planning Agreement has been entered into for the OWE including works in kind for the construction of the WNSLR.

The Southern Link Road is a proposed future road to be constructed by NSW Roads and Maritime Services (Roads and Maritime) in the near term. This road will provide access from Mamre Road, Kemps Creek to Old Wallgrove Road, Eastern Creek.

Goodman has designed the masterplan of Oakdale West such that access to the OWE is via the WNSLR, without reliance on the SLR. Estate Road 01 is approved to be constructed under Stage 1 Development and Estate Road 03 will form part of the proposed modification to the Stage 1 Development. The design of the internal road network has been developed to service the proposed modification to the masterplan presented as part of the modification to the Concept Proposal.

3. Need for the proposal

3.1 The approved project

The OWE was approved as SSD 7348 by the Executive Director, Compliance Industry and Key Sites, under delegation from the Minister for Planning and Public Spaces on 13 September 2019. The approved project involves the staged development of an industrial warehouse estate within the WSEA. The site is located on 154.12 ha, approximately 93.39 ha of developable area.

The approved SSD included a Concept Proposal and Stage 1 Development. The Concept Proposal establishes the conceptual layout for future development within five precincts, which broadly correspond to the five stages of development proposed at OWE. The Concept Proposal for OWE includes:

- development of a regional warehousing and distribution hub with 24 hour/day, 7 day/week operation
- indicative site/lot layout, site access, internal road network, site levels, drainage, building envelopes, parking and landscaping
- development controls and maximum estate wide GLA
- biodiversity offsets.

The Stage 1 Development was also approved under SSD 7348 to include the following:

- 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 1 development, including construction, fit out and use of warehouse buildings 1A, 1B and 1C within the Precinct
- detailed earthworks, on lot stormwater, services and utility infrastructure
- construction of a new regional road known as the WNSLR connecting to Lenore Lane to provide primary access to the site
- estate road network construction, including Estate Road 01 and 02
- Western boundary landscaping.

Construction of the Stage 1 Development is due to commence December 2019 with estate wide bulk earthworks and provision of approved infrastructure, including the WNSLR.

An application to modify SSD 7348 to account for minor civil and stormwater design changes and modification to the biodiversity strategy was recently submitted, as Modification 1 to SSD 7348, to the DPIE.

Detailed design has also commenced for a building in Precinct 1 and an application to modify aspects of the Stage 1 development including building height and layout and associated minor modifications to the civil design to facilitate these changes has been prepared. These changes are known as Modification 2 to SSD 7348.

3.2 Need for the development

3.2.1 Stage 2 development

The OWE is a staged development intended to become a significant complex of warehousing and distribution facilities forming part of a larger, integrated network operated by Goodman in the region. The OWE is consistent with the overarching aim for the broader Oakdale Estate to create high quality warehouse and logistics estate which maximises the employment generating potential of the land to create an efficient, attractive and high quality employment zone for Western Sydney.

The Stage 2 Development forms the next phase development activity at OWE and Goodman has been progressing with the procurement of tenants for the precinct. To respond to a unique tenant request, a large land holding is required to accommodate the size and configuration of the proposed development.

The proposed property includes one large warehouse and office facility spanning 56,365 m^2 of building footprint. The building will include four levels (ground + 3) to a height of 28 m (to top of plant) and 25.95 m (26 m) (to top of ridge line) and a small mezzanine structure on ground level that provides a total GLA of 200,668 m^2 and GFA of 206,968 m^2.

The development will also require large areas of concrete hardstand and truck parking, substantial car parking to support the creation of jobs within the area. The design will be completed with significant landscape detail.

This significant warehouse and distribution hub is required to be located in an area that is well serviced by infrastructure and can be delivered to a timeframe required by the tenant to meet market demand. The development will provide ongoing serviceability of last mile distribution of products to the Sydney customer base.

3.2.2 Concept Proposal Modification

To enable the progression of the Stage 2 Development, amendments to the Concept Proposal will be required as part of Modification 3 to SSD 7348.

A fundamental consideration in the formulation of the OWE Concept Proposal was to create large development lots which provide for the flexibility to suit the broad range of end user requirements as well as maximising the potential to accommodate larger footprint facilities in keeping with current best practice for efficiency of warehouse and distribution supply chain operations.

The Concept Proposal allows for flexibility in the staging and timing of development to respond to opportunistic efficiencies, infrastructure delivery, and market demand. Development stages will therefore not necessarily correspond to the numerical order of each precinct approved within the Concept Proposal layout.

The proposed modification amends the indicative building layout presented in the Concept Proposal, which comprised a series of smaller warehouses with an approved height of 15 m (to top of plant) and 13.7 m (to top of ridge line).

The proposed Precinct 2 building layout includes four buildings, one of which will form SSD 10397 (Lot 2B) comprising 206,968 m^2 GFA and up to 28 m in height (to top of plant). This alteration is required to satisfy a client's operational requirements for a specific building design allowing for innovation in warehouse and distribution processes. The design of the building proposed for Lot 2B requires a large land holding to accommodate the size and configuration of the proposed facility.

The height and dimensions of the warehouse are based on the optimised design of the future tenant. The proposed facility will adopt automated processes to deliver significant productivity improvements, including higher standards of safety for the team members, a reduction in the kilometres travelled by supplier and store transport fleets and will lead to better on-shelf availability in store.

Automation of the warehouse will offer several benefits for a sustainable supply chain as required by the future tenant and offer a smaller physical footprint for the equivalent volume of storage within a conventional warehouse.

The configuration of the proposed warehouse is based upon a relatively uniform design for the customer's facilities worldwide and triggers the necessary modifications to the Concept Proposal described in detail in section 4.1. The Concept Proposal will remain substantially in accordance with the development as described in the original development application. The OWE will continue to be developed as regional warehousing and distribution hub and the indicative site layout presented in the Concept Proposal has been amended to respond to specific customer requirements. The layout presented in the Concept Proposal was indicative and was always required to confirmed in subsequent Das for the staged development of the OWE.

3.2.3 Stage 1 Development Modification

The approved Stage 1 Development includes a number of works that will impact the ability of Stage 2 Development implemented. The amendments primarily relate to estate wide works approved to be developed as part of the Stage 1 development relating to infrastructure provision (including internal roads), earthworks and retaining walls, drainage design and landscaping in road reserves and are described in detail in Section 4.2.

The Stage 1 Development will remain substantially in accordance with the development described in the original development application with modifications required to progress the delivery of the Stage 2 Development.

4. Description of the proposal

To facilitate implementation of the Stage 2 Development SSD 10397, modifications to the approved layout for the Concept Proposal approved by SSD 7348 is required.

This section initially describes the required amendments to the Concept Proposal to allow implementation of the Stage 2 Development. A detailed description of each component of the warehouse and distribution facility proposed as part of the Stage 2 Development is subsequently provided.

4.1 Modification to the approved Concept Proposal

4.1.1 Overview

The Concept Proposal will remain substantially in accordance with the development as described in the original development application. The OWE will continue to be developed as regional warehousing and distribution hub and the indicative site layout presented in the Concept Proposal has been amended to respond to customer design requirements.

Alterations proposed to the approved Concept Proposal include:

- rationalisation and re-sizing of buildings in Precinct 2 and 3 to accommodate future customers
- reconfiguration of estate road network, particularly Estate Road 3 and the inclusion of a round-about at the intersection of Estate Road 1 and 3
- change to the pad levels across Precinct 2 and Precinct 3
- change to the retaining wall designs across Precinct 2 and Precinct 3 to accommodate the pad level changes
- re-design of the noise wall to the north-west corner of the estate
- re-design of basin 2 and 3
- updated civil and servicing strategy
- update to the staging plan and precinct numbering
- change in the GLA
- increase in building height for Building 2B only
- change to construction hours for 2B
- change to noise criteria for receivers to the south of OWE

The development remains substantially in accordance with the approved concept, with a summary of key amendments to the Concept Proposal in SSD 7348 are outlined in Table 4-1.

Further details of departures from the approved development are presented in the following sections.

Table 4-1 Proposed amendments to Concept Proposal

Development described in EIS	Proposed amendments
Staging plan: The approved Concept Proposal recognised Stage 2 Development (Precinct 2) as the most western precinct and Precinct 3 directly to its east.	Stage 2 (the location of Stage 2 Development) under the approved Concept proposal was referred to as Stage 3. For the purposes of this report and future developments it will be referred to as Stage 2.
Subdivision: The approved Concept Proposal recognised Stage 2 Development (Precinct 2) as the most western precinct and Precinct 3 directly to its east.	Precinct 2 (the location of Stage 2 Developments) under the approved Concept proposal was referred to as Precinct 3. For the purposes of this report and future developments it will be referred to as Precinct 2. Approval for subdivision of Lot 2B is also required and associated roads.
Development Precincts: Precinct 2 (previously Precinct 3) comprised an area of 18.5 ha and proposed four building pads serviced by Estate Roads 03 and 05.	The proposed modification includes the change in layout of Precinct 2 over an area 26.83 ha and includes four building pads serviced by Estate Roads 03 and 05. Building 2B includes the large warehouse development subject to SSD 10397.
Estate Roads: Precinct 2 was accessed by Estate Roads 03 and 05.	The proposed modification includes the realignment of Estate Road 03, the addition of a round-a-bout connecting Estate Road 01 and Estate Road 03. Estate Road 04 and 05/06 are removed.

4.1.2 Staging plan

Approved plan

The approved staging plan under SSD 7348 allowed for stages to be completed in numerical order, one through five. The approved Concept Proposal recognised Stage 2 Development (Precinct 2) as the most western precinct and Precinct 3 directly to its east as shown on Figure 4-1.

What is now proposed?

The proposed change redefines the boundaries of Precinct 2 and 3 whilst also changing the precinct names.

The approved Precinct 3 is extended north is renamed Precinct 2.

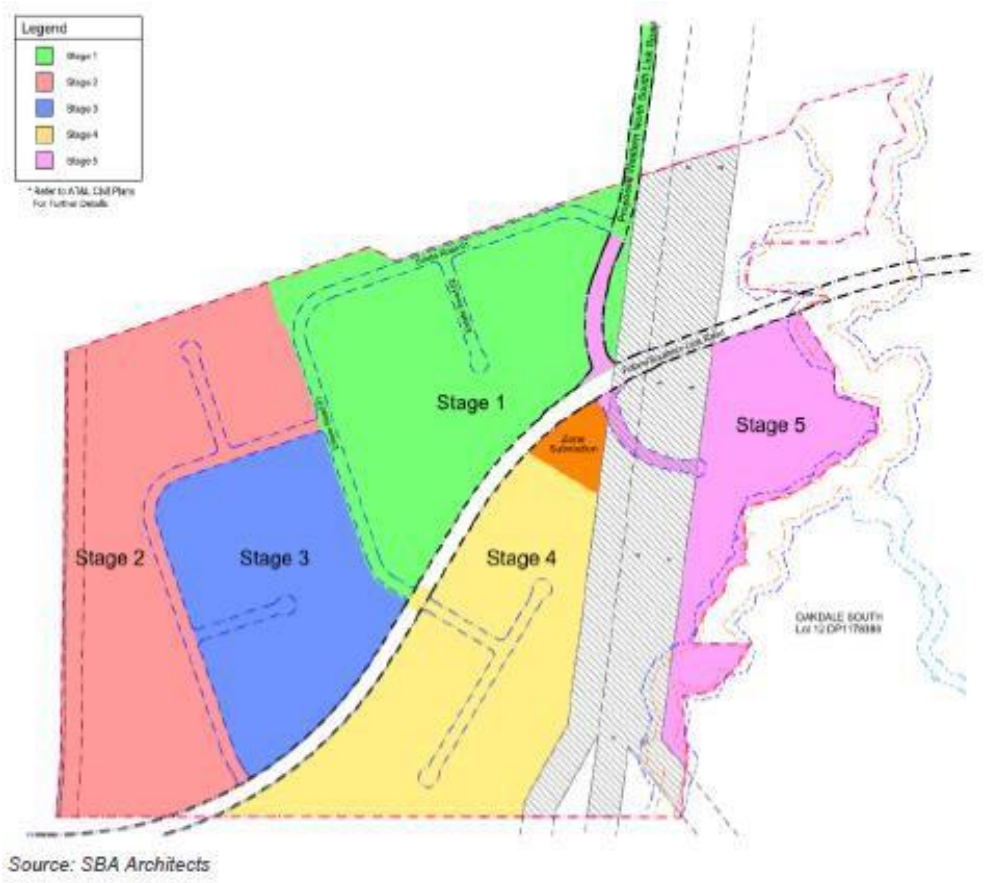
The resultant Precinct to the west, approved as Precinct 2, is renamed Precinct 3.

Refer to Figure 4-2 for the proposed precinct plan.

Reason for the change

The approved staging of development in the Oakdale West Estate Concept Proposal has been revised to allow for the construction and operation of Precinct 2 prior to Precinct 3. Operation of Precinct 2 is required earlier than initially anticipated based upon customer demand for large automated warehouse configuration.

The redefined staging plan remains substantially in accordance with the approved Concept Proposal with the proposed staging and layout modified to meet customer requirements for the Stage 2 DA.



Source: SBA Architects

Figure 4-1 Approved Precinct Plan under Concept Proposal

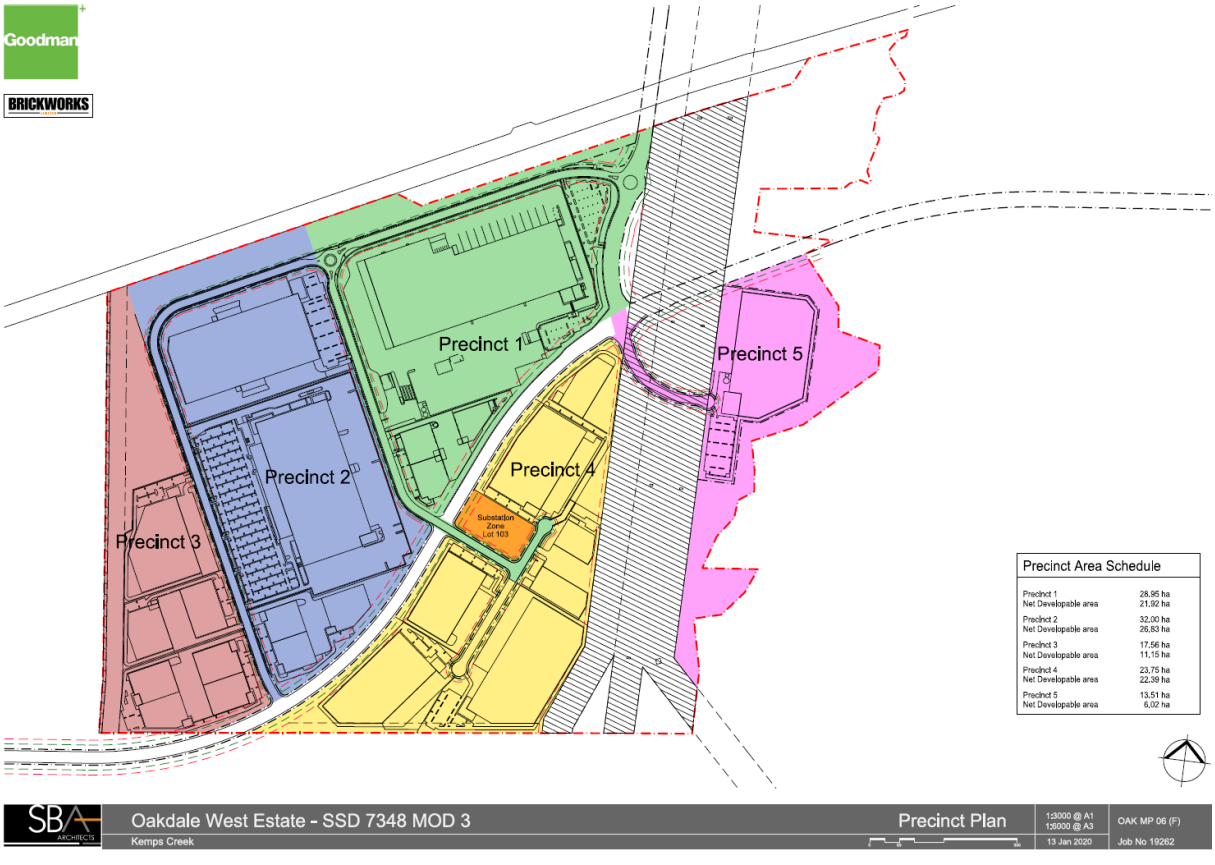


Figure 4-2 Proposed Precinct Plan

4.1.3 Change to subdivision layout

Approved layout and urban design

The approved layout under the Concept Proposal allowed for staged subdivision of the OWE, alongside infrastructure and services delivery (see Appendix I of the initial EIS). The indicative masterplan layout in the Concept Proposal comprised five staged developments corresponding to five precincts, shown in Figure 4-2. In addition to the five development precincts (six development lots), the Concept Proposal shows four biodiversity offset lots, six Estate Road lots, one Regional Road lot, seven detention basin lots and one services lot to be constructed.

Precinct 2 (previously Precinct 3) had an area of 18.49 ha and proposed four building pads serviced by Estate Roads 03 and 05. Refer to Section 3 the approved EIS for detailed description of the approved layout.

What is now proposed?

The preferred layout results from the restructure of proposed building pads within Precincts 2 and Precinct 3. The proposed Concept Proposal masterplan (shown in Figure 4-4) will revise the Precinct 2 building layout and include Building 2B, a large warehouse and distribution facility that is the subject of SSD 10397. Lot 2B will require approval for subdivision under the Stage 2 DA. The proposed subdivision layout plan is shown in Appendix S.

The configuration of Building 2B will require changes to the proposed layout of Precinct 2 to enable the Stage 2 development. This will result in an increase in GLA, maximum building height and building envelopes under the proposed OWE development controls.

The proposed changes to the approved site layout are summarised in Table 4-2.

Table 4-2 Approved site and proposed site

Oakdale West Estate	Approved	Proposed	Change
Maximum building height	15 m	28 m Building 2B; all other buildings in precinct 15 m (note: 39 m Builiding 1A proposed as part of Modification 2)	+ 13 m for Building 2B only (note building height within proposed modification to concept proposal for Building 1A as part of Modification 2
Site area (ha)	154.12 ha	154.12 ha	No Change
Total GLA (m^2)	476,000	557,063	+81,063
Total warehouse(m^2)	453,369	527,457	+74,088
Total office (m^2)	23,555	23,178	-377
Site Coverage (exc. awning)	60.3% Maximum of 65%	60.6% Maximum of 65%	0.3%

Figure 4-3 Approved OWE Masterplan

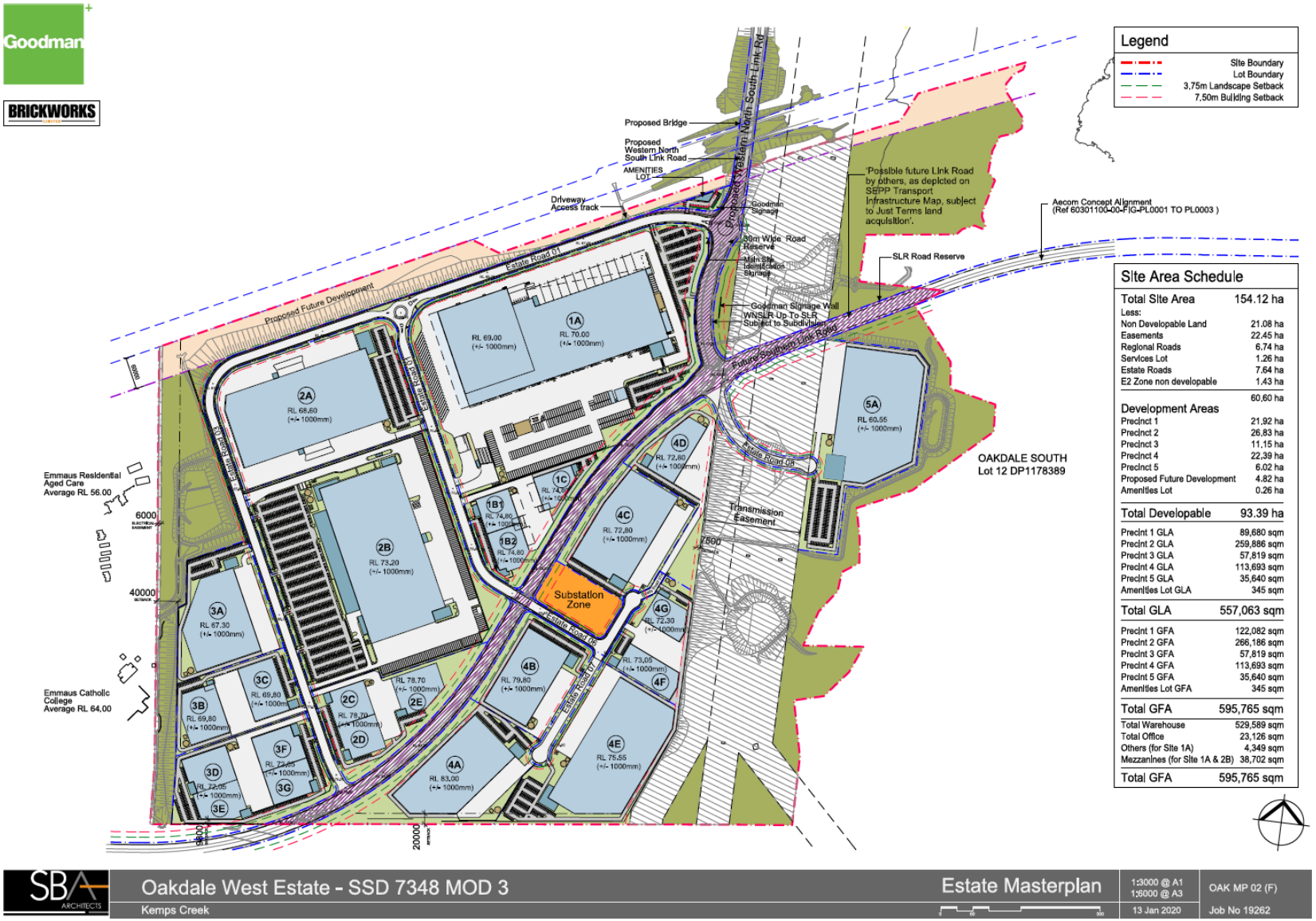


Figure 4-4 Proposed OWE Masterplan

Reason for the change

Goodman has been progressing the procurement of customers for the OWE. In consultation with the future tenants, some design changes have been proposed to enable the operation of a specialist automated distribution facility. The proposed changes have the following advantages:

- enables the refinement of industrial design to better meet the needs of customers
- supports innovation in warehousing and the distribution processes.

The proposed layout aims to improve both the operational efficiency for the customers and accommodate their required facilities. The configuration of the proposed warehouse is based upon a relatively uniform design for the customer's facilities worldwide and the additional height is required to implement automated processes.

It is noted that the proposed increase in building height to 28 metres is restricted to Building 2B and all other buildings within the precinct are proposed to remain with a maximum height of 15m. The modification to the concept proposal is also within the height proposed for Building 1A which is proposed to be amended to a maximum height of 39 m as part of Modification 2 to SSD 7348.

The OWE will continue to be developed as regional warehousing and distribution hub and the indicative site layout presented in the Concept Proposal has been amended to respond to customer requirements for the configuration of Precinct 2.

4.2 Modification to the Stage 1 Development

4.2.1 Overview

Modification to the approved Stage 1 development (consent under SSD 7348) will include the following:

- relocation and construction of Estate Road 3 to the north of Precinct 2 including the construction of a round-about at the intersection of Estate Road 1 and 3
- construction of associated retaining walls to support Estate Road 3
- construction of the nosie wall to the north-west corner of the estate
- subdivision of Estate Road 03 and Lot 2B
- change to the pad levels across Precinct 2 and Precinct 3 and bulk-earthworks to that effect
- construction of the retaining walls at Precinct 2 and Precinct 3 to accommodate the pad level changes
- construction of basins and changes to drainage and infrastructure
- landscaping in road reserve
- night work for earthworks and infrastructure services

4.2.2 Change to estate road network

Approved layout

The approved Concept Proposal and Stage 1 Development is programmed to construct a staged internal road infrastructure that will provide connection to the WNSLR. The approved estate road network saw access provided to Precinct 2 via Estate Road 03. The approved estate road network is provided in Figure 4-3.

What is now proposed?

Modification 3 proposes a revision of estate road network from the approved Concept Proposal. This will include the realignment and approval for construction of Estate Road 03 as part of the Stage 1 Development including a new roundabout connecting Estate Road 01 and Estate Road 03 as shown on Figure 4-4.

Only the road network in the north east of the OWE is proposed to change as a result of revised subdivision layout. Estate Road 03 will be redirected to follow the northern boundary of the OWE rather than intersecting Precinct 2.

The proposed estate road network will still be primarily accessed via Estate Road 01 and is consistent with typical road sections approved in the Concept Proposal, Oakdale Central and Oakdale South Estate. The proposed characteristics of the estate road network reflects the approved characteristics;

- a road reserve of 23.0 metres
- a 15.5 metres carriageway incorporating two 3.5 metres wide central traffic lanes and two, 4.25 metres wide kerbside traffic lanes
- a verge ranging from 3.5 metres to 4.0 metres wide, incorporating a shared path in certain locations.

Upon completion, the estate road network would be dedicated to Council.

Reason for the change

The approved estate road network was not viable for the proposed building 2B revisions and therefore needed to be amended. The proposed design can now effectively accommodate Lot 2B users.

Estate Road 3 incorporates a new roundabout at the intersection with Estate Road 1 and is required to be constructed concurrently with Estate Road 1 as part of the Stage 1 development.

4.2.3 Civil and services strategy

Approved strategy

Section 3.4.3 of the initial EIS provides a detailed description of the approved civil strategy, it is also summarised in Table 11 of that report.

The approved civil strategy will involve site preparation, earth works, road infrastructure, stormwater infrastructure utilities and services and environmental protection works.

Retaining walls are approved to be constructed alongside Estate Road 04 on Lot 2A / 2B to a height of 8.3 metres (these references must be used in conjunction with the approved Masterplan shown in Figure 4-3).

Services were designed to predominantly follow the internal road network

What is now proposed?

A detailed analysis of the proposed civil strategy is provided in Appendix J.

Proposed change to earth works include an increase in the cut and fill strategy from 632,387 m^3 under Modification 2 to 679,620 m^3. Modification 3 civil and services changes are proposed from Modification 2 which is currently under DPIE assessment.

Retaining walls within OWE have been repositioned and redesigned as part of Modification 3, as shown in Figure 4-6.

Goodman is seeking approval as part of the Stage 1 Modification for change to the final levels of Precinct 2 and 3 pad levels. These works will be completed during night time construction hours as detailed in section 4.3.7. The pad levels are shown in Table 4-3.

Table 4-3 Changes to approved pad levels for Modification 3

	Proposed building numbers					
	Building 2A G/F Level	Building 2B G/F Level	Building 2C, 2D & 2E G/F Level	Building 3A G/F Level	Building 3B & 3C G/F Level	Building 3D, 3E, 3F & 3G G/F Level
2019 approved masterplan pad levels *(see* Figure 4-3*)*	RL 64.500	RL 75.000 (2019 approved Building 3A, 3B)	RL 75.000 (2019 approved 3A, 3B)	RL 66.800 (2019 approved 2E)	RL 67.800	RL 72.050
MOD 3 proposed masterplan pad levels *(see* Figure 4-4*)*	RL 68.600	RL 73.200	RL 78.700	RL 67.300	RL 69.800	RL 72.050
Change in pad levels	Ground floor has been increased 4.1 m	Ground floor has been reduced 1.8 m	Ground floor has been increased 3.7 m	Ground floor has been increased 0.5 m	Ground floor has been reduced 2.0 m	Ground floor remains unchanged

NOTE: Building 2B previously Building 3A, 3B. Building 2C, 2D & 2E previously Building 3A, 3B. Building 3A previously Building 2E.

Modification to services include:

- Sydney Water – water and wastewater services will follow the new Estate Road 03
- Communications - communication conduits network line will be extended along WNSLR to OWE. Pit and pipe lines will be realigned with the estate road network
- Electrical - no change to the approved electrical design
- There is no change to the approved SSD 7348 easements throughout the site and therefore impacts will be consistent.
- No change to the infrastructure surrounding the OWE site is needed. Internal reticulation is required for networks above to be able to service the lots effectively.

Reason for the change

The civil strategy, including site preparation, earth works, road infrastructure, stormwater infrastructure utilities and services and environmental protection works needed to be amended to provide effective infrastructure to Lot 2B and the associated redesign of OWE.

4.2.4 Change to basin design

Approved layout

The approved stormwater management system is based around six stormwater catchment areas within the OWE draining to six, precinct-based, combined stormwater detention and bio-retention basins, with final discharge into Ropes Creek. With regard to the WNSLR, stormwater drainage is based around two catchments, serviced by two detention basins draining to Ropes Creek.

What is now proposed?

The Stormwater Catchment Plan, shown in Figure 7-20, will outline flows paths to Bio-Retention basins for each catchment. As a result of Modification 3 Catchments 2 and 3 have been redesigned, ensuing the following:

- Catchment 2 area increase from 4.85 ha to 9.93 ha (outflow path will continue to be the same)
- Catchment 3 area reduced from 38.31 ha to 32.51 ha (outflow path will continue to be the same)
- The basins will constructed as part of the Stage 1 development.

Reason for the change

Changes to the stormwater management including basin design is due to the need to incorporate building 2B and associated modifications.

4.2.5 Change to the approved noise wall

Approved layout

Noise barriers were approved as a mitigation measure for sensitive receivers adjacent to the OWE. The approved SSD 7348 design incorporated 2 m and 5 m high noise walls at the south and west boundary of the estate. At the northern end of the approved western noise wall, there is a section around 60 m in length which has a height of 2 m. This 2 m high section had been raised to a height of 5 m for Modification 2. This 5 m high barrier has also been extended 30 m in length to the north for Modification 2. Figure 4-5 shows the proposed Modification 2 lengthened and heighten western noise wall in the same location as the approved SSD 7348. There is no change to the southern noise wall proposed under Modification 2. This modification is currently under consideration by DPIE.

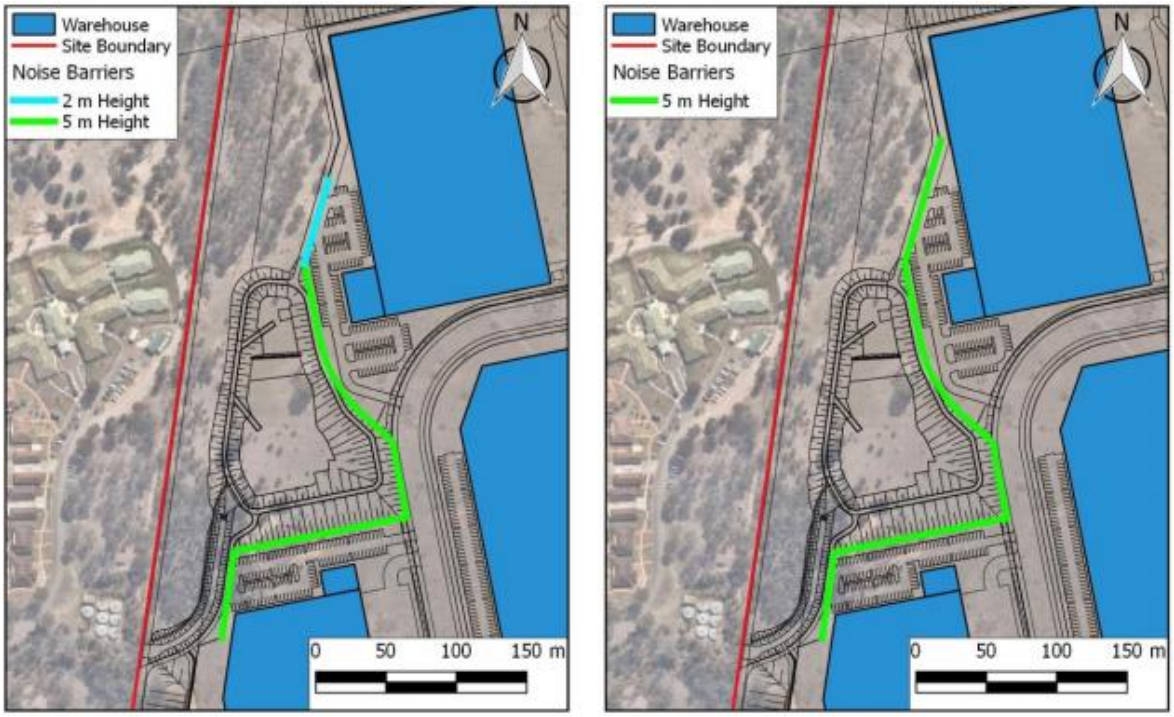


Figure 4-5 Proposed changes to western noise wall

**Left – Approved SSD 7348 design Right – proposed Modification 2 design*

What is now proposed?

The layout of the noise wall has been updated to provide optimum mitigation for noise sensitive receptors based upon the revised master plan for OWE, see Figure 7-19.

The western noise wall will be moved east of basin No. 2 due to changes in the civil design. The length and height dimensions will increase as a result of the on-site road layout changes in Modification 3 and on-site vehicle movements. The northern extent of the western noise wall will be lengthen at a height of 5 m and southern extent will be lengthen at a height of 3 m to provide effective noise attenuation. A detailed description is provided in Section 7.5.2 and Figure 7-19.

There will be no changes to the southern noise wall under Modification 3.

The change to design will fall under the modification to the concept proposal however construction of the noise walls will form part of modification to the Stage 1 Development.

The noise wall to the west will be constructed at commencement of the construction works under this application.

Reason for the change

The noise walls need to be redesigned due to the modifications to the masterplan layout. The changes to the design of the noise walls will improve noise reduction effectiveness to sensitive receivers.

4.2.6 Construction access

Approval to bring building materials to the site via Bakers Lane (per existing approval) and Aldington Road will be required during construction. This is because construction will commence before the completion of WNSLR. Bakers Lane will be the primary transport road unless the use occurs within peak school drop off or pick up periods, at which point Aldington Road will be used. Bakers Lane or Aldington Road will not be used for the transportation of fill

into the estate. Aldington Road will only be used during the construction of Stage 2 Developments.

An access road is shown in Figure 4-4 along the western boundary of Lot 2C, 2D and 2E. This access road will be temporary and is proposed to provide construction access to Lot 2B for the on-lot construction contractor, while the surrounding civil works are completed. This temporary access road would be removed at a later stage, likely when Lot 2C/2D are developed.

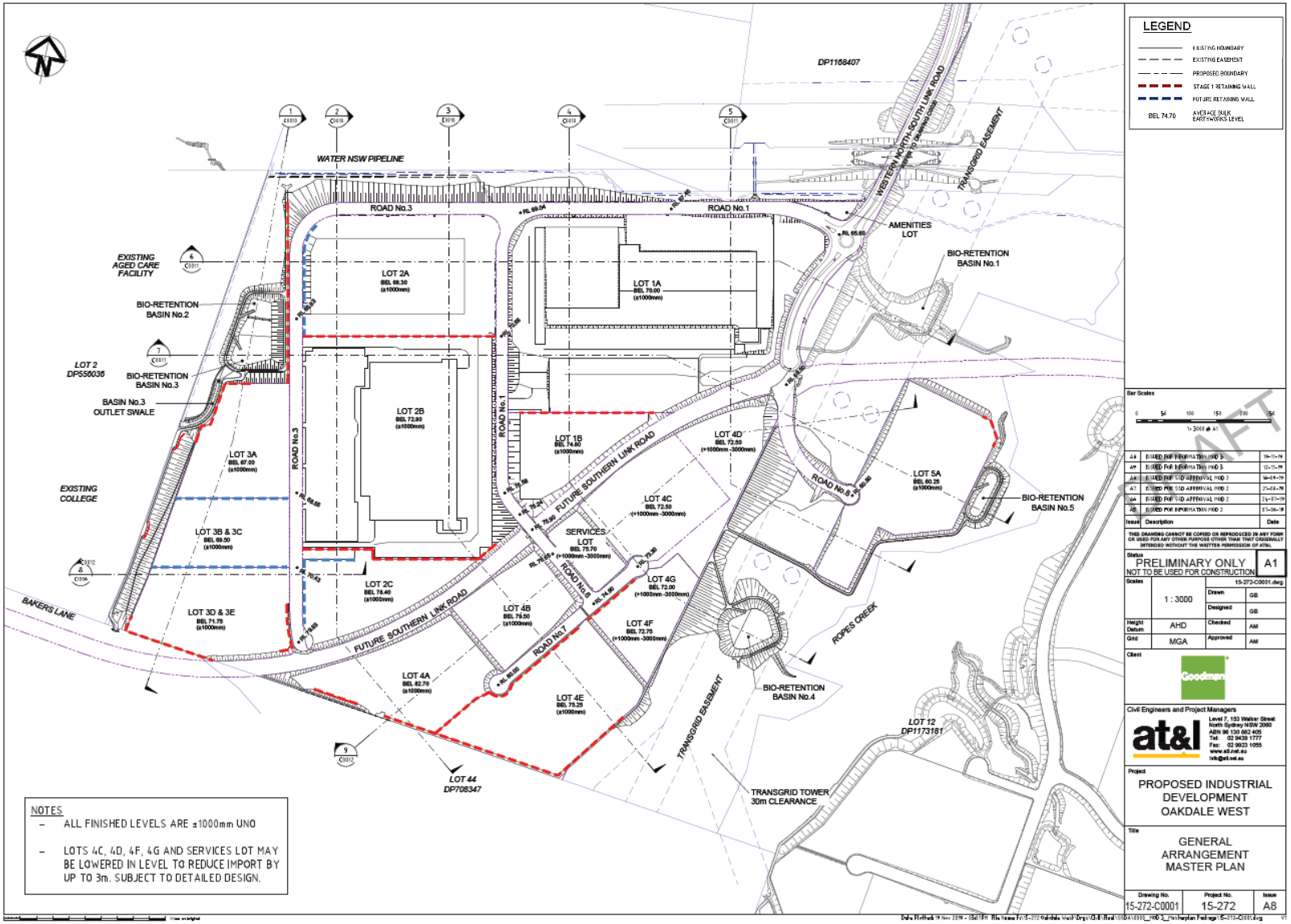


Figure 4-6 Proposed Retaining Wall layout

4.3 Stage 2 Development

4.3.1 Overview

The Stage 2 Development of the OWE includes the development of part of Precinct 2 comprising:

- construction, fit-out, and use approval of Building 2B to a height of 28 m
- 24 hour / 7 days a week operation
- warehouse and distribution use
- racking, automation, and warehouse fit-out across four levels
- single level office and fit-out
- signage
- subdivision of Lot 2B
- landscaping
- construction hours for building construction from 3 am to 10 pm seven days a week
- staged handover of Building 2B to allow certain levels to be occupied and operational prior to completion of others
- importation of building materials via Bakers lane, as primary access, and Aldington Road in school drop-off and pick-up periods.

The proposed development would accommodate a warehouse and an ancillary office. The purpose of the development is for warehousing storage and distribution with office space and parking. The Stage 2 Development will be designed to allow for early occupation of the ground level and level one prior to completion of construction and fit out for the upper levels.

4.3.2 Building 2B

The warehouse will consist of four levels (ground + 3) and an ancillary one level office space. The top three levels of the warehouse will be fitted to facilitate racking and automation. The ground floor will include a mezzanine, conveyors, and loading areas for inbound / outbound movements.

The warehouse building is serviced by central hardstand areas for loading and manoeuvring, a separate car park and landscaped perimeters. The building is designed to address street frontages with office area and primary entrances oriented toward key access roads (Estate Road 03). Building materials are similar to that of what has been approved as part of the Precinct 1 building package and as proposed to be modified by Modification 2.

The proposed development schedule is:

- site area 149,266 m2
- warehouse footprint (ground floor) 50,873 m^2
- office footprint spanning up to 5,492 m^2
- total building footprint 56,365 m^2
- 28 m building height
- total GFA 206,968 m^2
- total GLA 200,668 m^2.

The indicative layout and elevation plans for the Stage 2 Development are shown in Figure 4-7, Figure 4-9 and Figure 4-9. Detailed plans are included in Appendix C.

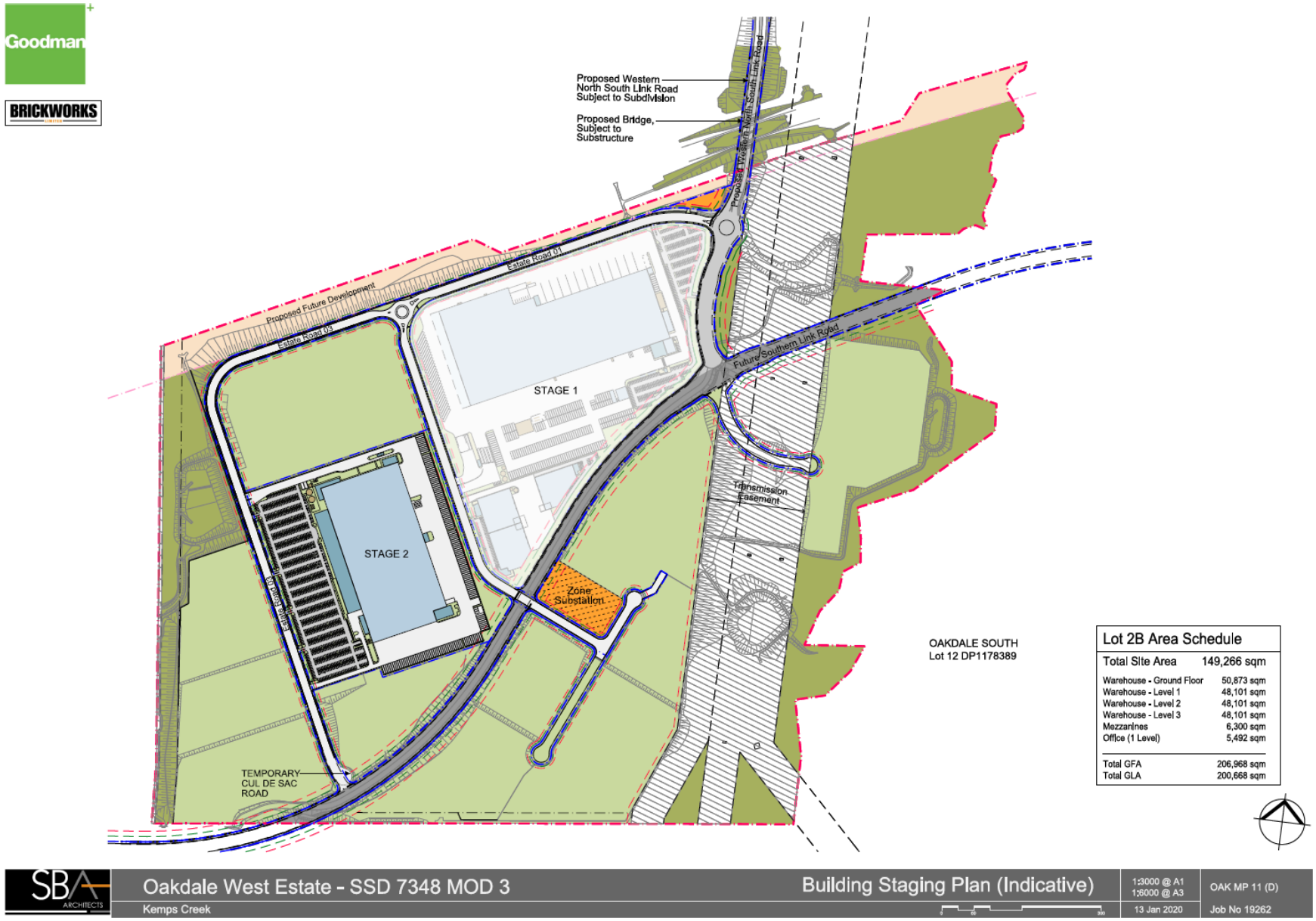


Figure 4-7 Building staging plan (indicative)

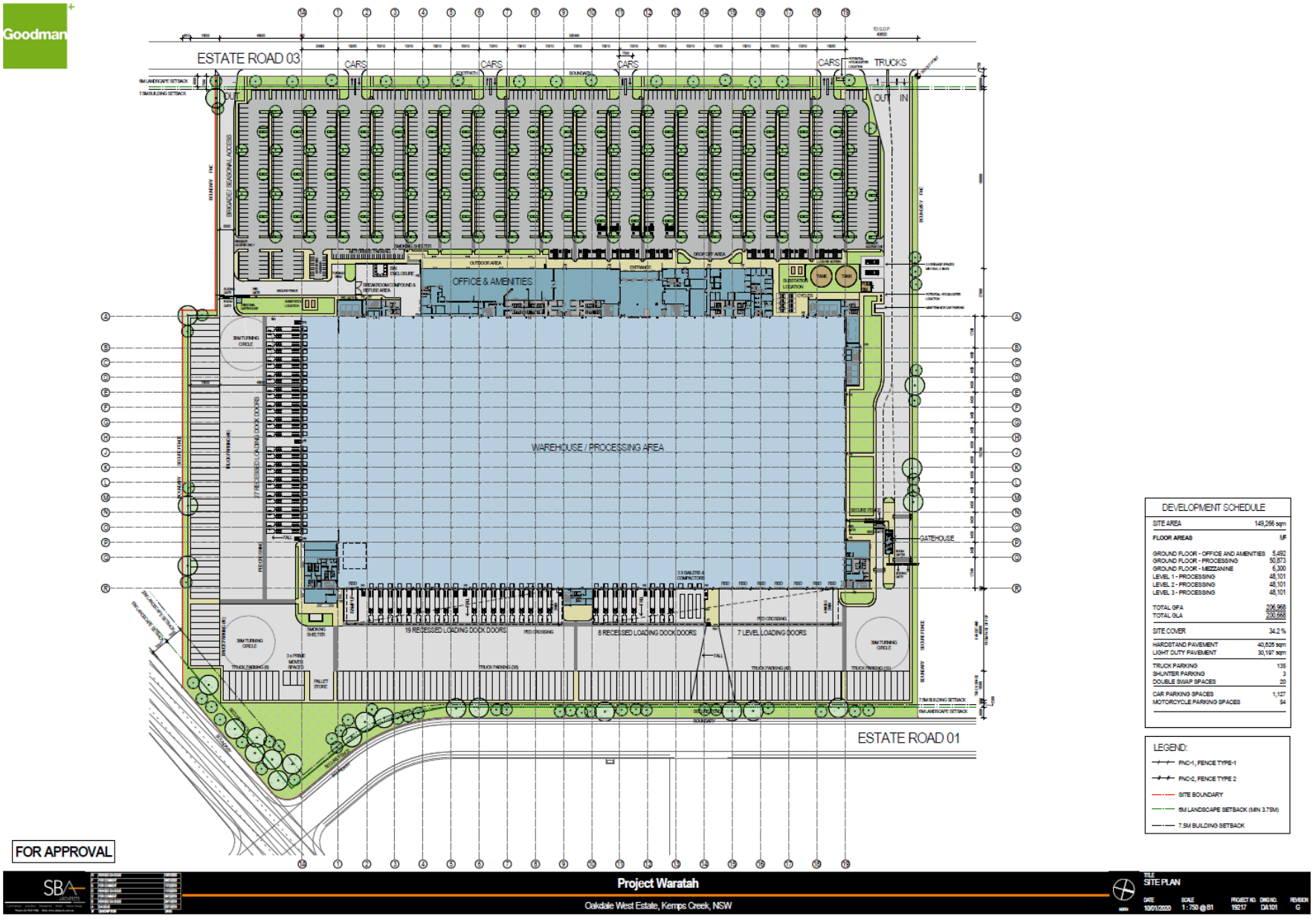


Figure 4-8 Indicative Stage 2 Development Layout

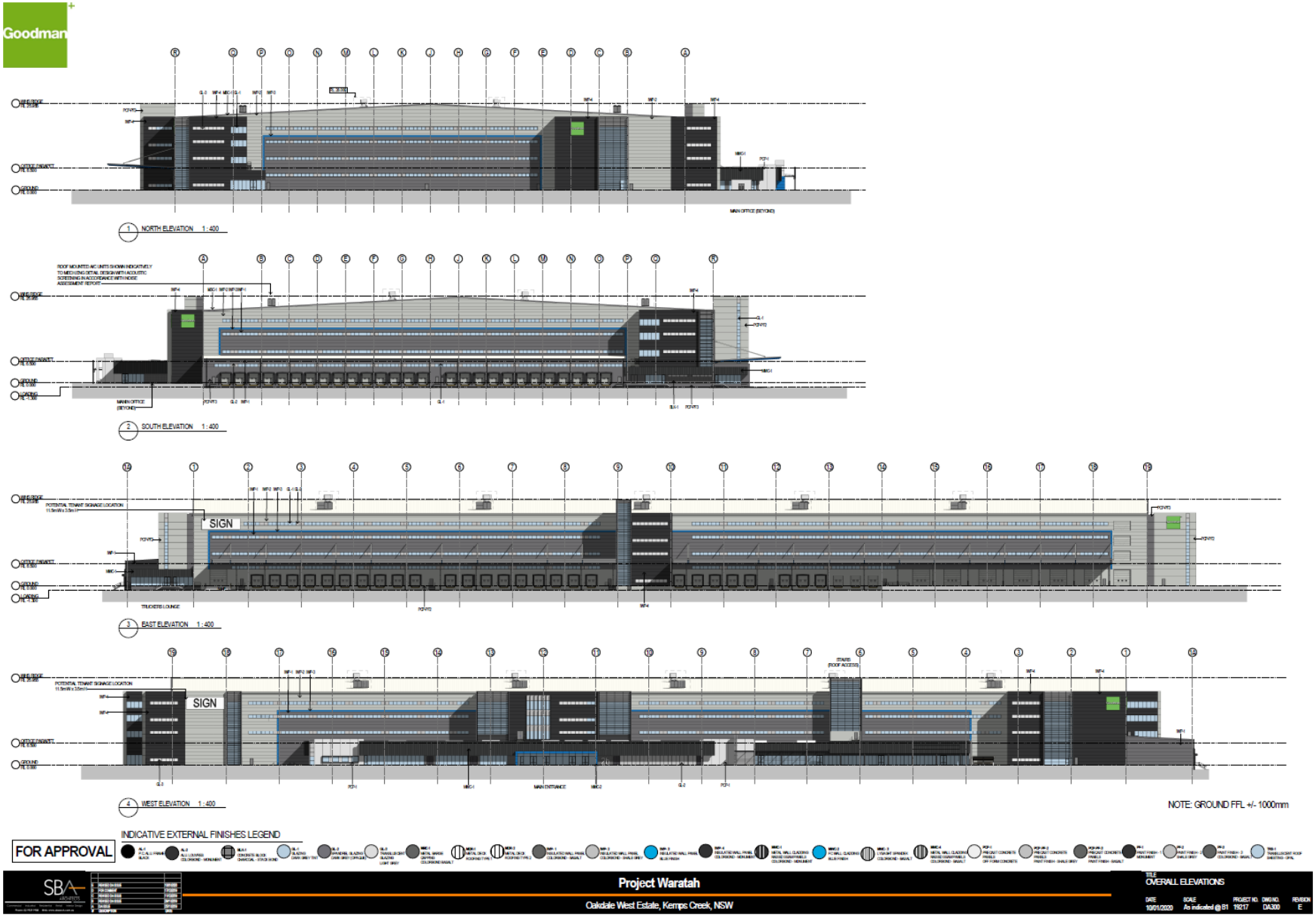


Figure 4-9 Indicative Stage 2 Development Elevations

Loading and access

Warehouse 2B is provided with separate access for heavy and light vehicles, with car parking also separated from loading and manoeuvring areas. All access points and internal driveways, service and circulation areas are deigned to be compliant with AS 2890.1 and 2890.2 and to accommodate the turning paths of B-Double vehicles..

Access and loading arrangements for Warehouse 2B include:

- 24 loading doors and 4 van loading doors on the south side of the warehouse
- 38 loading doors on the east side of the warehouse
- a separate truck entry/exit point from Estate Road 03 at the north end of Lot 2B
- A separate truck exit point to Estate Road 03 at the south end of Lot 2B for seasonal peak access
- 4 car park entry/exit point from Estate Road 03.

4.3.3 Parking

The Concept Proposal outlines the following minimum parking rates to be implemented within the OWE:

- Warehousing and Distribution – one space per 300 m2
- Ancillary office – To be included as ‘warehousing and distribution’ or ‘industry’ for the purpose of car parking calculations – one space per 40 m2.

The design of the proposed Development incorporates truck and car parking to service its needs; including the following allocations:

- 4 private vehicle crossovers to Estate Road 03 providing access to:
  - 1,127 car spaces
  - 54 motorcycle spaces
  - 134 truck spaces
  - 20 double swap spaces
  - 3 shunter parking
  - 128 bicycle parking.

4.3.4 Fit-out

The proposed fit-out of the warehouse will include:

- automation system with associated racking, equipment and shelving
- basic fit out of office including flooring, ceiling, lighting, services and amenities
- standard finishes to lobby/reception.

4.3.5 Landscaping

The proposed landscaping is in accordance with the planting plans provided by Scape Design and included at Appendix D.

The landscaping proposed is generally within the setback to the surrounding roads and provides extensive screening and visual softening of the development from the surrounding public domain through a mix of tree and shrub planting. Landscape setbacks have been increased as a result of the increase in height of Building 2B and significant trees have been included in the set-back area and other pocket areas as shown on Figure 4-10.

This landscaping will also strengthen character of the OWE and is consistent with the overall landscaping proposed in the approved Concept and Stage 1 SSDA. The Planting Plans shown in Appendix D provides additional details on each frontage, fencing and species proposed.

Extensive landscaping is proposed concentrated on ensuring:

- the staff parking area at the street is appropriately integrated into the streetscape with the use of landscaping between the street and parking and landscaping bays every 9 car parking spaces:
- curved entry/exit points for trucks and cars allowing for additional landscaping to be used
- extensive screen planting around service infrastructure, including plant room, ensuring they are visually screened from the street.
- inclusion of significant trees within setback areas and other pocket areas
- offset height increase is within the requirements.

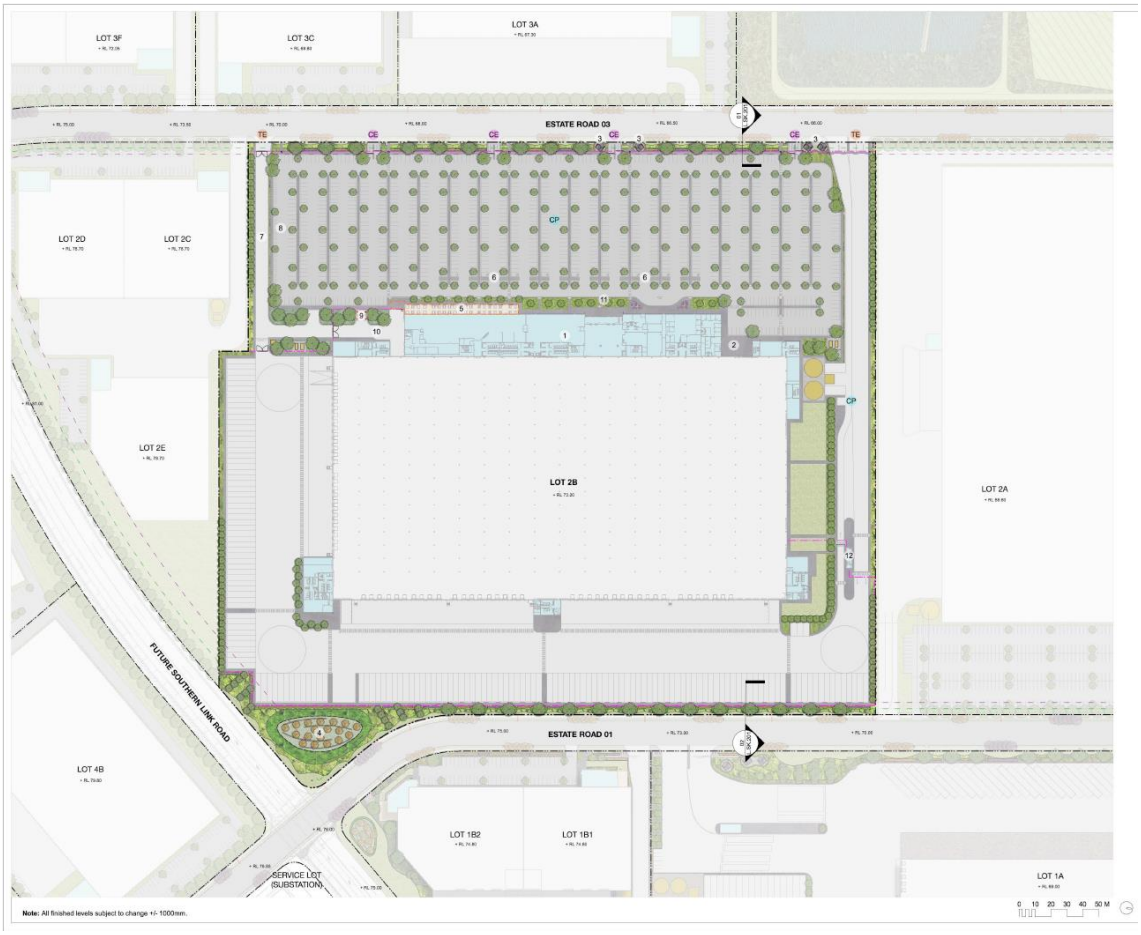


Figure 4-10 Proposed Site 2B Landscaping (Scape design)

4.3.6 Signage

Site signage has been designed to support the overall urban and landscape masterplan. Larger corporate signs, designed for viewing from moving vehicles have been located in strategic positions to reinforce main streets and give a consistent corporate identity across the whole estate. These signs have been located on each side of the warehouse as per discussions with council.

Signage to be installed as part of the development of Building 2B is in accordance with the typologies, scale and typical use of an industrial precinct. The plans shown in Figure 4-11

illustrate the proposed signage within Building 2B as part of the Stage 2 SSDA. Signage on the buildings are shown in Appendix C.

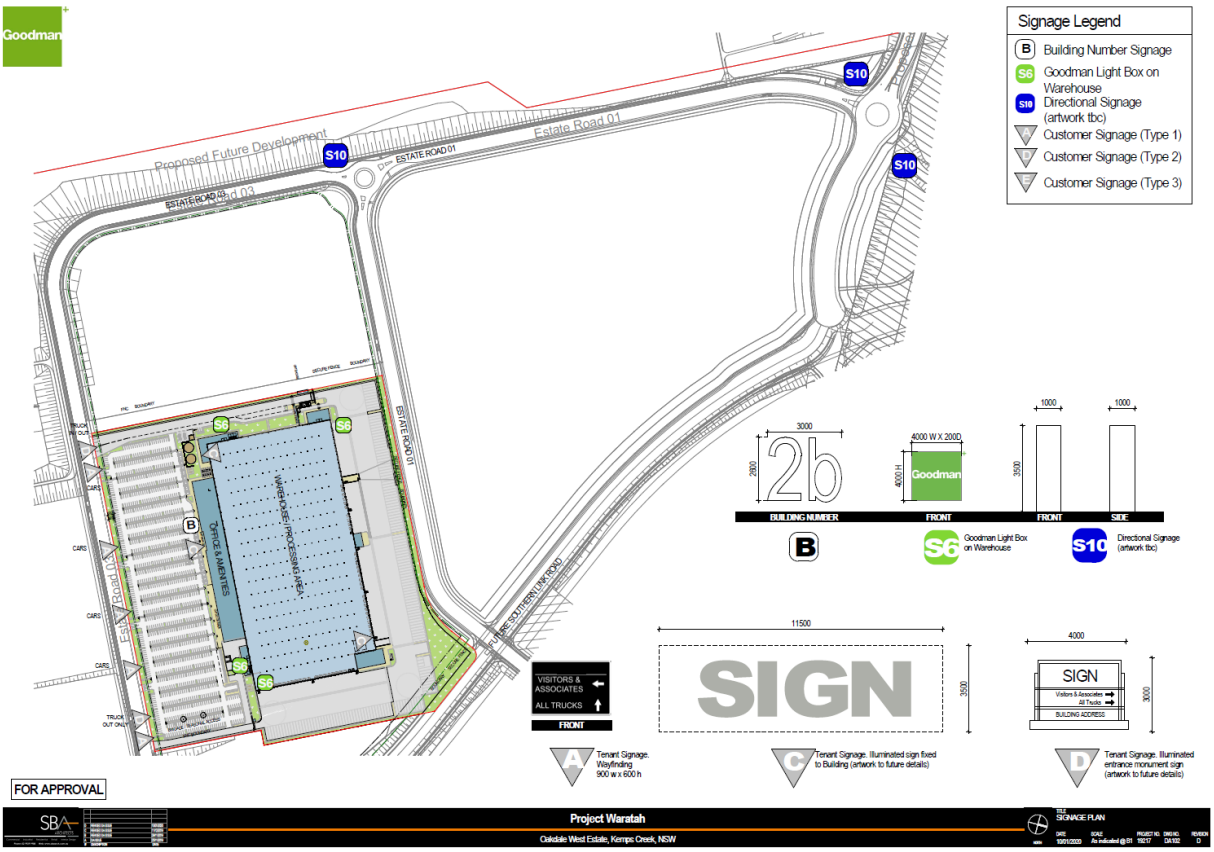


Figure 4-11 Proposed Stage 2 signage

4.3.7 Construction hours

Construction of the proposed facility is anticipated to be based around the following parameters:

- predicated construction time frame – 15 months
- predicted construction workers – 700.

Construction hours of 3 am to 10 pm for the duration of the project are required 7 days a week.

4.3.8 Operation

Staff

Anticipated staff numbers for operation of the warehouse and distribution facility include:

- predicted number of employees - 1,500
- predicted staff per shift – 587 non-peak, 838 peak
- predicted operating hours – 24/7
- predicted shift times – Two 10 hour shifts starting at 7 am and 7 pm respectively during non-peak (2 hours gap between shifts).

Note peak time refers to the last 6 weeks of the year when distribution numbers are expected to increase in the lead up to Christmas.

Staff distribution is as follows; 66 per cent of staff are will be stationed on the ground floor and 34 per cent on levels one, two and three, approximately 11 per cent per level (see Figure 4-10)

Traffic

Anticipated traffic generation for operation of the warehouse and distribution facility include:

- predicted daily maximum vehicles during operations – 2677 veh/day (3,784 veh/day peak)
- predicted AM peak hour vehicles during operations – 580 veh/hour (823 veh/hour peak)
- predicted PM peak hour vehicles during operations – 371 veh/hour (532 veh/hour peak)
- Seasonal peak vehicle numbers given above in brackets.

4.4 Urban design

Urban design matters surrounding the proposed development of Lot 2B have been considered and addressed by Goodman in conjunction with SBA Architects. Goodman has communicated to council the need and justification for the proposed changes to the approved building controls and design. These include changes to the height controls of the approved Concept Proposal and *Penrith Development Control Plan 2014*.

The proposed urban design is influenced by:

- the tenant's global warehouse design template
- council's comments regarding depth and articulation in the design of the façade to break up the bulk of the building as well as introducing line work and lighter colours to integrate with the sky line (i.e reduce the appearance of the height of the building).
- proposed changes to the strategic planning outcomes and development controls due to the increase in height, landscape setback, and wider and more significant landscaping across the site.

Due to the need to increase the height controls other strategic planning needs have been proposed, such as;

- setbacks have increased from 3.75 m to 7.5 m to ensure the height is offset
- landscaping, including ample trees within the car park area.

An Architectural Design Statement for Lot 2B has been prepared by SBA Architects and is included in Appendix E.

5. Statutory context and approval requirements

5.1 NSW legislation

This section sets out the key planning and environmental regulatory framework applicable to the proposal, including the identification of relevant environmental planning instruments and development approval requirements. Both NSW and Commonwealth legislative requirements are identified.

5.2 Environmental Planning and Assessment Act 1979

5.2.1 Overview

The key legislation in NSW for the regulation of the use of land is the EP&A Act and the Environmental Planning and Assessment Regulation (EP&A Regulation). The EP&A Act institutes a system for environmental planning and assessment, including approvals and environmental impact assessment requirements for proposed developments.

The need or otherwise for consent for a new development application is set out in environmental planning instruments including State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs), with applicable planning instruments described in detail in Section 5.2.4.

The proposal forms part of the staged development of the OWE which was approved as a Concept Proposal and Stage 1 development (SSD 7348) under Section 4.38 of the EP&A Act on 13 September 2019.

In accordance with Clause B1 in SSD 7348 and 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 and be consistent with SSD 7348 consent. A new DA (SSD 10397) is therefore required for the Stage 2 development of the OWE. The Stage 2 Development is permissible with development consent and is declared state significant development in accordance with Division 4.7 of the EP&A Act. As State significant development, the approval of the NSW Minister for Planning and Public Spaces is required and an EIS is required to support the application for approval.

A modification to the Concept Plan and Stage 1 Development approved as SSD 7348 will also be required under section 4.55 of the EP&A Act to facilitate the Stage 2 development. The proposed modification is intrinsically linked to the Stage 2 Development and required to facilitate the proposed building footprint and associated works for the proposal. A single assessment process has been undertaken as part of this EIS to assess potential impacts arising from the proposal as a whole.

5.2.2 Objects of the EP&A Act

The objects of the EP&A Act are as follows:

a. to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources

b. to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment

c. to promote the orderly and economic use and development of land

d. to promote the delivery and maintenance of affordable housing

e. to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats

f. to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage)

g. to promote good design and amenity of the built environment

h. to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants

i. to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State

j. to provide increased opportunity for community participation in environmental planning and assessment

The proposal has been developed with consideration to the objects of the EP&A Act.

The proposal will promote the social and economic welfare of Western Sydney through the development of a warehousing and distribution complex within the WSEA. The development is consistent with the overarching aim for the broader Oakdale Estate to create high quality warehouse and logistics estate which maximises the employment generating potential of the land to create an efficient, attractive and high quality employment zone for Western Sydney.

The proposal will be undertaken in accordance with the principles of ecologically sustainable development and is designed to promote good design and amenity of the built environment and to ensure the health and safety of occupants.

The proposal is consistent with the developments approved as part of the Concept Proposal and will result in minimal potential for impacts upon the environment or built and cultural heritage values of the locality as described throughout this EIS.

The proposal will be assessed as a state significant development and involve input from all levels of government and the community in determining the development application.

5.2.3 Approval pathways

Stage 2 Development (SSD 10397)

Stage 2 Development is classified as State Significant Development (SSD) pursuant to Section 4.36 of the EP&A Act.

The Stage 2 development is located on land zoned IN1 – General Industry under the WSEA SEPP. Warehouse and distribution centres' are permissible with consent within the IN1 zoning and is permissible with consent.

Warehouses or distribution centres with a capital investment value of more than $50 million are considered SSD in accordance with Clause 12 of the *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP). The Stage 2 Development will have a capital investment value in excess of $50 million and is therefore SSD) pursuant to Schedule 1 of the SRD SEPP.

Pursuant to Section 4.41 of the EP&A Act, the following approvals, permits and concurrences do not apply to SSD:

- A permit under section 201, 205 or 219 if the *Fisheries Management Act 1994*
- Approval under Part 4, or an excavation permit under section 139, of the *Heritage Act 1977*
- An Aboriginal Heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974*
- A bushfire safety authority under section 100B of the *Rural Fires Act 1997*
- A water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the *Water Management Act 2000.*
- The proposal forms part of the staged development of the OWE which was approved as a Concept Proposal and Stage 1 development (SSD 7348). In accordance 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 and be consistent with SSD 7348 consent.

The Stage 2 Development Application is considered substantially the same development and generally consistent with the Concept Proposal. The proposal does trigger a number of amendments to the Concept Proposal as described in Chapter 4 with specific conditions requiring amendment outlined below.

Modification 3 (SSD 7348)

The Concept Proposal and Stage 1 EIS was approved as a State Significant Development (SSD 7348) under Section 4.38 of the EP&A Act on 13 September 2019. SSD consents may be modified under Section 4.55 of the EP&A Act provided information stipulated in Clause 115 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) is contained within the application, and that the development as modified will be substantially the same development for which consent was originally granted.

The requirements of Clause 115 of the EP&A Regulation and where they are addressed in this document are outlined in Table 5-1.

Table 5-1 Requirements for application for modification of development consent

Requirement	Response/reference
(1) An application for modification of a development consent under section 4.55 (1), (1A) or (2) or 4.56 (1) of the Act must contain the following information:	
(a) the name and address of the applicant,	Section 1.3
(b) a description of the development to be carried out under the consent (as previously modified),	Section 3
(c) the address, and formal particulars of title, of the land on which the development is to be carried out,	Section 1.1.4
(d) a description of the proposed modification to the development consent,	Section 4.1
(e) a statement that indicates either: (i) that the modification is merely intended to correct a minor error, misdescription or miscalculation, or (ii) that the modification is intended to have some other effect, as specified in the statement,	Section 4.1
(f) a description of the expected impacts of the modification,	Section 7
(g) an undertaking to the effect that the development (as to be modified) will remain substantially the same as the development that was originally approved,	Section 4.1 and Section 4.2

Requirement	Response/reference
(g1) in the case of an application that is accompanied by a biodiversity development assessment report, the reasonable steps taken to obtain the like-for-like biodiversity credits required to be retired under the report to offset the residual impacts on biodiversity values if different biodiversity credits are proposed to be used as offsets in accordance with the variation rules under the Biodiversity Conservation Act 2016,	Not applicable
(h) if the applicant is not the owner of the land, a statement signed by the owner of the land to the effect that the owner consents to the making of the application (except where the application for the consent the subject of the modification was made, or could have been made, without the consent of the owner),	Not applicable
(i) a statement as to whether the application is being made to the Court (under section 4.56) or to the consent authority (under section 4.55),	Not applicable - The application is being made to the consent authority under Section 4.55

SSD 7348 includes conditions for the Concept Proposal in Schedule B and conditions for future development applications in Schedule C. The Stage 2 DA is considered to be substantially the same development as originally approved and has been prepared in generally in accordance with the conditions of Schedule B and C. The following amendments to Concept Proposal conditions will be required to facilitate the approval of the Stage 2 Development.

Condition B5 requires the Applicant to carry out the Concept Proposal in accordance with the EIS, RtS and respective plans. This condition will need to be modified to reflect the updated plans and description of the proposal forming Modification 3 to SSD 7348 described in Chapter 4 of this EIS.

Condition B9 includes limits on the total GLA square metres approved as part of the development. The Stage 2 Development will result in an increase to the GLA from 476,000 to 557,765 and triggers a modification to consent.

Condition B10 requires the development to be consistent with the OWE controls. The proposal complies with all development OWE with the exception of building height as shown in Table 5-2.

Table 5-2 Stage 2 compliance with OWE Development Controls

Issue/Element	OWE Development Control	Compliance	Proposed change to Development controls
Minimum Setback South link Road	20 m	Y	N/A
Minimum Setback Western North-South Link Road	20 m	Y	N/A
Minimum Setback Local Estate Roads	7.5 m	Y	N/A
Minimum Setback Wester site boundary	40 m	Y	N/A
Minimum Setback Southern Site boundary	20 m (excluding parking area)	Y	N/A
Rear boundary setbacks within estate	5 m	Y	N/A
South boundary setbacks within estate	0 m, subject to compliance with fire rating requirements	Y	N/A
Building height	15 m	N	28 m building 2B; 15 m all other buildings
Minimum lot size	5,000 m^2	Y	N/A
Minimum frontage	40 m (excluding cul-de-sacs) 35 m minimum lit width at the building line	Y	N/A
Site Coverage	Maximum of 65 % (excluding awnings)	Y	N/A

Condition B11 restricts warehouse buildings to a ridgeline height of 13.7 metres excluding roof mounted mechanical plant and solar panels. The proposal exceeds the ridgeline height for Building 2B.

Condition B18 provides the noise limits for the proposed development. The modelling indicates that with implementation of the proposed noise barrier design and acoustic treatment of mechanical plant, noise limits would be met for receivers to the west of the site with residual exceedance for receivers to the south. The residual exceedances are expected to occur at night under noise enhancing conditions. A noise agreement between the applicant and the nearest residential receiver to the south (N3) has been put in place and submitted to the Planning Secretary and an agreement is also currently being sought with the next closet receivers (N4 and N5). The Applicant continues to consult with these parties and has advised them about the current applications under assessment and this proposed application.

An amendment to the noise limits included is included as part of the Modification 3 to the Concept Proposal to incorporate limits that can realistically be achieved following the adoption of all feasible and reasonable mitigation. It is noted that Modification 2 to SSD 7348 proposed a variation to the $L_{A1,1min}$ night-time noise limits to accord with the provisions of the NSW Noise Policy for Industry with a level of $L_{A1,1min}$ 52 dBA proposed for all residential receivers.

Matters of consideration

When assessing a new DA or modification to consent, the consent authority is required to take into consideration the relevant matters outlined in Section 4.15 of the EP&A Act. This

environmental assessment considers the likely impacts of the development, including environmental impacts on both the natural and built environments and the social and economic impacts in the locality.

An outline of where matters of consideration in determining development applications have been addressed in this EIS is included in Table 5-3.

Table 5-3 Evaluation considerations under section 4.15 of EP&A Act

Requirement	Response/reference
the provisions of -	
(i) any environmental planning instrument, and	Section 5.2.5
(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and	NA
(iii) any development control plan, and	Section 5.2.6
(iv) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, an	Section 2.4
(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), that apply to the land to which the development application relates,	N/A
(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,	Section 7
(c) the suitability of the site for the development,	Section 2
(d) any submissions made in accordance with this Act or the regulations,	Section 5
(e) the public interest.	Section 6

This EIS has examined and considered, to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the proposed development in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued on 15 November 2019. An outline of where the SEARs have been addressed as part of this EIS in included in Table 5-4.

.

Table 5-4 SEARs reference table

Key Issue	SEAR Item	Reference
General Requirements	a detailed description of the development, including: • the need for the proposed development • justification for the proposed development • likely staging of the development • likely interactions between the development and existing, approved and proposed operations in the vicinity of the site • plans of any proposed building works.	Section 4
	consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments	Section 5
	a detailed assessment of the development against the approved concept plan and conditions for future development applications, included in SSD 7348	Section 4.1, 4.2
	a risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment	Section 7.2
	a detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: • a description of the existing environment, using sufficient baseline data • an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes • a description of the measures that would be implemented to avoid, minimise, mitigate and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/ or contingency plans to manage significant risks to the environment	Detailed impact assessment provided in Section 7 to Section 8 and Appendix F to Appendix Q
	a consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS.	Section 9
	The EIS must also be accompanied by a report from a qualified quantity surveyor providing:	Appendix R

Key Issue	SEAR Item	Reference
	• a detailed calculation of the capital investment value (CIV) of the development as defined in clause 3 of the Environmental Planning and Assessment Regulation 2000, including details of all components of the CIV • an estimate of the jobs that will be created by the development during the construction and operational phases of the development • certification the information provided is accurate at the date of preparation.	
Consistency with approved OWE Concept Plan	detailed assessments of the potential impacts of the development against the approved Concept Plan including but not limited to urban design and visual impact, traffic and transport and noise and vibration	Detailed impact assessment provided in Section 7 to Section 8 and Appendix F to Appendix Q Urban design is described in Section 7.3
	justifications for any departures from the approved Concept Plan	Section 4.1 and Section 4.2
Community and Stakeholder Engagement	a community and stakeholder participation strategy identifying key community members and other stakeholders and the proposed consultation approach	Section 6.1
	issues raised by the community and surrounding land owners and occupiers	Section 6.1
	details of how issues raised during consultation have been addressed and whether they have resulted in changes to the development	Section 6.1
	details of the proposed approach to future community and stakeholder engagement based on the results of consultation	Section 6.1
Urban Design	a detailed urban design review of the proposed changes to approved building heights, design and setbacks in the context of the entire Oakdale West Estate and the topography of the site, the immediate locality and the wider area	Urban design is described in Section 4.4, Section 7.3, Section 4.3.5 and Section 5.2.6.
	justifications for any departures from the approved Oakdale West Estate Concept Plan and Penrith Development Control Plan 2014 including but not limited to building height, setbacks, landscaping and site coverage	Section 4.4 and Section 5.2.6.
	assessment in accordance with Clause 31 Design Principles of the State Environmental Planning Policy (Western Sydney Employment Area) 2009	Section 5.2.4
	a landscaping plan showing proposed landscaping within the setback areas and car park, in the context of the building form, height, bulk and scale	Section 4.3.5 and Appendix F

Key Issue	SEAR Item	Reference
Visual	a detailed assessment (including photomontages and perspectives) of the development (buildings and parking areas) including height, colour, scale, building materials and finishes, signage and lighting, from nearby public receivers and significant vantage points of the broader public domain	Detailed assessment and photomontages provided in Section 7.3 and Appendix F Details of materials and finishes provided in Section 4
	a comparison of the finished ground levels, building heights, setbacks and landscaping of the approved concept plan and the proposed development in the context of visual impacts at key receptors	Section 7.3 and Appendix F
	an assessment of the adequacy of the proposed landscaping for minimising the overall visual impacts of the development, which shows any landscaping over various periods of times	Section 7.3 and Appendix F
Traffic and Transport	a Traffic Impact Assessment detailing all daily and peak traffic and transport movements likely to be generated (vehicle, public transport, pedestrian and cycle trips) during construction and operation of the development, including a description of vehicle access routes (construction and operation) and the impacts on nearby intersections	Section 7.4.2 and Appendix G
	details of access to the site from the road network including intersection location, design and sight distance	Section 7.4.2 and Appendix G
	an assessment of predicted impacts on road safety and the capacity of the road network to accommodate the development	Section 7.4.2 and Appendix G
	detailed plans of the proposed site access and parking provision on site in accordance with the relevant Australian Standards and with reference to the approved concept plan (SSD 7348)	Section 7.4.2, 4.3.3 and Appendix G
	details of impact mitigation, management and monitoring measures	Section 7.4.3 and Appendix G
Noise and Vibration	a description of all potential noise and vibration sources during the construction and operational phases of the development, including on and off-site traffic noise	Section 7.5 and Appendix H
	a cumulative noise impact assessment of all potential noise sources in accordance with relevant Environment Protection Authority guidelines	Section 7.5 and Appendix H
	demonstration of compliance with the noise limits set out in condition B18, Schedule B of development consent SSD 7348	Section 7.5 and Appendix H
	details of noise mitigation, management and monitoring measures	Section 7.5.3 and Appendix H

Key Issue	SEAR Item	Reference
Soil and Water	justify the need for any additional fill, detail the resulting finished ground levels and describe any changes to the approved drainage	Section 7.6.2, Appendix I and Appendix J
	detailed and consolidated site water balance	Section 7.6.2, Appendix I and Appendix J
	assessment of potential impacts on surface and groundwater sources (quality and quantity), soil (including contamination, salinity and acid sulphate soil), related infrastructure, watercourses	Section 4.2.3, 4.2.4, 7.6.2, Appendix I and Appendix J
	describe surface and stormwater management measures designed in accordance with Penrith City Council's Water Sensitive Urban Design Policy and principles, including drainage design, on-site detention, measures to treat or reuse water, and proposed uses of portable and non-potable waters	Section 7.6.3, Appendix I and Appendix J
	a description of the proposed erosion and sediment controls during construction and operational phases of the development	Section 7.6.2, Appendix I and Appendix J
	details of impact mitigation, management and monitoring measures	Section 7.6.3, Appendix I and Appendix J
Infrastructure Requirements	details of infrastructure required on the site and identification of any upgrades required to facilitate the development	Section 4.1, 4.2, 4.3
	details of any impacts on existing easements	Section 4.2.3
	an assessment of the impacts of the development (construction and operation) on existing infrastructure surrounding the site	Detailed impact assessment provided in Section 7 to Section 8 and Appendix F to Appendix Q
	an assessment of any other risks to the integrity and security of the Water NSW pipelines corridor that may result from the development and the proposed measures to be taken to mitigate those risks and impacts including vibration on the pipelines, soil and water, and infrastructure interaction with the pipelines corridor	Section 4.2.3 and 9.2 of the report in Appendix J
	an assessment of the impacts of the development on drainage paths, in particular Ropes Creek and the impacts on the pipelines and associated corridors	Section 7.6.2, Appendix I and Appendix J
Subdivision	including details of any proposed subdivision and demonstration the lots will be released in an orderly and coordinated manner, with appropriate access and servicing.	Section 4.1.3 and Appendix S
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 7.7 and Appendix K
Biodiversity	including an assessment of how biodiversity impacts have been addressed through the Oakdale West Estate Concept Plan or a waiver for the preparation of a Biodiversity Development Assessment Report under the Biodiversity Conservation Act 2016.	Section 5.4.1, Section 7.8 and Appendix L

Key Issue	SEAR Item	Reference
Air Quality	including an assessment of air quality impacts at private properties during construction and operation, in accordance with Environment Protection Authority guidelines and details of mitigation, management and monitoring measures.	Section 7.9 and Appendix M
Energy Efficiency	including an assessment of the energy uses on-site and the proposed energy efficiency measures.	Section 7.10 and Appendix N
Plans and documents	The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Environmental Planning and Assessment Regulation 2000. You should provide these as part of the EIS rather than as separate documents.	Appendix C, Appendix D, Appendix I, Appendix J and Appendix S
Consultation	During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular, you must consult with: • Penrith City Council • (former) Roads and Maritime Services (now part of TfNSW) • Transport for NSW • Water NSW • Climate Change and Sustainability Branch, Department of Planning, Industry and Environment (former Office of Environment and Heritage, Greater Sydney Region) • Water Group, Department of Planning, Industry and Environment (former Department of Industry, Lands and Water) • TransGrid • Endeavour Energy • surrounding residents and stakeholders. • The EIS must describe the consultation process and the issues raised and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, an explanation should be provided.	Section 6.1

5.2.4 Environmental planning instruments

State Environmental Planning Policy (State and Regional Development)

State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP) identifies development that is considered to be of state significance and includes provisions for SSD and SSI.

Clause 12 of Schedule 1 of the SRD SEPP relates to Warehouses or distribution centres and states that developments with a capital investment value of more than $50 million for a warehouse or distribution centre is considered SSD. The Stage 2 Development will have a capital investment value of approximately $500 m (excl GST) and is therefore SSD pursuant to Schedule 1 of the SRD SEPP.

State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP) aims to facilitate the effective delivery of infrastructure across NSW and allows for a range of developments to be permitted with and without consent.

The SEPP also includes provision for traffic generating development and requires referral and concurrence of the NSW Roads and Maritime Services (RMS) for certain development which is expected to generate significant traffic. Schedule 3 of the Infrastructure SEPP identifies 'traffic generating development' which must be referred to the Roads and Maritime for concurrence. The schedule includes development for the purposes of Warehouse or distribution centres with 8,000 m^2 or more of GFA. The Stage 2 Development will be considered a traffic generating development and concurrence from RMS will be required as part of the proposal.

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

State and Environmental Planning Policy No 33 – Hazardous and Offensive Development (SEPP 33) requires the consent authority to consider particular matters in determining a development application for a proposal that is a potentially hazardous industry or potentially offensive industry.

The Stage 2 Development is a warehouse and distribution facility and is not considered a potentially hazardous or offensive industry.

State Environmental Planning Policy (Western Sydney Employment Area) 2009

The aim of WSEA SEPP is to protect and enhance the Western Sydney area for employment purposes. The WSEA SEPP promotes an integrated and coordinated approach to land use planning in the Western Sydney Area in a manner consistent with economic development, industrial and technology development.

The WSEA SEPP establishes the zoning and development controls for the OWE. The Stage 2 Development is located on land zoned IN1 – General Industry under the WSEA SEPP Warehouse and distribution centres' are permissible with consent within the IN1 zoning and the Stage 2 Development is permissible with consent.

All development standards and provisions of the WSEA SEPP have been considered in detail as part of this EIS with the following Clauses of note to be applicable to Precinct 2.

Table 5-5 WSEA SEPP compliance table

Clause	Requirement	Response
Clause 3 Aims	Aims to protect and enhance the land within the WSEA for employment purposes.	The proposed seeks consent for a warehouse development for Building 2B of the OWE employment use, which is consistent with the overarching aim of the WSEA SEPP.
Clause 10 Land Use Zoning	Stage 2 of OWE is zoned IN1 – General Industry	The proposed development under the DA is permissible in the IN1 zone, including the construction and use of buildings for warehousing and distribution.
Clause 18 Development Control Plans	Clause 18 requires that a DCP be in place before consent can be granted for development within the WSEA.	The OWE lies within the Penrith LGA in the 'Erskine Business Park' precinct. Penrith Development Control Plan 2014 (DCP 2014) establishes development controls for the Erskine Business Park, however it is noted that pursuant to clause 11 of the SRD SEPP, DCPs do not apply to SSD. Development controls for the OWE will be established via the Concept Proposal. An assessment against the core precinct development controls proposed within the approved Stage 2 for OWE has been undertaken within this EIS at Section 5.2.6.
Clause 20 Ecological sustainable development	The development is required to be contain measures to minimise the consumption of potable water and greenhouse gas emissions.	A site water balance has been prepared in respect of the OWE proposal and is discussed in Section 6.7.4 of the approved EIS. Further details and calculations are included in the civil report in Appendix J. An assessment of energy efficiency of the proposal and the emission during construction and operation has also been undertaken and is detailed in Section 7.10.
Clause 21 Height of Buildings:	The consent authority must not grant consent to development on land to which this Policy applies unless it is satisfied that: Building heights will not adversely impact on the amenity of adjacent residential areas, and Site topography has been taken into consideration.	The building height of the proposed development is 28 m which is higher than the maximum building height of 15 m as adopted for the OWE within the consent for the Concept and Stage 1 SSDA for the OWE. The increase in building high has been addressed in Section 4.2 and consideration of the site context, topography and visual impact has been addressed in Section 7.3.
Clause 22 Rainwater Harvesting	The consent authority must not grant consent to development on land to which this Policy applies unless it is satisfied that adequate arrangements will be made to connect the roof areas of buildings to such rainwater harvesting scheme (if any) as may be approved by the Director-General.	Details of proposed stormwater arrangements are detailed in Section 7.6 and Appendix J.

Clause	Requirement	Response
Clause 23 Development adjoining Residential Land	Clause 23 relates to land within 250m of land zoned primarily for residential purposes and considers the effect of the development on the amenity of surrounding land-uses.	The OWE adjoins rural residential lands to the south and west which include some residential dwellings. The provisions of clause 23 are therefore triggered in relation to development on the OWE within 250 m of the southern and western boundaries. Consideration of the detailed requirements of Clause 23 of the WSEA SEPP in relation to the OWE proposal is provided below.
	Wherever appropriate, proposed buildings are compatible with the height, scale, siting and character of existing residential buildings in the vicinity.	The proposed OWE development adopts building heights which achieve the minimum requirements for a modern warehousing and distribution facility. A Visual Impact Assessment (VIA) has been prepared for the proposed works and confirms that the proposed design and visual treatment would preserve an appropriate outlook and level of amenity for surrounding landowners and adequately addresses the requirements of clause 23 of the WSEA SEPP.
	Goods, plant, equipment and other material resulting from the development are to be stored within a building or will be suitably screened from view from residential buildings and associated land.	Goods, plant and equipment would be stored inside at all times or suitably screened to avoid potential visual impacts in compliance with these requirements.
	The elevation of any building facing, or significantly exposed to view from, land on which a dwelling house is situated has been designed to present an attractive appearance	The proposed development would not be significantly exposed to view from existing dwellings, but would be visible in certain locations.
	Noise generation from fixed sources or motor vehicles associated with the development will be effectively insulated or otherwise minimised	A Noise Impact Assessment has been completed as part of this EIS, detailed in Section 7.5 and Appendix H. The noise assessment concludes that noise impacts on surrounding lands can be effectively maintained at acceptable levels with the mitigation measures proposed.
	The development will not otherwise cause nuisance to residents, by way of hours of operation, traffic movement, parking, headlight glare, security lighting or the like	The development has been designed to be sympathetic to surrounding residential properties.
	The development will provide adequate off-street parking, relative to the demand for parking likely to be generated	The proposal makes provision for parking as outline in RMS Guidelines. Section 5.11.2 of the RMS Guide requires parking for warehouse developments be provided at the rate of 1 space per 300 m^2 of GFA and 1 space per 40 m^2 of GFA for office use.
	The site of the proposed development will be suitably landscaped, particularly between any building and the street alignment.	Landscape and visual analysis prepared in respect of the proposal has informed the design of the landscape treatment and confirms that the

Clause	Requirement	Response
		proposed landscaping response is appropriate to preserve the amenity of surrounding residential areas.
Clause 24 Development involving subdivision	The consent authority must not grant consent to the carrying out of development involving the subdivision of land unless it has considered the following: (a) the implications of the fragmentation of large lots of land, (b) whether the subdivision will affect the supply of land for employment purposes, (c) whether the subdivision will preclude other lots of land to which this Policy applies from having reasonable access to roads and services.	Modification of the Indicative Ultimate Lot Layout plan (OAK MP 07 (U) approved by SSD 7348. The indicative lot layout plan is described in Section 4.1.3 and shown in Appendix S. Subdivision staging would be aligned with infrastructure and services delivery and would not result in land fragmentation or isolation. The subdivision proposed in the Stage 2 DA is for the Estate Road 03 and Precinct 2 only. This is consistent with the subdivision plan for Estate Road 1 and Precinct 1 which is currently before Penrith Council.
Clause 25 Public Utility Infrastructure	In accordance with Clause 25, a consent authority must not grant consent to development of land unless that it is satisfied that adequate public utility infrastructure is available for the proposed development.	Public utility infrastructure to service the Stage 2 Development is being delivered as part of the proposed modification to the Concept Proposal and Stage 1 development approved in SSD 7348.
Clause 26 Development on or in vicinity of proposed transport infrastructure routes	This clause applies to any land situated in the vicinity of a proposed transport infrastructure route and has been considered as part of the development of the Concept Proposal for the OWE.	The proposal will integrate and be compatible with surrounding planned transport infrastructure routes. The internal estate roads link to the proposed WNSLR which will provide direct access to the OWE from Lenore Drive, Erskine Park. Lenore Drive link to the M7 and M4 Motorways which are key regional roads.
Clause 31 Design Principles	In determining a development application that relates to land to which this Policy applies, the consent authority must take into consideration whether or not: • the development is of a high-quality design, and • a variety of materials and external finishes for the external facades are incorporated, and • high quality landscaping is provided, and • the scale and character of the development is compatible with other employment-generating development in the precinct concerned.	The proposed development reflects the key development principles which apply under the approved Oakdale West Concept Proposal and Stage 1 SSDA.

State Environmental Planning Policy 55 – Remediation of Land

SEPP 55 provides for a state-wide planning approach to the remediation of contaminated land and aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment by:

a) specifying when consent is required, and when it is not required, for a remediation work,

b) by specifying certain considerations that are relevant in rezoning land and in determining development applications in general and development applications for consent to carry out a remediation work in particular,

c) by requiring that a remediation work meet certain standards and notification requirements.

In determining a development application a consent authority is required to consider if the land is contaminated and if contamination is identified is the land suitable in its contaminated state for the purpose for which the development is proposed to be carried out and if any remediation is required to make the land suitable for that purpose.

The potential for historical contamination from historical uses has been considered as part of the Stage 1 development and the site was considered to be generally suitable for commercial and industrial land uses.

State Environmental Planning Policy 64 – Advertising and signage

State Environmental Planning Policy No 64 – Advertising and Signage (SEPP 64) applies to all signage and advertisements, which can be displayed with or without development consent under an environmental planning instrument and is visible from any public place or public reserve.

SEPP 64 applies to the proposed development as the proposed signage and advertisement will be visible to the surrounding road network. The consent authority is required to consider and assess any proposed signage and/or advertisements against the assessment criteria set out under Schedule 1 of the SEPP.

An assessment of the proposed signage against Schedule 1 Assessment criteria of the SEPP has been undertake in Table 5-6.

Table 5-6 SEPP 64 Compliance

Control	Proposed	Compliant
1 Character of the Area		
Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located? Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?	The subject site is within an industrial precinct and as such industrial business signage is considered compatible. It is consistent with outdoor industrial business advertising.	Yes
2 Special areas		
Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas?	No, the site is suitably removed from sensitive receptors including residential areas, and open space. Signage will be oriented to the estate roads and site entrance, not towards surrounding open space or residential areas.	Yes

Control	Proposed	Compliant
3 Views and vistas		
Does the proposal obscure or compromise important views? Does the proposal dominate the skyline and reduce the quality of vistas? Does the proposal respect the viewing rights of other advertisers?	No, the building on which the signage will be positioned will not obstruct any important views No, the proposed signage will be generally within the proposed building envelope and not dominate the skyline. The signage will not obstruct the viewing rights of other advertisers.	Yes
4 Streetscape, setting or landscape		
Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape? Does the proposal contribute to the visual interest of the streetscape, setting or landscape? Does the proposal reduce clutter by rationalising and simplifying existing advertising? Does the proposal screen unsightliness? Does the proposal protrude above buildings, structures or tree canopies in the area or locality? Does the proposal require ongoing vegetation management?	The proposed signage is appropriate for the setting and the location within an industrial precinct. Yes, the signage is to be used to provide an identity to a building without becoming visually dominant. No existing advertising on the site. The signage layout provides a rational approach to building and business identification on the site. No, the signage is not proposed as a screen. No, the proposal does not protrude above buildings, structures or tree canopies in the area or locality. No the proposal would not require ongoing vegetation management.	Yes
5 Site and building		
Is the proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located? Does the proposal respect important features of the site or building, or both? Does the proposal show innovation and imagination in its relationship to the site or building, or both?	The proposed signage will be of suitable scale and design for the intended purposes. The sizing, location and appearance of the proposed signs have been incorporated into a cohesive design strategy for the site and the overall building structure. The signage will not present as the dominant visual feature of the approved OWE.	Yes
6 Associated devices and logos with advertisements and advertising structures		
Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?		

Control	Proposed	Compliant
7 Illumination		
Would illumination result in unacceptable glare? Would illumination affect safety for pedestrians, vehicles or aircraft? Would illumination detract from the amenity of any residence or other form of accommodation? Can the intensity of the illumination be adjusted, if necessary? Is the illumination subject to a curfew?	Illumination is proposed for 5 signs attached to the Warehouse and 1 entrance monument sign, as detailed within the Architectural Plans. The applicant will ensure that the proposed illumination will meet the requirements of the relevant Australian Standards.	Yes
8 Safety		
Would the proposal reduce the safety for any public road? Would the proposal reduce the safety for pedestrians or bicyclists? Would the proposal reduce the safety for pedestrians, particularly children, by obscuring sightlines from public areas?	The signage will not be located or positioned to impact the safety of any public road. The signage is not considered to reduce safety for pedestrians or bicyclists. The sign will not cause disruption of any sightlines from public area.	Yes

5.2.5 Strategic Planning

The Greater Sydney Regional Plan – A Metropolis of Three Cities

The Greater Sydney Region Plan, A Metropolis of Three Cities aims to establish three cities within Sydney where most residents live within 30 minutes of their jobs, education and health facilities, services and great places. The Greater Sydney Region Plan identifies three connected cities within the Greater Sydney area as follows:

- Western Parkland City
- Central River City
- Eastern Harbour City.

OWE is be located within the Western Parkland City. The proposal would directly address and support Objective 20 of the Greater Sydney Region Plan, which identifies the Western Sydney Airport and the surrounding business zone as an economic catalyst for the Western Parkland City.

The Western Sydney District Plan

Western City District Plan is a 20-year plan to manage growth in the context of economic, social and environmental matters to achieve the 40-year vision for Greater Sydney. It is a guide for implementing the Greater Sydney Region Plan, A Metropolis of Three Cities, at a district level and is a bridge between regional and local planning. The plan identifies the Planning Priorities to achieve a liveable, productive and sustainable future for the District.

Section 3 of the Plan recognises the importance of industrial activity within the district, noting that the West District's major economic asset is its significant concentration of employment and urban services land. The district currently accommodates 13% of Greater Sydney's zoned industrial land, with around 700 hectares as part of the Western Sydney Employment Area. Utilisation of the WSEA as employment and urban services areas will be crucial for employment and economic activity as the District's economy, and that of Western Sydney, grows and evolves.

Section 5 of the District Plan outlines objectives to promote a sustainable city. A sustainable city protects and enhances its natural environment, integrating its bushland, open space, waterways and vegetation into the planning for how the city will grow and be built. The sustainability priorities include protecting the District's waterways, protecting and enhancing biodiversity, deliver Sydney's Green Grid and planning for a resilient West District.

Consideration for these strategic objectives and ecological values has continued to be addressed as part of the staged development of OWE.

Future Transport Strategy 2056

Future Transport Strategy 2056 replaced the NSW Long Term Masterplan (2014). It sets the 40 year vision, directions and outcomes framework for customer mobility in NSW, which will guide transport investment over the longer term. It will be delivered through a series of supporting plans. An integrated network of corridors will support the efficient movement of people and goods throughout Greater Sydney. Future Transport 2056 is focused on three types of corridors that have been developed to align with the land use vision and to guide service levels (capacity, function and service frequencies) and infrastructure investment.

The hierarchy of corridors in Greater Sydney include

- City-shaping corridors – major trunk road and public transport corridors providing higher speed and volume connections between our cities and centres that shape locational decisions of residents and businesses.
- City-serving corridors – higher density corridors within less than 10km of metropolitan centres providing high frequency access to metropolitan cities/centres with more frequent stopping patterns.
- Centre-serving corridors – local corridors that support, buses, walking and cycling, to connect people with their nearest centre and transport interchange.

OWE will be developed in a manner that supports the delivery of the Future Transport Strategy 2056.

5.2.6 Local planning controls

Penrith Local Environmental Plan 2010

The Penrith City Local Environmental Plan (LEP) 2010 provides local environmental planning provisions within the designated land application area for the LEP in the Penrith local government area (LGA). However, the land covered in the Oakdale East Estate does not fall within the designated land area of the Penrith LEP and the policy does not apply to the proposal.

Penrith Development Control Plan 2014

The OWE lies within the Penrith LGA in the 'Erskine Business Park' precinct. Penrith Development Control Plan 2014 (DCP 2014) establishes development controls for the Erskine Business Park, however it is noted that pursuant to clause 11 of the SRD SEPP, DCPs do not apply to SSD. Development controls for the OWE were established via the Concept Proposal. The controls have been approved to allow for easy integration into DCP 2014.

Condition B10 of the Development Consent for SSD 7348 requires that development within the OWE is consistent with the development controls as detailed Table 5-7. The proposed controls have been designed to be consistent with those applied at Oakdale Central and Oakdale South and to respond to the particular constraints and characteristics of the OWE.

Table 5-7 Stage 2 compliance with OWE Development Controls

Issue/Element	OWE Control	Proposal	Compliance
Site Coverage	Maximum 65%.	Maximum 65%	Y
Minimum Lot Size	Minimum 5,000 m^2	Minimum 5,000 m^2	Y
Minimum Frontage	Minimum 40 m	Minimum 40 m	Y
Building Height	Maximum 15 m; with the expectation of 36 m building 1A under Modification 2.	28 m building 2B; 15 m all other buildings	N
Building Setback – Primary Frontage	Minimum 20 m to regional roads Minimum 15 m to link roads Minimum 7.5 m to local roads	Minimum 20 m to regional roads Minimum 15 m to link roads Minimum 7.5 m to local roads	Y
Building Setback – Side	Minimum zero setback subject to compliance with fire safety standards	Minimum zero setback subject to compliance with fire safety standards	Y
Building Setback – Rear	Minimum rear setback 5 m.	Minimum rear setback 5 m.	Y
Landscaped Setbacks	Minimum Landscaped Setbacks: • Southern Link Road: 20 m setback/10 m landscape • Collector Road: 7.5 m, or average of 50% of setback along the frontage • Local Estate Road: Average of 50% of setback along the frontage • Side boundary: No minimum requirement (except for western site boundary as described above) • Rear boundary: 2.5 m	• Southern Link Road: 75.5 m • Collector Road: 7.5 m, or average of 50% of setback along the frontage • Local Estate Road: Building 2B 112 m from Estate road 03 and 76 m from Estate Road 01 • Side boundary (east and west): 40 m • Rear boundary (south): 20 m	Y
Car Parking	On-site car parking to be provided at the following minimum rates: • Warehousing and Distribution – 1 space/300 m^2 or in accordance with RMS Guidelines • Office – 1 space/300 m^2 for ancillary office up to 20% of total GFA • Other uses – as per DCP 2014	Warehousing and distribution – 1 space to 300 m^2 Office – 1 space to 40 m^2	Y
Disabled Parking	For development with more than 50 parking space, 2% are to be provided as accessible parking	2 spaces per 100 car spaces	Y
Road Infrastructure	23 m wide reserve for estate roads	23 m	Y

5.3 Other relevant NSW legislation

5.3.1 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (BC Act) aims to conserve biodiversity at a bioregional and state scale and lists a number of threatened species, populations and ecological communities to be considered in deciding whether there is likely to be a significant impact on threatened biota, or their habitats.

A detailed biodiversity assessment was completed as part of the development application for the Concept Proposal and Stage 1 development. The initial assessment was undertaken in accordance with the *Threatened Species Conservation Act 1995* which has been repealed on 25 August 2017. A subsequent assessment has been undertaken under the BC Act to ensure vegetation management and biodiversity credits are managed within the current legislative process. The biodiversity assessment has considered all required clearing and impacts associated with bulk earthworks across the OWE.

Consideration of any implications to biodiversity associated with modification to the Concept Proposal including potential changes to stormwater drainage has been undertaken as part of this EIS.

5.3.2 Biosecurity Act 2015

The *Biosecurity Act 2015* (Biosecurity Act) repealed the *Noxious Weeds Act 1993* on 1 July 2017. The Biosecurity Act specifies the duties of public and private landholders as to the control of priority weeds. Under this Act, priority weeds have been identified for Local Government Areas and assigned duties for control. Part 3 provides that any person who deals with biosecurity matter (ie weeds) and who knows, or ought reasonably to know, the biosecurity risk posed or likely to be posed by the biosecurity matter has a duty to ensure that, so far as is reasonably practicable, the biosecurity risk is prevented, eliminated or minimised.

As such, if present, priority weeds located on the proposal site should be assessed and controlled.

5.3.3 Heritage Act 1977

The *Heritage Act 1977* (Heritage Act) is concerned with all aspects of heritage conservation ranging from basic protection against indiscriminate damage and demolition of buildings and sites, through to restoration and enhancement.

Heritage places and items of particular importance to the people of NSW are listed on the State Heritage Register. Approval under section 60 of the Heritage Act is required for any direct impacts on a state listed heritage item. Approval from the NSW Heritage Council under section 139 of the Heritage Act is required prior to the activities likely to disturb a relic while section 140 of the Heritage Act provides for the application for a permit.

The proposal is anticipated to have a low potential to impact upon any identified heritage item or relic protected under the Heritage Act.

A full Heritage assessment has been undertaken and provided in the Oakdale West Estate EIS for SSD 7348. This report gives a detailed analysis of Heritage items in proximity to the site as well as mitigation and management measures.

5.3.4 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act) provides for the protection of Aboriginal objects (sites, objects and cultural material) and Aboriginal places. Under the NPW Act, an Aboriginal object is defined as: any deposit, object or material evidence (not being a handicraft

for sale) relating to indigenous and non-European habitation of the area that comprises New South Wales, being habitation both prior to and concurrent with the occupation of that area by persons of European extraction, and includes Aboriginal remains.

An Aboriginal place is defined under the NPW Act as an area, which has been declared by the Minister administering the Act as a place of special significance for Aboriginal culture. It may or may not contain physical Aboriginal objects.

It is an offence under Section 86 of the NPW Act to 'harm or desecrate an object the person knows is an Aboriginal object'. It is also a strict liability offence to 'harm an Aboriginal object' or to 'harm or desecrate an Aboriginal place', whether knowingly or unknowingly. Section 87 of the NPW Act provides a series of defences against the offences listed in Section 86 which includes if the harm was authorised by and conducted in accordance with the requirements of an Aboriginal Heritage Impact Permit (AHIP) under Section 90 of the NPW Act.

The proposal footprint will be restricted to a disturbed industrial footprint in an already approved staged development and the proposal is not anticipated to result in any previously unidentified impacts upon Aboriginal Heritage.

5.4 Commonwealth legislation

5.4.1 Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the Australian Government's central piece of environmental legislation that provides a legal framework to protect and manage environmental values considered to be of national environmental significance.

The EPBC Act requires approval from the Commonwealth Minister for the Environment and Resources for actions that may have a significant impact on listed matters of national environmental significance (MNES).

The Oakdale West Concept Proposal has undergone assessment by the Commonwealth Department of the Environment and Energy (DoEE). On the 31 August 2017 the DoEE determined the proposal is a "controlled action". A 'controlled action' defines the proposal as likely to result in significant impact and requires assessment and approval under the EPBC Act.

Approval (EPBC 2017/7952) was granted for the clearing of no more than 2.06 ha of Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest ecological community (CPW).

Although it should be noted that only 1.81 ha collectively of PCT 849 and PCT 850 meet the criteria for being considered as threatened ecological communities under the EPBC Act.

The proposed Stage 2 Development and Modification 3 concept proposal do not impact on the extent of CPW that has been approved to be cleared by DoEE.

6. Community and stakeholder consultation

6.1 Consultation with key stakeholders

Goodman has completed significant consultation with all key stakeholder groups dating back from 2015. This consultation has been frequent in nature as they progressed through the various items that were raised as part of the approval process. Following the approval of SSD 7348, Goodman appointed SLR Consulting to be the community liaison manager for the estate. The purpose of this appointment was to establish a dedicated team who would be available to answer the community's queries at any point of the day. SLR have drafted a community consultation protocol which has been submitted to the DPI&E for consideration.

Whilst SLR are engaged as the community liaison manager, Goodman maintain in regular contact with key authorities and members of the community, particularly in relation to upcoming development applications.

SLR and Goodman currently conduct monthly community and authority liaison meetings where the community meetings include the surrounding neighbours (including the school and aged care facility) and the authority group includes Penrith City Council, Endeavour Energy, and Transgrid for example

Consultation with key stakeholders has taken place for this application specifically, and is summarised in Table 6-1 below.

Table 6-1 Stakeholder consultation

Stakeholder	Consultation
DPIE (Water Group, Climate Change and Sustianability)	Recent correspondence has been held between Goodman's ecologist and DPIE. It has been confirmed that MOD 3 and the Stage 2 Development Application does not affect any previous biodiversity approvals.
Transport for NSW (TfNSW)	A meeting is scheduled with TfNSW on 12 December 2019 with the tenant and Goodman to discuss a proposed bus route to the estate given the worker population proposed to be generated from this application.
Roads and Maritime Services	Meetings have been held with the former Roads and Maritime office at TfNSW in relation to the application. Goodman has also communicated detail regarding the application to Roads and Maritime via email. Goodman has proposed a further meeting should Roads and Maritime have further questions.
Penrith City Council (PCC)	Goodman has met with PCC two times to discuss this application in detail. PCC has provided detail feedback on the proposal – mainly in relation to the design intent of the buildings, and the consideration of the strategic context of the development parameters given the increased height of the Stage 2B building. Goodman has addressed these items to the extent possible given the tenant's business guidelines and requirements.
Local Members of Parliament and Ministers Office	Consultation with Treasury and the Ministers Office commenced over six (6) months' ago by the tenant and is ongoing between Goodman and the tenant.
Fire & Rescue NSW	Meetings are to be held with Fire & Rescue in the New Year once Fire & Rescue are less occupied with the current fires occurring around Sydney. Goodman

	recognises early consultation with Fire & Rescue NSW is paramount, and will seek a meeting early in the New Year.
Endeavour Energy	Goodman met with Endeavour Energy on 13 November 2019 to discuss this application specifically. Endeavour Energy requested Goodman to complete an application for the power for the property as soon as practical.
TransGrid	Building 2B does not affect the Transgrid land. Goodman spoke to Transgrid in late November 2019 regarding Goodman's proposed site works and general maintenance Transgrid were completing on site. Transgrid participate in Goodman's authority liaison group.
WaterNSW	Building 2B is not adjacent to WaterNSW's land and therefore, further consultation with WaterNSW is not required.
WSEA Community	As mentioned above, Goodman have a monthly meeting with the community group where upcoming applications and current works are discussed.
General public, neighbourhoods schools and community	Goodman has emailed all neighbours to the south and west to outline the proposal. In addition to this, Goodman has had a meeting with the owners along Aldington Road (sensitive receiver N3, N4, and N5) to discuss the proposal at length and outline any possible impacts to their sight. As a result, Goodman will be entering into a noise agreement with the owner of N4 and N5. N3 is aware of the proposed development and has an existing noise agreement in place. Goodman has requested a meeting with both the owner of the land at N1 and N2, and the tenants being the schools and aged care facilities. These neighbours did not take up Goodman's offer for a meeting. N1 and N2 requested the visual impact assessment for the application which will be sent to them for consideration. Goodman will continue to discuss these applications with those in the community affected.

7. Environmental impact assessment – key issues

7.1 Introduction

This section provides a summary of the results of the assessment undertaken for the key issues identified by the SEARs. This section (and section 8) also take into account the outcomes of the risk assessment (see section 7.2).

The assessment has considered the following for each component of the proposal discussed in Section 4.

Concept Proposal modification –a comparison against the assessment provided in the approved EIS (SSD 7348) for the Concept Proposal and if there are inconsistencies with the conditions of approval for SSD 7348.

Stage 1 Development modification - a comparison against the assessment provided in the approved EIS (SSD 7348) for the Stage 1 Development and if there are inconsistencies with the conditions of approval for SSD 7348.

Stage 2 Development – A full assessment of the Stage 2 Development including Building 2B and an identification of any additional or amended mitigation measures required for this development above those already prepared for the approved SSD 7348.

This report presents the impact assessment of the Concept Proposal modification, Stage 1 Development modification and Lot 2B development together (see Sections 7.3 to 7.10).

7.2 Risk Screening

7.2.1 Purpose

An environmental risk screening was undertaken to identify potential environmental impacts that may arise as a result of the proposal. The assessment was undertaken to broadly identify the potential environmental risks that may arise as a result of the proposal and to identify whether there are any environmental aspects requiring further detailed assessment.

The environmental risk screening for the proposal involved:

- identifying environmental aspects
- identifying the source of potential risks associated with each of these aspects
- identifying the potential impact associated with each risk
- identifying any further assessment requirements needed to quantify the extent of impacts associated with the proposed modification.

Preliminary risk screening considered a range of issues in relation to the proposal to guide and inform the assessment stage. Early identification of issues through a risk screening process maximises opportunities to mitigate potential impacts of development through design responses applied in the planning of the proposal and may avoid the need for mitigation measures to be applied in response to impact assessment.

7.2.2 Criteria and screening

The risk screening process considers and prioritises issues based on the criteria defined in Table 7-1 and applies a ranking to guide the level of assessment required for that issue. The level of impact assessment corresponding to each of the risk categories is as follows:

- Key Issue – Requires detailed technical assessment to establish and quantify the extent of potential impact. Issue requires mitigation and management and further analysis of residual impact. These are discussed in Section 7.3 to 7.10 and the supporting technical studies are provided in Appendix F to Appendix Q.
- Other Issue – May require technical assessment to establish and quantify the extent of potential impact. Mitigation and/or management may or may not be required, alongside further residual impact assessment. These are discussed in Section 8.
- Not Applicable – The issue is of no further relevance to the assessment of the proposal.

Table 7-1 Risk assessment criteria

Risk and Constraint Category	Definition and Criteria	Priority for Impact Assessment
High	• Baseline analysis shows that issue is a key constraint and/or driver of design and/or layout. • Technical assessment indicates a high risk of significant impact. • Avoidance or specific/tailored mitigation or management measures are required to minimise the significance of the impact.	Key Issue
Moderate	• Baseline analysis shows that issue is a consideration for the Concept Proposal and development and may require a design response. • Technical assessment indicates a moderate risk of significant impact. • Potential impacts can be addressed through design responses and/or typical construction and/or operational management measures.	Key Issue
Low	• Baseline analysis shows that issue is relevant to inform the development but does not require a specific design response. • Technical assessment indicates a low risk of significant impact. • Management/mitigation may or may not be required through typical construction and/or operational management measures.	Other Issue
Not applicable	• Baseline data shows that the issue is not relevant to the development and does not require further consideration.	No impact assessment required.

The results of the risk assessment for the OWE proposal are shown in Table 7-2.

Table 7-2 Preliminary environmental risk screening results

Environmental aspect	Source of risk	Potential impact	Risk category	Section reference	Discussion
Visual Impacts	Height of Building 2B and construction activities	Potential increase in impact to sensitive receivers and alteration to the landscape character	Moderate	7.3	The proposal would involve an increase in building height and change in layout. This would result in a change in the visual impact on surrounding sensitive receptors. A Visual Impact Assessment has been undertaken to assess these impacts.
Traffic and access	Additional vehicle movements during construction and operation	Potential impacts upon the safety or capacity of the road network	Moderate	7.4	The proposal will alter the internal road layout of the OWE which may have an impact on capacity. Traffic volumes could also change and have an impact on the operation of the surrounding road network. An updated Traffic Assessment has been completed as part of the EIS.
Noise and vibration	Construction works Operational activities	Potential increase in impact to sensitive receivers.	Moderate	7.5	The modification to the layout of Precinct 2 and Precinct 3 may change the predicted noise levels compared to the approved limits. Operational traffic volumes and the construction and operation of Building 2B may result in exceedances to sensitive receivers. An updated Noise impact assessment was completed.
Soil and water	Construction and operational works	Interaction with contaminated material on site Increased stormwater runoff	Low	7.6	The approved EIS determined a low potential for contamination across the site, as remediation works were involved in the initial proposal. Due to the change in proposed earthworks and stormwater plans there is the potential for increase impacts on soil and water within OWE. Civil, Stormwater and Infrastructure Service Report have been competed as part of this EIS.
Waste management	Construction and operational waste	Increase waste during construction and operation	Low	7.7	Due to the change in scope of Stage 1 and proposed development of Stage 2 the is likely to be a change in the way that waste is managed within OWE. A Waste Management Plan (WMP) has been prepared to discuss the broad waste streams that the construction works would generate and the applicable mitigation measures.
Biodiversity	Clearing of land	Potential impacts upon threatened flora and fauna species, populations and ecological communities	Low	7.8	Land clearing was approved under the original EIS and minor alterations to will be assessed in the assessment.

Environmental aspect	Source of risk	Potential impact	Risk category	Section reference	Discussion
Air quality	Construction works, use of machinery, operation works	Dust from construction; and vehicle emissions during construction and operation	Low	7.9	The impacts to air quality, as a result of the proposal, are expected to be similar due to similar construction works and use of machinery as Stage 1. An Air Quality Impact Assessment (AQIA) for the proposal has been prepared to assess the impacts and provide mitigation measures to comply with air quality standards.
Sustainability and energy efficiency	Inefficient use of resources	Unsustainable use of energy and water resources and greenhouse gas emissions	Moderate	7.10	A design which does not consider energy efficiency measures, and sustainable use of water could negatively impact on local and regional resources. The approved EIS outlined the *Energy Management Plan* (EMP) and opportunities with regard to water reuse in respect to the proposed Stage 1 Precinct Development. The Stage 2 development should be consistent with these measures. ESD measures will also be taken into account for building design.
Waterways and Riparian areas	Construction and operation works	Impacts to water quality including sedimentation and turbidity within Ropes Creek	Low	N/A	Ropes Creek is in proximity to the OWE, however, does not boarder with Precinct 2. Stormwater and drainage will be established across the OWE Estate as part of the Stage 1 development. Consideration of potential impacts associated with the Stage 2 works and interactions with the approved water management system will be outlined in the EIS.
Flooding	Ropes creek flood extent	Earthworks effecting impacts of 1:100 year floods	Low	8.2	A design which does not consider flooding issues increase the risk of flooding damage. A revised study has been prepared to assess the likelihood of the impact.
Heritage	Construction works	Damaging or destroying heritage items or archaeological potential.	Low	8.3	The approved EIS Heritage Impact Assessment (HIA) determined that there would be some impact to heritage. There is possibly additional impacts on heritage by the proposal due to additional ground disturbances and construction of Stage 2 development. Further assessment has been undertaken to determine the impact of the proposal on listed heritage items.
Fire Safety	Building design cause hazards to occupants	Unsafe fire construction and operational	Low	8.4	A Fire Safety Strategy has been undertaken to comply with the relevant guidelines and legislation. Ensuring occupant safety is critical to OWE during construction and operation. Goodman will be proactively engaging in discussions with Fire & Rescue NSW.
Bushfire		Occupant safety	Low	8.5	A bushfire protection has been provided as part of this EIS to assess the risks and mitigation measures needed to support the OWE development.
Mineral resources	Excavation	Loss of resources	Negligible	N/A	The approved EIS concluded that the underlying clay/shale is not of short supply, and common in the local area. The proposal would not impact mineral resources, as there would not be any additional extractive activities. No further assessment will be required.

7.2.3 Priority for assessment

Based upon the results of the environmental risk screening, the following broad qualitative risk ratings were assigned for each environmental aspect.

- High – nil
- Moderate – Visual, Traffic and access, noise and vibration, Sustainability and energy efficiency
- Low – Soil and water, Waste management, Biodiversity, Air quality, Waterways and Riparian areas, Flooding, Heritage, Fire Safety, Bushfire
- Negligible – Mineral resources.

More detailed consideration of environmental impacts is provided in the following section, with the level of assessment commensurate with the level of risk associated with the proposal.

7.3 Visual amenity

A summary of the Landscape Character and Visual Impact Assessment (LCVIA) undertaken by Clouston Associates is provided in the following sections. The full report is provided in Appendix F.

The purpose of the LCVIA is to assess the potential landscape character and visual impacts of the proposal on surrounding private and public receivers, and outline appropriate strategies for mitigation.

7.3.1 Existing conditions

OWE has approximately 200m of direct frontage to Bakers Lane with a proposed intersection providing vehicular access via Bakers Lane and a proposed WNSL Road from the northern side to the precinct.

Emmaus Catholic College and Emmaus Retirement Village are located directly to the west of the site. A private residence is located adjacent to the southern boundary of the site. The site is bounded to the north by the WaterNSW pipeline and to the east OWE shared boundary Oakdale South Estate employment development and Ropes Creek (see Figure 2-1). A 30 metre wide transmission line easement runs along the eastern edge of the site.

Topography

The topography of the site is of a rolling ridge and valley nature. The site generally falls from south to north and east to west. The high point of the ridge is approximately the middle portion of the site and close to the southern boundary.

The long main ridge runs through the middle portion of the site on a north south alignment, falling to east, west and north, with several spurs to the east and west.

Land Use

The existing land use of the proposal site is grazing farm land. An abandoned cottage sits on top of the ridge and was the accommodation for the farm manager. The site is currently comprised of open grassland with woody vegetation mostly confined to small groups of individual trees and groupings of trees on the eastern and western boundaries. There is existing vegetation along Ropes Creek, the western boundary and the property adjacent to the southern side of the proposal site.

Flora

The eastern boundary of the proposal site is heavily vegetated with mature trees along Ropes Creek corridor which forms a natural buffer between the site and the Oakdale South Development. The southern boundary is also heavily vegetated with mature trees; however, the trees are located on the adjacent land rather than the site itself.

There is no vegetation between the dwelling on Bakers Lane and the proposal site. The western boundary has pockets of mature vegetation on the site boundary with significant clusters around the buildings that comprise the Emmaus seniors living facility.

Landscape character

Landscape character is a combination of distinctive qualities of a certain area including readily identifiable elements such as landform, vegetation cover, built-form & architecture, as well as history, seasonal changes, human culture, urban grain, wildlife and land use. Together these elements produce a distinctive character that influences how the landscape is perceived and valued by the community. The existing landscape character of the proposal site is as follow:

- open rolling farmland with long horizons
- rural agriculture with groups of trees
- Blue mountain escarpment background to the west
- large size of residential blocks to the south of the site
- existing industrial estate to the north of the site.

The proposal will be by its nature alter this character within the site itself but only to the relatively small visual catchment and the existing employment lands landscape will not significantly alter the local character.

Approved SSD 7348

The approved SSD 7348 Concept Proposal and Stage 1 Development would result in a significant change to the levels across the site. The major change to existing ground levels will be the cutting of the major ridge line that runs in a south-north direction on the site. The ground level at the existing high points in the site will be lowered by over ten metres. The approved SSD 7348 assessed vegetation clearance and the placement of warehouses and infrastructure, as discussed in section 3.1.

7.3.2 Impact assessment

Overview

The landform changes and vegetation removal required for the proposal are consistent with the approved SSD 7348 master plan and subsequent modifications. The proposal will result in an alternate site layout, setbacks and scale of warehouses and infrastructure within the proposal site. Building 2B is a greater scale and height than assessed in approved SSD 7348 (refer to section 4). The SEARs for the proposal require an assessment of the visual impacts of the proposed development.

The LCVIA assessed four views into the estate, having regard to the site context and potential view corridors to the site. Impact of the proposal are to landscape character and the visual catchment of the site are discussed below.

Landscape character assessment

The proposal will by its nature alter the landscape character discussed in section 4.3.5 within the site itself but only to the relatively small visual catchment and the existing employment lands landscape will not significantly alter the local character. There is no significant change to the impact to landscape character in the approved SSD 7348.

Visual amenity impact assessment

There are three principal receptors within the immediate visual catchment of the proposal. These receptors are Emmaus College, the aged care facility and the Bakers Lane residences. A visual impact assessment to these receptors has been considered from four view point locations shown in Figure 7-1 and summarised in Table 7-8 and Table 7-9. An additional three view point locations were considered in the LCVIA (Viewpoint 5 to 7) and it was determined that views of OWE were not possible from these locations and were therefore excluded from the assessment.

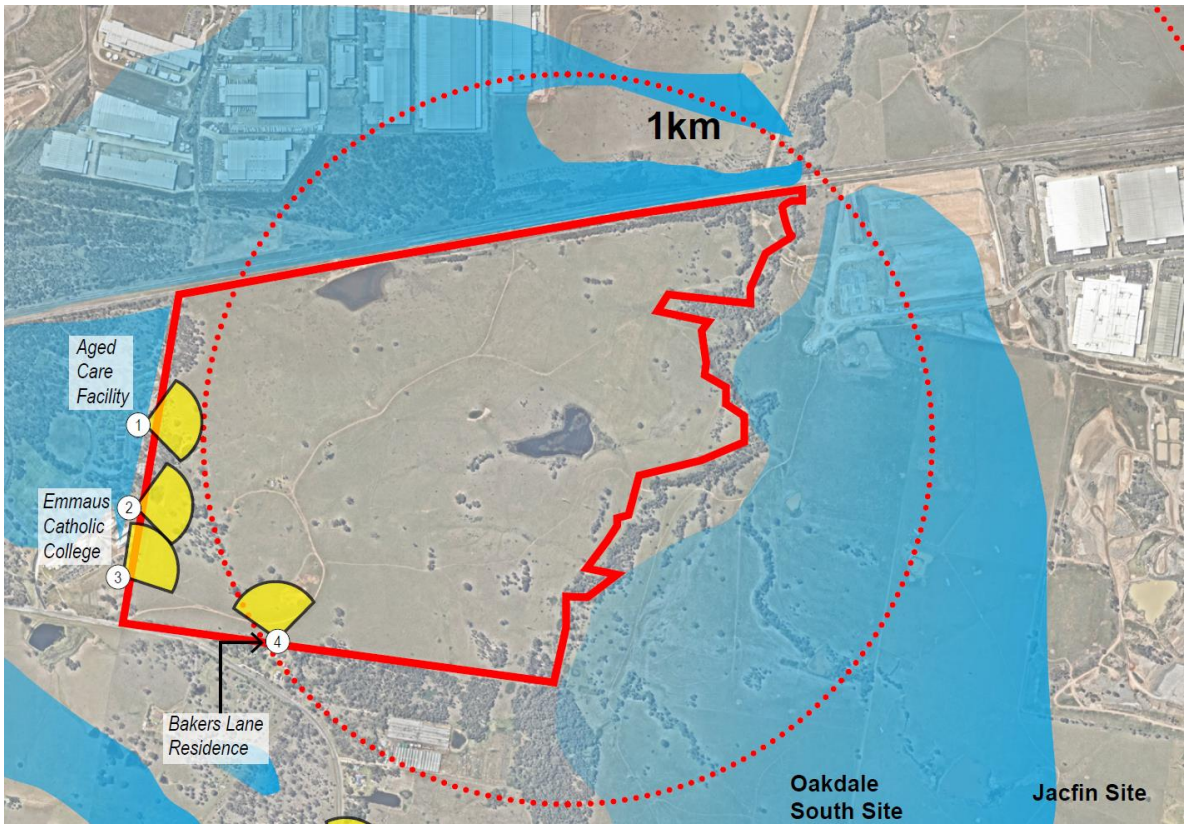


Figure 7-1 Viewpoint locations

The overall visual impact rating of the Proposal at each viewpoint is rated based on themes of magnitude and sensitivity and recorded using a four band scoring system from negligible to high.

- Sensitivity: each visual receptor type has an inherent and varied sensitivity to change in the visual scene based on the personal context in which their view is being experienced (ie. At home, on the street, in a park etc). This sensitivity has a direct bearing on the perception of visual impact experienced by the receptor and qualifies the quantitative impacts
- Magnitude: a measure of the magnitude of the visual effects of the development within the landscape. A series of quantitative assessments are studied, including distance from development, quantum of view, period of view and scale of change
- Overall Impact Rating: The severity of these impacts is calculated using a matrix outlined in Section 2.8 of Appendix F.

Viewpoint 1 - Emmaus Residential Aged Care

Viewpoint 1 is from the open space area around the reception of the aged care facility extending to the middle distance, with the existing mature vegetation creating a visual enclosure. The landscape is generally flat at this location. Large clusters of mature trees are visible. A description of the potential impacts to Viewpoint 1 due to Modification 3 and Stage 2 proposal are summarised in Table 7-3 as well as the overall impact rating of the proposal.

Table 7-3 Viewpoint 1 - Emmaus Residential Aged Care visual impact assessment

Features/Value	Expected visual impact	Overall visual impact rating
Modification 3	The modifications to the estate's building layouts and levels between the 2019 approved master plan (as shown in Figure 7-2) and Modification 3 is expected to have no additional visual impact, once the landscape embankment has fully established. The approved building and landscape buffer planting is illustrated in Figure 7-3. As a result the visual impact rating remains largely unchanged. The proposal, particularly proposed buildings 2A and 2B, will be visible from the Emmaus Age Care facility and adjacent open space, as shown in Figure 7-5. The existing trees will filter part of the proposed buildings. A moderate / high visual impact is expected with a noticeable change in the visual scene if no mitigation is undertaken. The landscape strategy of the master plan would assist in reducing this impact. This includes the establishment of the landscape buffer and mounding. On this basis, the impacts would reduce to Moderate/Low. .	Moderate
Stage 2	The proposed building 2B will be visible from the Emmaus Aged Care facility and adjacent open space, as shown in Figure 7-4. It will be set back approximately 170 metres from the shared boundary. The existing trees in the foreground will filter part of the proposed building. A Moderate/High visual impact is expected with a noticeable change in the visual scene if no mitigation is undertaken. The landscape strategy of embankment planting and acoustic wall on the top of the bank would provide limited reduction in visual impact at this initial phase. On this basis, the impacts would reduce to Moderate/Low.	Moderate/Low

Figure 7-2 Viewpoint 1 2019 approved master plan before mitigation

Figure 7-3 Viewpoint 1 proposed master plan after mitigation

Figure 7-4 Viewpoint 1 Stage 2 DA photomontage (Proposed landform, Stage 2 DA building and noise wall)

Figure 7-5 Viewpoint 1 Modification 3 photomontage (Proposed landform, Stage 2 DA building, noise wall and Modification 3 Building(s)

Viewpoint 2 - Emmaus Catholic College

Viewpoint 2 is from a lawn area adjacent to the classroom windows in Emmaus Catholic College, replicating a similar view to that from inside the classroom, which extends to the middle distance, with the natural topography and open land visible. A varied and rolling topography, existing fence and clusters of mature vegetation form the existing view. A description of the potential impacts to Viewpoint 2 due to Modification 3 and Stage 2 proposal are summarised in Table 7-4 as well as the overall impact rating of the proposal. The approved building and landscape buffer planting is illustrated in Figure 7-7. Viewpoint 2 provides two views from the same viewpoint. Although both are from a similar location, Figure 7-6 and Figure 7-7 look south-east whereas Figure 7-8 and Figure 7-9 look directly east.

Table 7-4 Viewpoint 2 - Emmaus Catholic College visual impact assessment

Features/Value	Expected visual impact	Overall visual impact rating
Modification 3	The modifications to the estate's building layouts and levels between the 2019 approved master plan and Modification 3 master plan is expected to have no additional visual impact, once the landscape embankment has fully established (15-20 years subject to soil and weather conditions) as shown in Figure 7-8. The visual impact rating remains unchanged.	Moderate/High
Stage 2 DA	The proposed landform, will be highly visible from this viewpoint, eliminating views to neighbouring rural lands. The proposed building 2B will be setback approximately 300 metres from the shared boundary, but will not be visible due to the acoustics wall. The scale of the embankment and acoustics wall will be significant in this view. A high visual impact would be expected with a significant change in the visual scene from an open land view due to a constructed embankment and acoustic wall. The proposed mitigation in the 40 m wide landscaped embankment with tree and understorey plantings along this boundary and an acoustic wall on top of bank are shown in Figure 7-8. The mitigations would result in some reduction to visual impact. On this basis, the impacts would reduce to Moderate/Low when the landscape planting reaches maturity.	High

Figure 7-6 Viewpoint 2 - 2019 approved master plan before mitigation

Figure 7-7 Viewpoint 2 proposed buildings and buffer planting

Figure 7-8 Viewpoint 2 - Stage 2 DA photomontage (Plants at 1 year with noise wall, Stage 2 DA Building is not visible from this viewpoint)

Figure 7-9 Viewpoint 2 - Modification 3 photomontage (Plants at full maturity (15-20 years) with noise wall and Modification 3 Building(s), Stage 2 DA Building is not visible from this viewpoint)

Viewpoint 3 - Emmaus Catholic College

Viewpoint 3 is from the open space area at the top of a ridge, extends to the middle distance, with the natural topography, landscape features and existing buildings forming a visual enclosure. A varied and rolling topography includes clusters of mature vegetation, existing buildings and structures form the existing view. A description of the potential impacts to Viewpoint 3 due to Modification 3 and Stage 2 proposal are summarised in Table 7-5 as well as the overall impact rating of the proposal. The approved building and landscape buffer planting is illustrated in Figure 7-11.

Table 7-5 Viewpoint 3 - Emmaus Catholic College visual impact assessment

Features/Value	Expected visual impact	Overall visual impact rating
Modification 3	Modification 3, particularly proposed buildings 3A to 3C, 3D, 3F and 2B will be highly visible from the Emmaus Catholic College and adjacent open space. Although the proposed buildings will be located 40 metres set back from the shared boundary, the scale of the buildings will be significant in this view. A high visual impact is expected with a significant change in the visual scene if no mitigation is undertaken. Significant planting along this boundary would substantially reduce the visual impacts. The proposed landscape embankment is shown in Figure 7-12 and Figure 7-13. Modification 3 is expected to have no additional visual impact and the visual impact rating remains largely unchanged once the landscape embankment is fully established. Full maturity is expected to take 15-20 years depending on soil and weather conditions.	Moderate/Low
Stage 2 DA	From this location, the Stage 2 DA including proposed building 2B will be highly visible from the Emmaus Catholic College and adjacent open space, with landform and built form eliminating distant views of undulating topography and scattered trees. The existing trees adjacent to the development will filter part of the development as shown in Figure 7-11. A High visual impact is expected with a noticeable change in the visual scene if no mitigation is undertaken. The landscape strategy of embankment planting and acoustic wall on the top of bank would provide limited reduction in visual impact. On this basis, the impacts would reduce to Moderate/Low.	Moderate/High

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Figure 7-10 Viewpoint 3 - 2019 approved master plan before mitigation

Figure 7-11 Viewpoint 3 - 2019 approved master plan before mitigation

Figure 7-12 Viewpoint 3 - Stage 2 DA photomontage (Plants at 1 year)

Figure 7-13 Modification 3 photomontage (Plants at full maturity, 15 – 20 years)

Viewpoint 4 - Private Residence on Bakers Lane

Viewpoint 4 is from a property to the south of OWE. It is open and expansive due to the elevated position of the property. The Blue Mountains form a consistent band along the horizon. This is an elevated outlook across open farm land with small dams and clusters of trees. Clusters of mature vegetation form an enclosure on the boundary of the property. A description of the potential impacts (combination of sensitivity and magnitude ratings) to viewpoint 4 are summarised in Table 7-6.

Table 7-6 Viewpoint 4 - Private Residence on Bakers Lane visual impact assessment

Features/Value	Expected visual impact	Overall visual impact rating
Modification 3 Master Plan	The proposal is visible from the dwelling, see Figure 7-16. With the elevated position of the dwelling, the roof lines of the proposed buildings will be visible. However, the panoramic western outlook of these dwellings will not be affected as the proposal will sit below the elevated position of the dwellings and private open space. The modifications to the estate's building layouts and levels between the 2019 approved master plan (see Figure 7-14) and Modification 3 is expected to have a slight increase of visibility although the overall visual impact rating will not change. .	High
the Stage 2 DA	From this elevated position, the Stage 2 development will be highly visible. The landform and build form interrupt distant views of the Blue Mountains and beyond to the east, as shown in Figure 7-15. Due to the elevated outlook from these dwellings and associated private open space, the infrastructure on the western boundary will be mostly obscured. A High visual impact is expected due to the interruption of these distant views by the proposed built form. No mitigation measures are proposed as this would result in further loss of distant views towards the surrounding landscape as this is a significant feature of this location.	High

Figure 7-14 Viewpoint 4 2019 approved master plan before mitigation

Figure 7-15 Viewpoint 4 - Stage 2 DA photomontage (Plants at 1 year)

Figure 7-16 Viewpoint 4 - Modification 3 photomontage (Plants at full maturity. Note that visible planting shrubs only, no trees visible from this location)

Construction impacts

Typically, the visual impacts during construction would include:

- Earthworks
- Site compounds
- Construction parking
- Night lighting
- Temporary maintenance plant.

In general these visual impacts of will be temporary in nature and are therefore not considered significant.

It is also not possible to determine the exact visual impacts in this phase until such time as a detailed construction plan has been established. Based on typical building phases, it can however be expected that unmitigated visual impacts during construction phases when evaluated from the viewpoints in this assessment may be as follows:

- Major bulk earthworks: Moderate to High
- Scaffolding and cranes: Moderate to High
- Built form: Low in early phases to Moderate or High in later phases

All of these impacts would be expected to reduce to those identified in the above assessment on completion and occupation of OWE.

Additionally, some of the mitigation measures put in place to reduce the visual impacts of the building will be in place before construction commences. This includes the 40 metre landscaped embankment along the Emmaus Catholic College boundary which will be completed six months

prior the commencement of the construction of Building 2B. This arrangement allows time for the vegetation to become established, with its capacity to screen views to develop increasing as the tree and understorey plantings mature.

Visual impact summary

The visual impacts of the proposal from the four assessed viewpoints range from Moderate to High. The impact of the proposal on all four viewpoints will be reduced through landscape buffer zones with trees and understory planting. When mitigation in the form of the boundary planting is applied, the visual impact ratings reduced to a range of Moderate/Low to Moderate/High. Boundary planting is expected to take 15 to 20 years to become fully established however it will be effective from the first year. Table 7-9 provides an overview of the visual impact at each of the assessed viewpoints and impact rating following the implementation of the proposed mitigations.

The visual impact of Stage 2 Developments, including Building 2B and the associated noise wall, is consistent with the visual impact for the entire estate. The proposed concept plan indicates a slight increase in impact at viewpoint 4 while viewpoint 3 has been reduced. The overall visual impact has been determined as substantially the same as that originally approved including the increased building height and noise wall heights/lengths. A comparison of the visual impacts rates after mitigations in Table 7-8 and Table 7-9 shows that there has not been a substantial change in the visual impact as a result of Modification 3.

Table 7-7 Visual impact rating summary for the 2019 approved masterplan

Receptor type	Receptor Sensitivity	Magnitude					Before mitigation	After mitigation
		Distance	Quantum of View	Period of View	Scale of change	Summary of Ratings	Impact Rating	Impact Rating
Viewpoint 1	High	High	Low	Mod	Low	Mod	MODERATE	MODERATE /LOW
Viewpoint 2	High	High	High	High	High	High	High	MODERATE /HIGH
Viewpoint 3	High	High	High	Mod	High	High	HIGH	MODERATE
Viewpoint 4	High	High	Low	High	Low	Mod	MODERATE/ HIGH	MODERATE /HIGH

Table 7-8 Visual impact rating summary for Modification 3

Receptor type	Receptor Sensitivity	Magnitude					Plants at full maturity
		Distance	Quantum of View	Period of View	Scale of change	Summary of Ratings	Impact Rating
Viewpoint 1	High	High	Low	Mod	Low	Mod	MODERATE
Viewpoint 2	High	High	Low	High	Low	Mod	MODERATE/HIGH
Viewpoint 3	High	High	Low	Mod	Low	Low	MODERATE/LOW
Viewpoint 4	High	High	High	High	High	High	HIGH

Table 7-9 Visual impact rating summary for Stage 2 Developments

Receptor type	Receptor Sensitivity	Magnitude					Plants at full maturity
		Distance	Quantum of View	Period of View	Scale of change	Summary of Ratings	Impact Rating
Viewpoint 1	High	High	Low	Mod	Low	Mod/ Low	MODERATE/LOW
Viewpoint 2	High	High	Mod/ High	High	Mod/ High	High	HIGH
Viewpoint 3	High	High	Mod	Mod	Mod	Mod	MODERATE/HIGH
Viewpoint 4	High	High	High	High	High	High	HIGH

7.3.3 Mitigation measures

The following mitigation measures are either already in place or are recommended.

- The existing vegetation on the eastern, southern and western boundary will be retained where possible to assist filtering views to the proposed buildings
- The proposed landscape design provides sufficient visual mitigation of the development by creating a 40 metre vegetated embankment with extensive tree and understorey planting along the western boundary bordering Emmaus Catholic College
- Landscaped embankment along the western boundary will be completed six months prior to the commencement of the Stage 2 DA.

7.4 Traffic and transport

A summary of the results of the Traffic Impact Assessment (TIA) undertaken by Ason Group is provided in the following sections. The full report is provided in Appendix G.

The TIA will address the impacts as a result in the changes under Modification 3 (SSD 7348) and the Stage 2 Development (SSD 10397).

7.4.1 Existing conditions

Traffic and transport assessments in the area has been extensive over recent years, including assessments for the WSEA, alternate Oakdale Estate's and the approved SSD 7348. These reports have been considered in the TIA.

A summary of the existing and proposed regional road network is provided in Table 7-10.

Table 7-10 Regional road network summary

Road	Description	Status
Existing		
M7 Motorway	A four lane highway part of Sydney's orbital network located 2.5 km north of OWE. 70,000 vehicles per day (vpd) capacity.	Operational
Wallgrove Road	Two-lane, two-way road that runs parallel to the M7, approximately 2.5 km to the north of OWE. 30,000 vpd capacity.	Operational
Lenore Drive	Sub arterial road running east to west, connecting OWE to Mamre Road	Operational
Old Wallgrove Road	Connects Lenore Dr and Wallgrove Rd as a local road. Recent upgrades have provided a connection to M7 interchange via M7 Business Hub and Roberts Road	Operational
Proposed		
Western North South Link Road (WNSLR)	1.3 km dual lane carriage way connecting the Oakdale Estates to Lenore Drive and the planned SLR	Under construction as part of OWE Stage 1
Planned		
Southern Link Road (SLR)	Additional road infrastructure to service the WSEA, specifically South of Warragamba Pipeline area	Planned construction under RMS, delivered 3–8 years

Approved network and traffic generation

The estate road network under the approved SSD 7348 Concept Proposal and Stage 1 Development is shown in Figure 4-1. The approved SSD 7348 provides comprehensive analysis of the OWE traffic access and connections. The initial EIS outlined impacts to regional and local conditions as a result of the staged development of the OWE. In light of the mitigation and management measures provided in the report, the Concept Proposal and Stage 1 Development were determined 'supportable with respect to access, transport and traffic'.

The traffic generation under the approved SSD 7348 consent:

- 1.892 vehicles per day per 100 m^2 of GFA
- 0.163 peak vehicles per hour per 100 m^2 of GFA.

Table 7-11 Approved traffic generation

Precinct	GFA (m^2)	AM/PM Peak Hour (veh/hr)	Daily (veh/day)
1	116,359	190	2,202
2	105,425	172	1,995
3	99,967	163	1,891
4	120,988	197	2,289
5	32,530	53	615
Total	**475,269**	**775**	**8,992**

According to Table 7-11, the following peak hour and daily traffic figures were considered for Precinct 2 and Precinct 3 as part of SSD 7348:

- Peak hour: 335 veh/hr
- Daily: 3,886 veh/day.

7.4.2 Impact assessment

Operational traffic management

The proposal will result in amendments to estate roads within Precinct 2 and Precinct 3 as shown on Figure 4-4. The amendments to the estate road network was required as a result of the revised subdivision layouts and will include the following changes to the estate road network:

- Realignment of the Estate Road 03 around Precinct 2 and Precinct 3
- Construction of a roundabout controlled intersection at the new Estate Road 01 and Estate Road 03 intersection

Traffic generation associated with the OWE has been developed using both a theoretical approach utilising approved generic generation rates for GFA in accordance with the original assessment for SSD 7348 and a combined approach using first principles data using specific trip generation data provided by prospective tenants of Precinct 1 and 2.

Table 7-12 outlines the predicted traffic generation for the proposal based upon the theoretical approach to allow a direct comparison with the approved SSD 7348.

Table 7-12 Modification 3 precinct traffic generation

Precinct	GFA (m^2)	AM/PM Peak Hour (trips)	Daily (trips)
1	122,082	199	2,310
2	264,107	431	4,997
3	57,820	94	1,094
4	113,694	185	2,151
5	35,640	58	674
Total	**583,586**	**951**	**11,226**

In accordance with the theoretical approach, Precinct 2 and Precinct 3 will result in the following traffic generation:

- Peak hour: 525 veh/hr
- Daily: 6,091 veh/day

Precinct 2 traffic generation has also been estimated using the site specific data from predicted schedules for the Stage 2 Development combined with the generic theoretical approach for other unknown tenancies within the precinct. Seasonal peak periods were estimated which

indicate higher traffic volumes may occur for short periods of time in the lead up to busy consumer periods (eg. Christmas and other special days).

The first principles approach has predicted the following peak hour and daily traffic volumes for Precincts 2 and 3 with the figures in brackets represent peak seasonal conditions which would only occur for a short period of time:

- AM Peak 771 (1,014) veh/hr
- PM Peak 562 (723) veh/hr
- Daily: 4891 (5,995) veh/day.

The difference in overall traffic generation for OWE based upon the works proposed as part of Modification 2 and Modification 3 to the consent are outlined in Table 7-13. Peak season refers to the last 6 weeks of the year when distribution of products is expected to increase due to the holiday gift giving season.Upon completion of MOD 2 and MOD 3 the surrounding road network would see an increased traffic generation of 333 (585 during peak season) and 104 (269 during peak season) veh/hr during AM and PM peak period and additional of 784 (2,322 during peak season) veh/day during the weekday.

Table 7-13 OWE total traffic generation

Time Period	Originally Approved	MOD 2	MOD 3	Difference (post-completion of MOD 2 and 3 vs. originally approved)
AM Peak	775	679 (688)	1,108 (1,360)	333 (585)
PM Peak	775	679 (688)	879 (1,044)	104 (269)
Daily	8,992	8,850 (9,294)	9,776 (11,324)	784 (2,332)

Note: Peak Seasonal in brackets ()

It is important to note that the peak seasonal is expected to only occur for a short period of time, and the above assessment has assumed that the seasonal peak for building 1A tenant and building 2B tenant will occur at the same time.

The impact of the additional traffic generation as a result of the modification to the Concept Proposal forming part of SSD 7348 has been assessed using SIDRA modelling to assess the capacity of critical intersections for interim (2026) and ultimate (2036) forecast year scenarios.

The SIDRA analysis indicates that MOD 3 will result in moderate increases in Average Vehicle Delay (AVD) and Level of Service (LoS) generally at all intersections on the local road network. Despite these minor increases, these intersections will operate with acceptable level of service (LoS D or better) in both forecast years (2026 and 2036) during peak seasonal and non-peak seasonal periods.

The traffic impact analysis concludes that the overall OWE traffic generation volumes will have no material additional impact at the surrounding key intersections and that the infrastructure approved as part of the original Concept Plan will be sufficient to accommodate the impacts of the stage development.

Lot 2B operational vehicle movements

Table 7-14 and

Table 7-15 summarises the non-peak and peak vehicle movements predicted for Stage 2 Development.

Table 7-14 Non-peak vehicle movements

Period	Cars			Trucks			Cars & Trucks (inbound & outbound)
	Inbound	Outbound	Total	Inbound	Outbound	Total	
AM Network Peak (7:00-8:00)	267	297	564	8	8	16	580
PM Network Peak (17:00-18:00)	206	157	363	4	4	8	371
Daily Total	**1,174**	**1,174**	**2,347**	**165**	**165**	**330**	**2,677**

Table 7-15 Peak seasonal vehicle movements

Period	Cars			Trucks			Cars & Trucks (inbound & outbound)
	Inbound	Outbound	Total	Inbound	Outbound	Total	
AM Network Peak (7:00-8:00)	381	424	805	9	9	18	823
PM Network Peak (17:00-18:00)	294	224	518	7	7	14	532
Daily Total	**1,676**	**1,676**	**3,352**	**216**	**216**	**432**	**3,784**

The Precinct-wide modelling described above has demonstrated that the cumulative traffic generation will not present worsening impacts to the road network, inclusive of the wider estate's internal roads and connections to the Link Roads. This demonstrates that the road network has sufficient capacity to cater for Building 2B traffic whilst maintaining operation at a satisfactory level.

Accordingly, this DA will not result in any unacceptable traffic impacts and no additional upgrades at surrounding road network would be required as part of this DA.

Lot 2B access

In regards to traffic and access the following are key characteristics have been assessed:

- four private vehicle crossovers to Estate Road 3 providing access to the parking facilities
- a primary entry and exit access crossover for commercial vehicles at the northern boundary of the
- site, facilitating B-Double access and egress movements
- a secondary exit only crossover at the Site's southern boundary, facilitating movements through peak periods throughout the year.

Figure 7-17 shows proposed vehicle type access points for Lot 2B. These access points have been determined acceptable for the vehicle generation through Lot 2B.

Lot 2B parking

- Parking provisions approved in accordance with SSD 7348 are outlined as follows:
- one space per 300 m^2 for Warehouse
- one space per 40 m^2 for office
- two accessible spaces per 100 car parking spaces.

Using the car parking rate above and the total Building 2B footprint of 56,365 m^2, 285 car parking spaces are required. The proposed Stage 2 Development will provide 1,127 car parking space, which significantly exceeds the required minimum. The substantial increase in parking provision is due to the future tenants needs to accommodate an expected 1,500 staff a day.

The peak season is expected to occur for 4-6 weeks annually, predicating 587 staff during non-peak and 838 during peak periods. The proposed parking provisions are also expected to provide accommodations for unexpected surges.

Accessible parking requirements under Condtion B13(e) stipulate 23 accessible spaces must be provided according to the disability parking rates. The design has incorporated 34 accessible parking spaces to satisfy this requirement.

In response to Condition B14 (below) 128 bicycle parking spaces have been provided exceeding the 120 requirement:

- staff bicycle parking requirement (3-5% of staff number)
- visitor bicycle parking requirements (5-10%) of staff number).

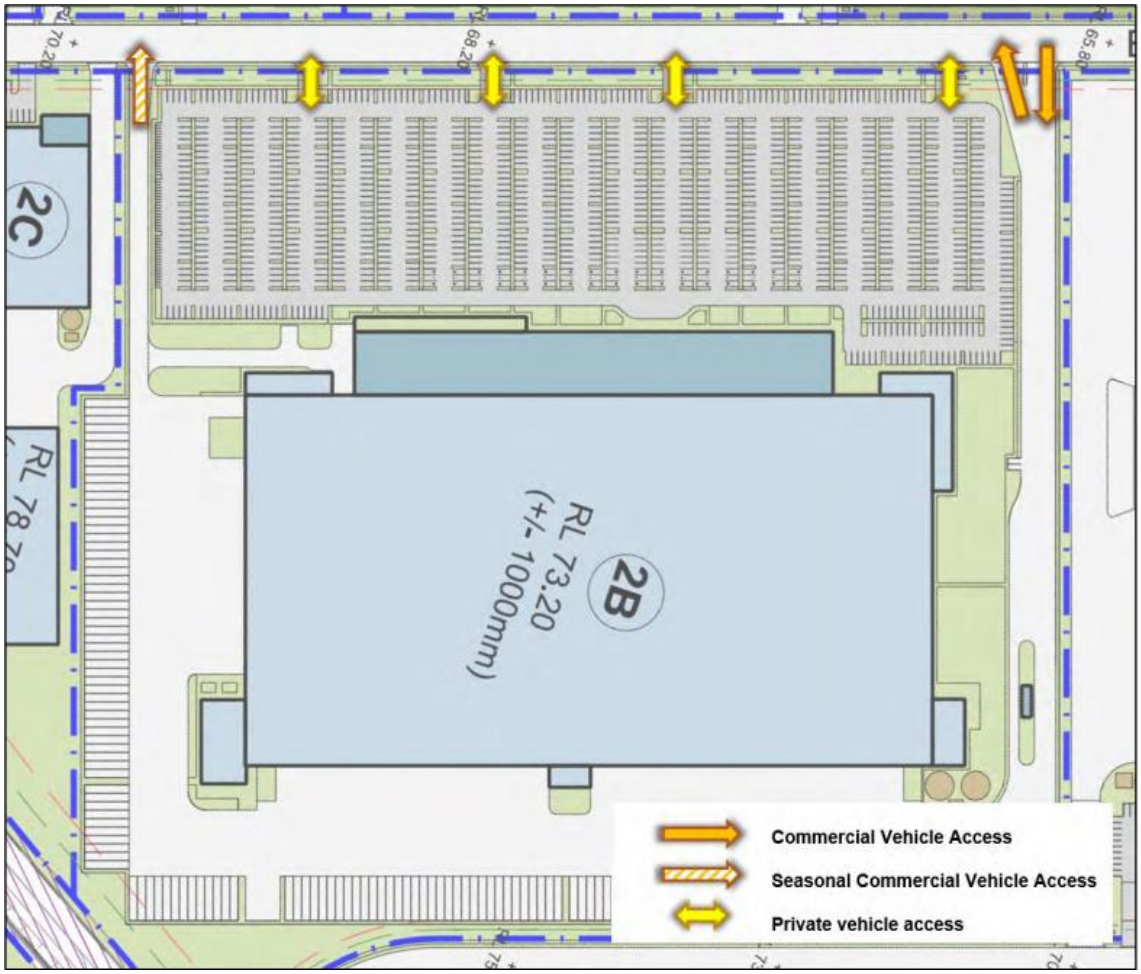


Figure 7-17 Lot 2B vehicle access

Public transport and active transport

The closest railway station is 7 km from OWE establishing unlikely influence on commuters in regards to the proposal. A bus station is located 400 m, however, there is no existing services to cause impacts to OWE. The proposal will target a 20% public and active transport and 80% private car transport.

Public transport and active transport use is not expected to cause any impacts on the road network during construction operation.

Goodman is meeting with Transport for NSW to discuss a bus service at the estate.

Construction traffic management

A condition of consent following the approval of SSD 7348 Concept Proposal was to provide a detailed Construction Environmental Management Plan (CEMP), including a Construction Traffic Management Plan (CTMP).

The TIA predicts there will be no additional traffic impacts to the estate road network or the regional road network as a result of construction activities for the proposal. This is a result in the quantum of cut to fill anticipated to deliver the site plan and anticipated pad levels has reduced from the Stage 1 development resulting in an overall reduction to the number of construction vehicles on the road network. There was therefore predicted to be no impacts associated with construction vehicles required to support the Stage 2 Development.

Heavy vehicle routes proposed for the Stage 2 Development will take into account restrictions on the use of Bakers Lane during peak hours. Bakers Lane is proposed to be utilised for construction access prior to the completion of WNSLR. Existing traffic flows along Bakers Lane have been assessed as constrained in AM peak 8:00 am – 9:00 m and PM peak 2:30 pm – 4:00 pm corresponding to peak school peak school pick-up and drop off times.

The construction hours of Stage 2 Development will occur between 3 am and 10 pm 7 days a week. However, Bakers Lane will only be used during non AM and PM peak periods and be utilised for vehicles associated with construction and earthworks only. Traffic assessments have been undertaken on Bakers Lane, Mamre Road and intersection between them determining an acceptable level of service.

For construction traffic during peak hours (3 hours a day corresponding to school drop off and pick-up) the proposed route will follow Aldington Road and Abbotts Road. The Aldington Road route has been determined acceptable for use until WNSLR is operational. Aldington Road will only be used for construction and earthworks for works related to the Lot 2B pad.

7.4.3 Mitigation measures

The Stage 2 Development and Modification 3 will not result in any unacceptable traffic impacts and no additional road upgrades are required. However, mitigation measures are outlined below to ensure limited traffic impacts as a result of the OWE works:

- Temporary use of Bakers Lane until WNSLR is operational (per current approval)
- Alternate Stage 2 earthworks and construction vehicle route via Adlington Road during school peak hours

7.5 Noise and vibration

A summary of the results of the Noise and Vibration Impact Assessment (NVIA) prepared by Wilkinson and Murray Pty Ltd is provided in the following sections. The assessment address the impacts as a result in the changes under Modification 3 (SSD 7348) and the Stage 2 Development (SSD 10397) and the full report is provided in Appendix H.

7.5.1 Existing conditions

Existing environment

The existing ambient noise environment surrounding the proposal site is typical for a rural environment, with the natural environment dominating the background noise. The nearest noise and vibration sensitive receivers are:

- Residential premises that lie to the west, south, southeast and north of the OWE.
- Emmaus Village approximately 20 metres to the west of the OWE site boundary.
- Kemps Creek rural-residential area. The closest dwelling is approximately 20 metres to the south of the OWE site boundary.
- Mount Vernon and residential properties in Horsley Park, as well as the proposed Jacfin RU4 residential subdivisions and the proposed Capitol Hill residential subdivision. The closest point of these residential lands is approximately 840 metres to the southwest of the OWE site boundary.
- Erskine Park residential suburban areas approximately 1,500 metres to the north of the OWE site boundary.
- Three schools and a childcare centre are located to the west of the OWE site boundary.

Approved SSD 7348

A NVIA was carried out as part of the initial EIS for the approved SSD 7348. This identified a number of impacts to sensitive receivers and resulted in the following conditions quantifying approved noise limits:

- *Condition B18. The applicant shall ensure the Development does not exceed the noise limits in Table 3 at the receiver locations N1, N2, N3 N4 and N5:*

Stage 1 conditions noise limits are provided below in Table 7-16.

Table 7-16 Stage 1 conditions of approval Noise Limits dB(A) (Table 3)

Location	Day	Evening	Night	
	$L_{Aeq,15min}$	$L_{Aeq,15min}$	$L_{Aeq,15min}$	$L_{A1,(1\ min)}$
N1 Emmaus Village Residential	44	43	41	51
N3 Kemps Creek – nearest residential property	39	39	37	47
N4 and N5 Kemps Creek – other residences	39	39	37	47
Location	**When in use**			
N2 Emmaus Catholic College (School)	35 (internal)			

- *Condition B19. The noise limits in Table 3 do not apply to receiver N3 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.*

A Noise Agreement between the applicant and receiver N3 has been put in place and submitted to the Planning Secretary. As such, the criteria in Condition B18 of the Development Consent SSD 7348 are not applicable at receiver N3. An agreement is also currently being sought with the next closet receivers (N4 and N5). The Applicant continues to consult with these parties and has advised them about the current application and potential noise impacts associated with the proposal.

It is noted that Modification 2 to SSD 7348 proposed a variation to the $L_{A1,1min}$ night-time noise limits to accord with the provisions of the NSW Noise Policy for Industry (NPfI) with a level of $L_{A1,1min}$ 52 dBA proposed for all residential receivers.

7.5.2 Impact assessment

Construction noise

The assessment of construction noise and vibration has identified no material change to the assessment approved (number SSD 7348) for Stage 1 of the OWE.

The proposal includes an extension of construction noise hours outside those specified in Condition D70 of SSD 7348. The proposed construction hours 3 am to 10 pm 7 days a week are needed to avoid weather conditions unsuitable to construction works. The increase in construction hours from 3am to 7am and 6 pm to 10 pm.

Noise predictions indicate general compliance with the EPA's Interim Construction Noise Guideline (ICNG) with marginal exceedance of less than 5dB during out of hours evening and day periods and are not predicted to be particularly significant or intrusive.

Construction traffic on Bakers Lane generated by the OWE is not predicted to increase daytime road traffic noise levels by more than 2 dBA at the nearest sensitive receivers. Construction road traffic noise mitigation or management measures are therefore not considered to be required.

Construction traffic along Aldington Road and Abbotts Road is expected to be a temporary option until the completion of the WNSLR (expected competition Q4 2020). The Aldington Road and Abbotts Road route will only be used during school related peak traffic periods effecting Bakers Lane. Consultation has been undertaken with the immediate neighbours on Aldington Road. Traffic noise levels within 100 m should not exceed the $L_{Aeq,1\ hour}$ 55 dBA limit during the daytime (7.00am-10.00pm) as outlined by the NSW Road Noise Policy (RNP).

Based on the construction traffic movements shown in Figure 7-18 and the estimated existing traffic movements on Aldington Road provided by Ason (see Appendix G), the following traffic noise levels are anticipated. The construction traffic movements along Aldington Road are expected to comply with the RNP criteria as shown in

Table 7-17.

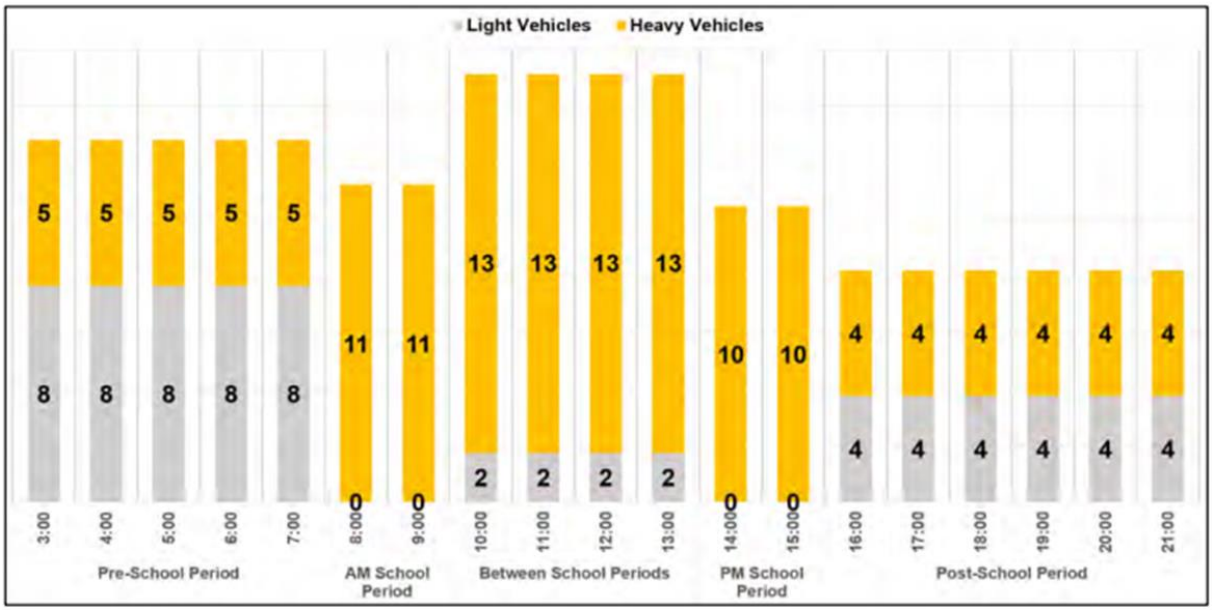


Figure 7-18 Hourly construction traffic movements

Table 7-17 Traffic noise levels for Aldington Road

Receiver Address	Existing Traffic Noise Level $L_{Aeq,1Hour}$ dBA	Project Construction Traffic Noise Level $L_{Aeq,1Hour}$ dBA	Existing Project Traffic Noise Level $L_{Aeq,1Hour}$ dBA	RNP Criterion $L_{Aeq,1Hour}$ dBA	Excee-dance (dB)	Relative Change (dB)
144-160 Aldington Road	51	53	55	55	Nil	4.3
106-124 Aldington Road	50	53	54	55	Nil	4.7

Construction vibration

The vibration generating plant items would be set back from the site boundaries by several hundreds of metres. Given this setback distance, vibration levels would not be discernible off-site, therefore no vibration impacts are anticipated.

Operational noise from onsite sources

Operational noise sources included in the noise assessment comprise fixed rooftop plant, and on-site light and heavy vehicles movements. The original design included noise barriers which have been reviewed as part of this assessment.

Sensitive receivers located surrounding the OWE Estate are shown on Figure 7-19. The noise barrier on the western edge of the site has also been redesigned due to the change in design of Bio-Retention Basin No. 2 and to extend its length and height to ensure satisfactory acoustic screening, with the revised design included on Figure 7-19.

This assessment considers the noise limits set out under Approval Condition B18 (SDD 7348) and night time maximum noise level criterion of 52 dBA proposed for all residential receivers, as

proposed in Modification 2. The assessment has considered the impact of the following scenarios:

- All precincts – which compares the operation of the fully developed OWE based on the Modification 3 proposal.
- Staged development - there would be a period of approximately 5-6 months where only Lot 2B would operate, following which Precinct 1 would be developed and then operate concurrently with Lot 2B, before the rest of OWE is fully developed.

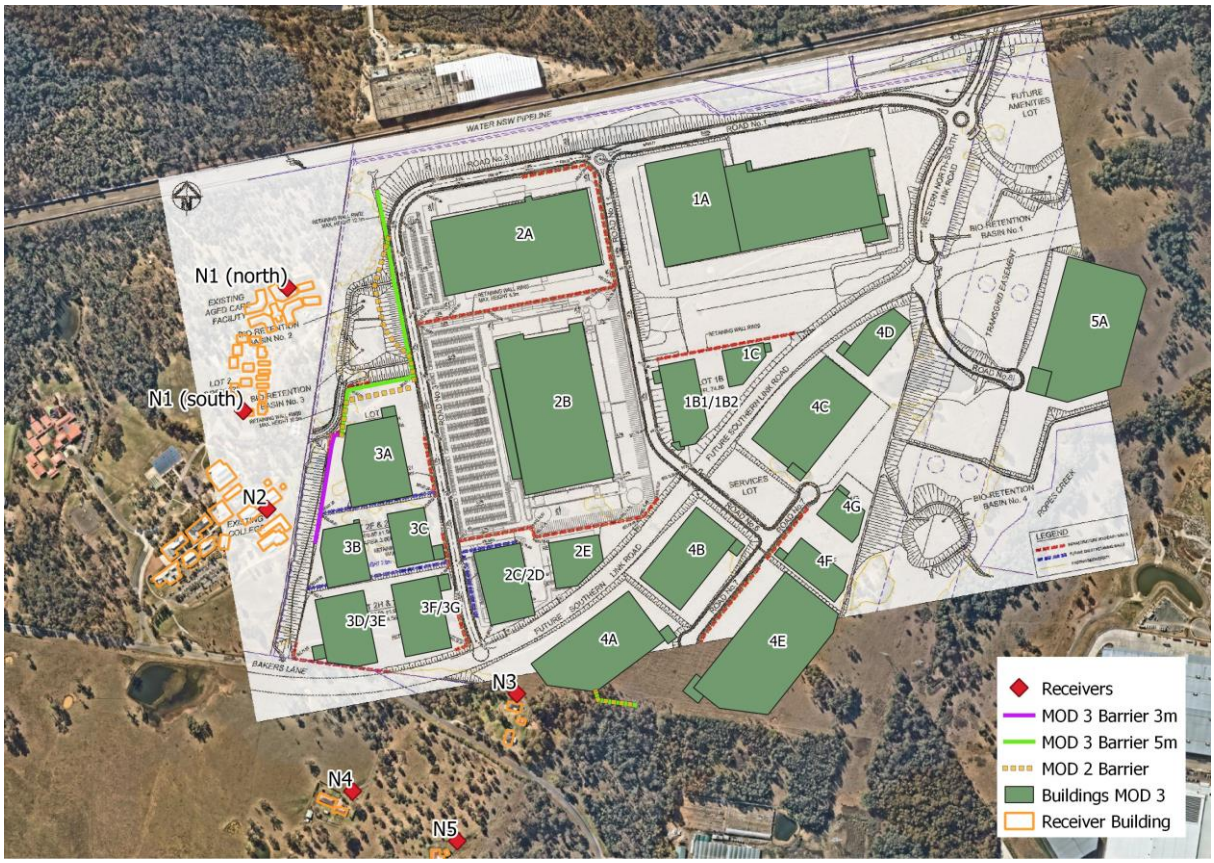


Figure 7-19 Receiver and acoustic wall location

Table 7-18 illustrates the predicted operational noise levels for the full development, with and without the acoustic wall mitigation in comparison to the approved noise limits. This shows that:

- With the modified barrier design and acoustic treatment of the Lot 2B mechanical plant during detailed design, the approved noise limits would be met for typical and peak operations at N1 and N2 to the west of the site.
- At N4, general compliance is predicted, with residual exceedances of 2 dB (typical) and 3 dB (peak season) predicted at night.
- At N5 for typical operations, 1 dB residual exceedances of the day and evening limits are predicted, with a 3 dB exceedance of the night limit predicted under noise enhancing meteorological conditions. With respect to the seasonal peak, exceedances of 2 dB (day), 1 dB (evening), and 4 dB (night, noise enhancing conditions) are predicted.

Table 7-18 Predicted operational noise levels - full development

Receiver	Period (weather)	LAeq,15min Noise Level (dBA)			
		Approved Noise Limits	Predicted MOD3 Unmitigated	Predicted MOD3 Mitigated	
				Typical	Peak Season
N1 – Emmaus Village - residential	Day	44	**45**	38	39
	Eve	43	**45**	37	37
	Night	41	**44**	34	35
	Night(Adverse)	41	**45**	37	38
N2 – Emmaus Catholic College (School)	Day	45	45	40	41
	Eve	n/a	45	40	40
	Night	n/a	45	37	37
	Night(Adverse)	n/a	45	40	41
N3 – Kemps Creek – nearest residential property	Day	n/a	51	46	48
	Eve	n/a	51	46	46
	Night	n/a	51	42	43
	Night(Adverse)	n/a	52	45	46
N4 – Kemps Creek – other residence	Day	39	**44**	39	39
	Eve	39	**44**	39	39
	Night	37	**44**	35	36
	Night(Adverse)	37	**46**	**39**	**40**
N5 – Kemps Creek – other residence	Day	39	**45**	**40**	**41**
	Eve	39	**45**	**40**	**40**
	Night	37	**44**	36	37
	Night(Adverse)	37	**46**	**40**	**41**

Note: assumptions are provided in in Appendix H. Exceedances shown in bold type.

In the context of the EPA's NPfI, residual exceedances of up to 2 dB are generally considered negligible. The exceedances above 2 dB are defined by the NPfI as marginal to moderate in nature, however with consideration to the relatively rare occurrence i.e. during peak season operations and under noise enhancing conditions, these exceedances are not considered to be of great significance.

Table 7-19 illustrates the predicted operational noise levels for the staged development in comparison to the approved noise limits. It is anticipated there would be a period of approximately 5-6 months where only Building 2B would operate due to other commitments on the site. Thereafter, Precinct 1 would be developed and then operate concurrently with Building 2B for a period before the rest of the estate is fully developed.

Table 7-19 Predicted operational noise levels - Staged development

Receiver	Period (weather)	$L_{Aeq,15min}$ Noise Level (dBA)						
		Approved Noise Limits	Lot 2B		Lot 2B + Precinct 1		All Precincts	
			Typical	Peak Season	Typical	Peak Season	Typical	Peak Season
N1 – Emmaus Village Residential	Day	44	35	37	36	37	38	39
	Eve	43	34	35	34	37	37	38
	Night	41	35	36	35	36	35	36
	Night (Adverse)	41	39	39	39	41	38	39

Receiver	Period (weather)	$L_{Aeq,15min}$ Noise Level (dBA)						
		Approved Noise Limits	Lot 2B		Lot 2B + Precinct 1		All Precincts	
			Typical	Peak Season	Typical	Peak Season	Typical	Peak Season
N2 – Emmaus College (School)	Day	45	40	45	40	45	40	41
	Eve	n/a	42	42	42	43	40	40
	Night	n/a	39	43	39	43	37	38
	Night (Adverse)	n/a	44	47	44	48	40	42
N3 – Kemps Creek – residence	Day	n/a	42	45	43	45	46	48
	Eve	n/a	43	43	42	43	46	47
	Night	n/a	42	43	42	43	42	44
	Night (Adverse)	n/a	46	48	46	48	45	48
N4 – Kemps Creek – residence	Day	39	36	39	37	40	39	39
	Eve	39	37	37	36	38	39	39
	Night	37	36	38	36	38	36	36
	Night (Adverse)	37	**41**	**43**	**41**	**43**	**39**	**40**
N5 – Kemps Creek – residence	Day	39	36	39	36	39	**40**	**41**
	Eve	39	37	37	36	37	**40**	**40**
	Night	37	36	37	36	37	36	37
	Night (Adverse)	37	**40**	**42**	**40**	**42**	**40**	**41**

Note: assumptions are provided in in Appendix H. Exceedances shown in bold type.

The analysis demonstrates:

- During the identified site development stages, the operational noise levels to the west of the site would be expected to remain in compliance with the approved noise limits. However, to the south of the site, some further temporary exceedances have potential to occur.
- At N4, residual exceedances of up to 4 dB (typical) and 6 dB (peak season) are predicted at night.
- At N5, residual exceedances of up to 3 dB (typical) and 5 dB (peak season) are predicted at night.

The residual exceedances of up to 5 dB are defined as moderate by the NPfI, whilst the 6 dB exceedance is defined by the NPfI as significant. However, it is noted that this is only predicted to occur under relatively rare conditions (during peak season operations and under noise enhancing conditions).

Modelling indicates that due to the elevations of Receivers N4 and N5 and their lines of sight to the OWE, on-site barriers have limited efficacy in reducing the identified residual noise exceedances.

Section 4.2 of the NPfI discusses the acceptability of residual noise impacts, where all source and pathway feasible and reasonable noise mitigation measures have been applied. With respect the fully developed site, in accordance with the provisions of the NPfI, the exceedances may be considered generally marginal to moderate in nature.

However, given the current expectation that Lot 2B and Precinct 1 would operate for a substantial period prior to the full development of the OWE, it is considered appropriate to

consider the exceedances for the staged development. The NPfI defines the identified temporary residual exceedance at N4 of up to 6 dB as significant.

With consideration to the potential impacts, Goodman proposes to consult with the affected landowners (N4, N5) to address the matter of potential noise impacts during the development and operation of the OWE and would seek to enter into noise agreements with the potentially affected owners.

Subject to their agreement, Goodman proposes to offer to provide 'at-receiver' noise mitigation treatments, consistent with the recommendations of the NPfI.

Taking into consideration the particular preferences of the landowners, the treatments considered would include upgraded glazing standards to further increase the ability of the building façade to reduce noise levels. The owners would be invited to participate in mitigation selection process in a transparent, equitable and consistent way. An amendment to the noise limits included in Condition B18 is proposed as part of the Modification 3 to the Concept Proposal to incorporate limits that can realistically be achieved following the adoption of all feasible and reasonable mitigation.

Sleep disturbance

An assessment of potential sleep disturbance has been undertaken considering heavy vehicle brake releases and reverse alarms (non-tonal) modelled in the hardstand areas of the proposal site with a sound power level of SWL 115 dBA. Table 7-20 presents the predicted noise levels for the full development and the staged development in comparison to the approved noise limits.

Table 7-20 Predicted maximum operational noise levels relating to sleep disturbance

Receiver	Period (weather)	Adopted Criteria Approved Limit	$L_{A1,1min}$ Noise Level (dBA)			
			Full development	Staged development		
			Mitigated	Lot 2B	Lot 2B + Precinct 1	All Precincts
N1 – Emmaus Village Residential	Night	52 (51)	43	46	46	43
	Night (Adverse)	52 (51)	49	51	46	49
N2 – Emmaus College (School)	Night	n/a	n/a	n/a	n/a	n/a
	Night (Adverse)	n/a	n/a	n/a	n/a	n/a
N3 – Kemps Creek – residence	Night	n/a	60	52	52	60
	Night (Adverse)	n/a	61	56	52	61
N4 – Kemps Creek – residence	Night	52 (47)	49	44	44	49
	Night (Adverse)	52 (47)	**53**	50	44	**53**
N5 – Kemps Creek – residence	Night	52 (47)	46	43	43	46
	Night (Adverse)	52 (47)	52	49	43	52

Noise modelling post completion of OWE (all buildings have been built) indicates the potential for noise emissions to marginally exceed the adopted criteria by 1 dB at N4 (representing a 6 dB exceedance of the approved limit).

It is noted that Modification 2 to SSD 7348 proposed a variation to the $L_{A1,1min}$ night-time noise limits to accord with the provisions of the NSW Noise Policy for Industry with a level of $L_{A1,1min}$ 52 dBA proposed for all residential receivers.

Operational noise from off-site traffic sources

The NSW *Road Noise Policy* (NSW EPA, 2011) requires noise mitigation where new land use developments increase road traffic noise by more than 2 dB. An increase of greater than 2 dB is generated by an increase in traffic volumes of approximately 60 per cent or higher.

The main access route to the development site is via the proposed WNSLR then the arterial road of Lenore Drive. The forecast traffic daily traffic volumes on Lenore Drive at opening of the WNSLR is approximately 28,000 vehicles, including vehicle movements from the OWE. The daily traffic volume from the OWE is estimated to be approximately 12,000 vehicles, which equates to an increase in traffic volumes of approximately 45%.

Therefore, an increase in traffic noise due to the OWE of greater than 2 dB is not considered likely. No mitigation is likely to be required as a result.

7.5.3 Mitigation measures

Where relevant the mitigation measures outlined in the EIS and the approval conditions (number SSD 7348) for Stage 1 of the OWE would be carried out to ensure the works are undertaken with minimal impact.

In accordance with Condition D73 (approval number SSD 7348) a detailed Construction Noise and Vibration Management Plan would be developed during the detailed design phase of the proposal to manage impacts.

To mitigate the potential moderate impacts on receivers N4 and N5, subject to the findings of further detailed design, receiver-based treatment would be considered for the affected dwellings at N4 and N5.

Preparation of a commercial agreement with the receivers at N3 and N4 due to exceedances is underway. This agreement will be in addition to mitigation measures such as noise walls.

In order to achieve the predicted noise levels, and that internal residential amenity standards are maintained the following operational noise mitigation controls have been identified and are recommended:

- Noise barriers possessing surface mass of no less than 15 kg/m^2 to be installed at the locations and to the heights detailed in Appendix H and shown on Figure 7-19.
- On-site speed limits of 25 km/hour for heavy vehicles and 40 km/hr for light vehicles to be imposed.
- Tonal reversing alarms not to be used on the OWE.
- During detailed design, Lot 2B rooftop mechanical services plant to be reviewed to ensure that cumulatively emissions are controlled to not exceed LAeq,15min 37 dBA at the western site boundary or LAeq,15min 41 dBA at the southern site boundary. The inclusion of silencers/attenuators and/or barrier solutions may be considered to ensure these acoustic design standards are achieved, as confirmed by noise modelling.
- Subject to the findings of further detailed design, the provision of mechanical ventilation systems to receivers N4 and N5 to be considered, to enable windows to be closed without compromising internal air quality/amenity.

7.6 Soil and water

A summary of the findings of the Lot 2B Civil Report (SSD 10397) and Modification 3 (SSD 7348) Civil Report prepared by AT&L is provided in the following sections. The full reports are provided in Appendix I and Appendix J, respectively.

7.6.1 Existing environment

Ropes Creek runs along the eastern boundary of the site. The creek is classified as a third order watercourse, requiring the maintenance of an average 30 m, vegetated riparian zone in accordance with NOW guidelines.

Existing overland flows on the OWE run either side of a central north-south ridgeline. Flows generated on the eastern side flow into farm dams and Ropes Creek, whilst flows generated on the western side flow first to farm dams on the western and north-western boundaries of the site and ultimately into creeks to the north of Emmaus Catholic College and the Catholic Healthcare facility west of the site.

The underlying geology and soils on the site are as follows:

- Topsoil – Clay with rootlets and grass surface, depth 0.0 metres
- Natural Soil – Clay, depth 0.04-0.5 metres
- Bedrock – Sandstone and Shale, depth 0.7-4.0 metres.

The potential for acid sulfate soils on the site is low.

Approved SSD 7348

A targeted Phase 2 contamination assessment carried out for approved SSD 7348, found a low general potential for contamination across the site, however two areas of surface soil were found to be impacted with fragments of asbestos containing material. This material would be removed as part of the approved development and the site validated prior to operations. Subject to this remediation the site has been found to be suitable for commercial/industrial use.

Standard sediment and erosion control measures would be implemented during construction works. The approved development includes the retention, restoration and maintenance of the Ropes Creek riparian corridor which will be the subject of an in-perpetuity management protocol in accordance with the OWE Biodiversity Offset Strategy.

Potential salinity issues would be managed in accordance with a Salinity Management Plan which would form part of the CEMP for the approved development.

All stormwater systems in the OWE must comply with the following:

- Penrith City Council Design Guidelines for Engineering Works
- Penrith City Council Water Sensitive Urban Design (WSUD) Policy December 2013
- C3 Water Management DCP

For detailed council requirements and design criteria see Section 3.3 of the full report provided in Appendix I.

7.6.2 Impact assessment

Modification 3 and the proposed Stage 2 Development will result in minor changes to the approved SSD 7348 for earthworks, overland flows and potential for erosion and sedimentation. The sections below outline the proposed changes and section 7.6.3 summarises the control measures.

The proposal includes a potable water strategy in line with the requirements of government bodies, Sydney Water and factors affecting the scarcity of future water supply. The objective is to implement a sustainable integrated approach to water cycle management to minimise demand of potable water supplies. Groundwater will not be affected as a result of the proposal. Additional details regarding water sustainability are provided in section 7.10.

Earthworks

Amendments under Modification 3 to the cut and fill specifications are needed to meet the requirements of a specific tenant. These specifications are outlined as follows:

- minimise the fill importation volumes where possible below the SSDA 7348 approval,
- minimise the height or necessity of retaining walls
- minimise earthworks cut in unclassified rock
- Maximising the accessibility of the future lots along their respective facing roads.

Modification 3 proposes a net fill of 679,620 m^3 which is an increase from the proposed Modification 2, 632,387 m^3 but the overall fill import will be less than the initially approved by SSD 7348. Importation of general fill will be transported via WNSLR (not Baker's Lane) in alignment with the CTMP.

Stormwater management

Modification 3

Modification 3 catchment flows will not exceed the catchment flows approved in the initial Concept Proposal. Modification 3 will have no effect on the overall strategy to direct stormwater through the Estate Road 03 stormwater system.

A summary of the on-site detention requirements for each discharge point and catchment areas are provided in Section 6.3.3 of Appendix J. The overflow paths are unchanged from the approved Concept Proposal. The water sensitive urban design are also unchanged, with the expectation of rebalancing the inflows to Bio-Retention Basin No. 2 and No. 3. Post-development flows will continue to be under pre-development flows resulting in no significant impact.

Lot 2B

The proposed Lot 2B storm water drainage will be directed into Bio-Retention Basin No. 3. The stormwater will then be discharged through a gross pollutant trap (GPT) before draining through a single point to the north west of the lot. The discharge point connects the Lot 2B stormwater to the Estate Road 03 stormwater system.

The catchment plan for Lot 2B is shown in Figure 7-20. Overflows are also designed to flow into the Estate Road 03 stormwater system and will not impact the approved stormwater management outcomes.

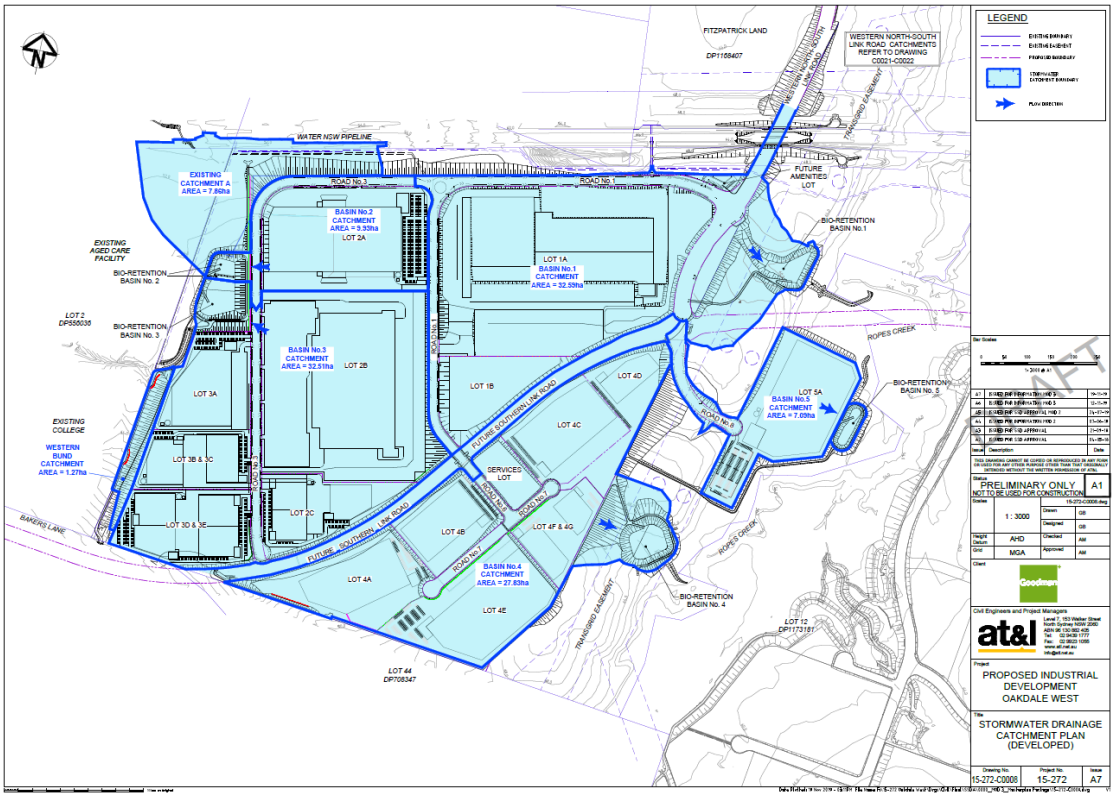


Figure 7-20 Stormwater drainage catchment plan

Erosion and sedimentation

The risk of erosion or sedimentation will not change significantly due to the proposal from the assessment and strategy provided for approved SSD 7348. The existing strategy to limit sedimentation throughout the construction phase will still be appropriate given the works associated with Modification 3 and the Stage 2 Development. Figure 7-21 below shows the revised Modification 3 erosion and sediment control plan.

Controls and measures will comply with the relevant restrictions under Landcom's *managing urban stormwater: soils and construction guidelines* (2004). The measures will cover the following:

- design of sediment and erosion control measures and reconfiguration of temporary sediment basins within Precinct 2 and Precinct 3
- soil and Water management Plan (SWMP) which will require no change to the objectives provided as part of the approved Concept Proposal
- site inspections and maintenance outlined in the approved Concept Proposal and SSDA Engineering Report.
- These controls comply with the requirements set out by the Penrith City Council Engineering Guidelines and the EPA.

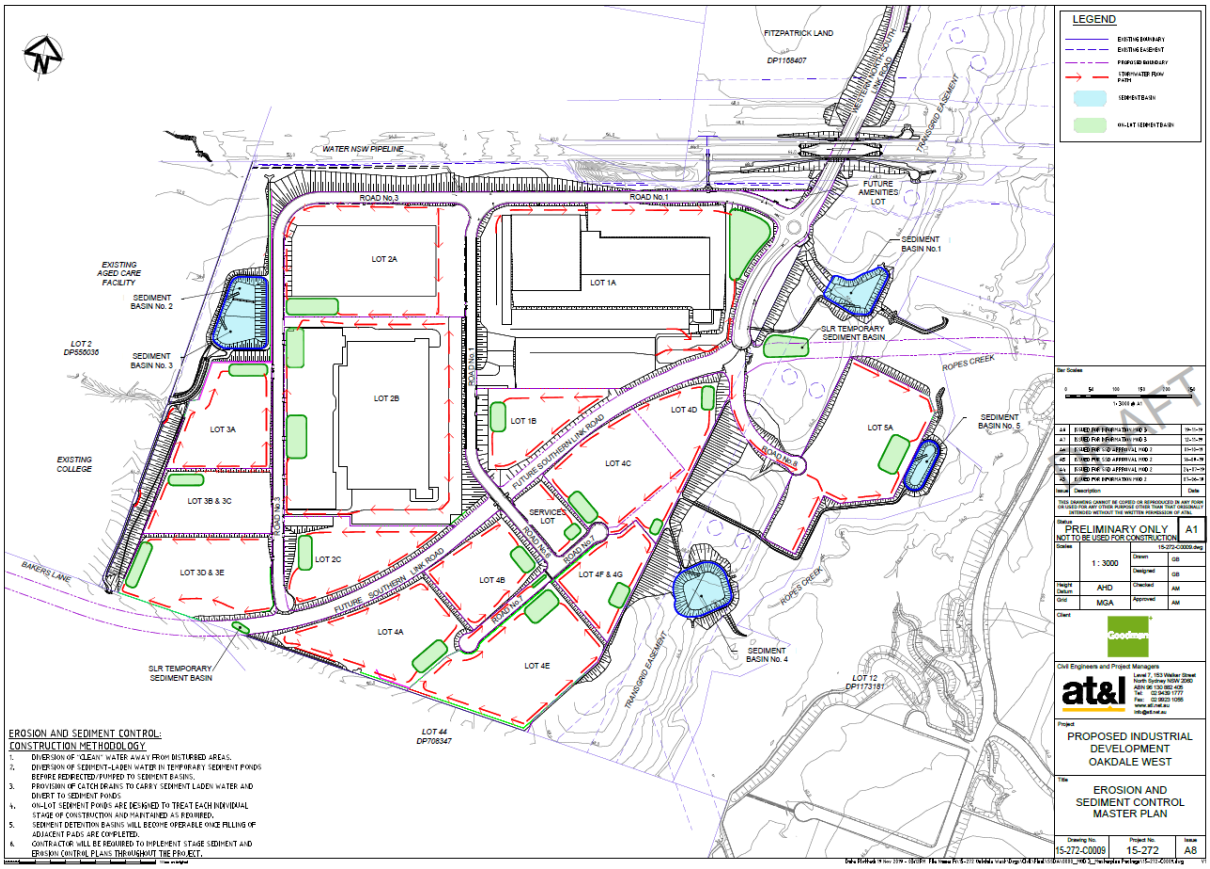


Figure 7-21 Erosion and sediment control master plan

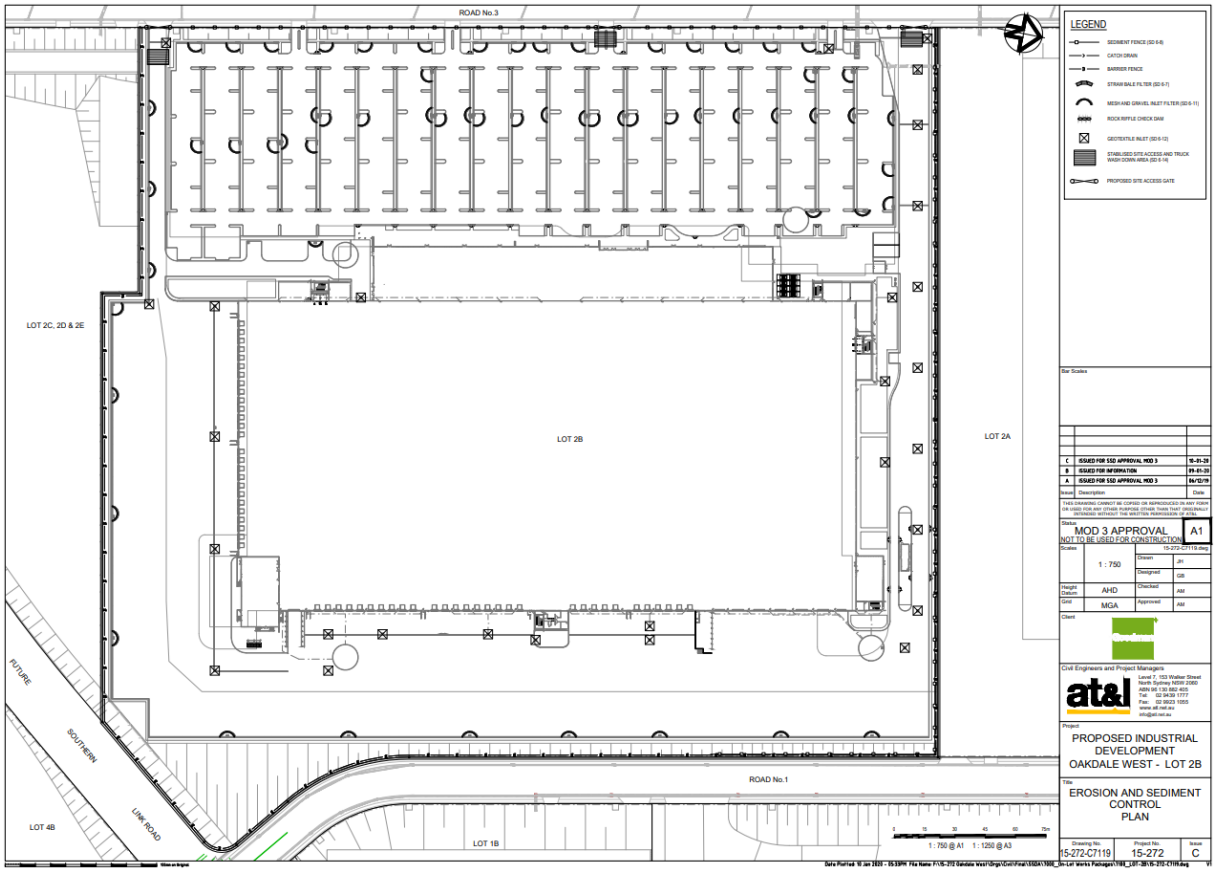


Figure 7-22 Erosion and sediment control Lot 2B plan

Water Balance

A potable water strategy has been developed in line with government bodies, Sydney Water and factors affecting the scarcity of future water supply. The objective is to implement a sustainable integrated approach to water cycle management to minimise demand of potable water supplies. The following water demand end uses will be need to be satisfied;

- toilet and urinal flushing
- landscape watering (outdoor garden use).

Rainwater harvest tanks will be implemented to meet a minimum of 80 per cent of all non-potable water demand, as outlined in the PCC WSUD (July 2015). This will increase the water sustainability of the site through water recycling and limiting the usage of water mains.

7.6.3 Mitigation measures

No additional mitigation measures are required in addition to the approved SDD 7348.

A summary of the design measures to be adopted to manage soil and water resources are listed below:

- All stormwater drainage within the lot 2B will be the responsibility of Goodman.
- Finished Floor Levels (FFL) of proposed buildings within the precinct (separate approval) to have minimum 500mm freeboard to 100 year overland flows.
- A gross pollutant trap (GPT) will be installed within Lot 2B on the final downstream stormwater pit prior to discharging. As these GPT's will be located on-lot as they will be owned and maintained by Goodman. The GPT will capture 90% of Gross Pollutants from Lot 2B as per water sensitive urban design guidelines.

Suitable erosion and sediment measures shall be implemented into the development throughout all stages, show in Figure 7-22. These include:

- all design, documentation, installation and maintenance of sediment and erosion controls will be in accordance with the Penrith City Council engineering Guidelines and the EPA.
- a SWMP will be prepared for the construction phase of the development
- site inspection and maintenance specified in Section 5.2 of the report provided in Appendix I
- sediment basin maintenance, including drainage within 5 days, implementation of flocculation when the 5 day target cannot be met.
- These controls comply the requirements set out by the Penrith City Council engineering Guidelines and the EPA.

7.7 Waste management

A summary of the results of the Waste Management Plan (WMP) prepared by SLR Consulting Australia Pty Ltd (SLR) is provided in the following sections. The full report is provided in Appendix K.

7.7.1 Impact assessment

The construction and operation of OWE will produce a number of waste streams and will require management strategies to be implemented. This section will assess the waste streams related to Modification 3 and the Stage 2 Development.

The objective of the WMP is to identify all waste streams applicable to the proposal during construction and operation, as well as provide a management advice. The specific objectives 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 proposal comply with consent conditions and other relevant regulatory authorities.

Construction

Development of the proposal would result in the following construction waste streams:

- site clearance wastes
- construction wastes
- plant maintenance waste
- packaging wastes
- work compound waste from on-site employees.

The Concept Proposal (incorporating Modification 3) is expected to produce a total 508,250 m^3 of site preparation waste. The Stage 2 Development is expected to produce 65,535 m^3 of site preparation waste. It is recommended that excavated waste is checked for contamination and used accordingly. Uncontaminated fill will be used again on site or sent to a licenced facility.

Anticipated construction waste for the proposal is 19,800 m^3 and 2,395 m^3, respectively.

Operational

Development of OWE would result in the following operational 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
- stores, plant and general maintenance wastes.

The approved Stage 1 Development was expected to produce a total 342 m^3 per week, of which 50 per cent can be re-used or recycled.

Stage 2 Development will generate a total 1,505 L/week of operational waste. Due to the proposed use of Building 2B, the waste will be largely paper and recycling.

Waste storage features will take into account best practise strategies and recommendations for Council's DCP, and will be located so that it:

- is located away from primary street frontages
- is near any on-site loading bays
- is convenient, safe, functional and directly accessible to users in each tenancy and servicing collection staff, but inaccessible to the public
- avoids pedestrian or vehicular traffic hazards likely to be caused by waste collection and storage

- has 1.8 m zone of unobstructed clearance between the waste storage area and the entrance.

Waste storage features will also align with Section 6.6 of the WMP ensuring adequate requirements are met.

7.7.2 Mitigation measures

The Construction Waste Management Plan (CWMP) and WMP will describe the process of waste mitigation strategies, such as waste avoidance, reuse, and recycling. These plans will also specify the correct storage, handling and disposal methods.

Due to the large amounts of paper and cardboard anticipated through Lot 2B a baler is recommended to increase storage and compactor is suggested for general waste. By compacting these waste items a total 206.17 m^3 will be saved.

7.8 Biodiversity

A summary of the results of the *Biodiversity Impact Assessment* prepared by Ecologique is provided in the following sections. The full report is provided in Appendix L.

7.8.1 Existing conditions

The OWE is largely cleared of native vegetation with approximately 96% of the vegetated cover on the site cleared. The remaining 4% vegetated cover on the site is limited to small remnant patches and sparsely scattered trees through the paddocks. There are also areas of regenerating woodland connecting to larger patches of woodland to the west and south of the site.

The condition of vegetation across the OWE is degraded due to persistent impacts from grazing even within areas of native vegetation; the ground layer is frequently dominated by exotic species, and the shrub layer is almost absent.

Some of the remnant native vegetation on the site has been assessed as being associated with Threatened Ecological Communities (TECs) listed under the Biodiversity Conservation Act and one Critically Endangered Ecological Community (CEEC) listed under the EPBC Act. The listed plant community type (PCT) identified were:

- HN526: Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion
- HN528: Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin
- HN529: Grey Box - Forest Red Gum grassy woodland on shale of the southern Cumberland Plain, Sydney Basin Bioregion
- HN594: Swamp Oak swamp forest fringing estuaries, Sydney Basin Bioregion and South East Corner Bioregion.

Approved SSD 7348

The SSD 7348 approved the removal of approximately 4.41 hectares (ha) of remnant native vegetation and approximately 3.0 ha of regenerating or planted (derived) native woodland, subject to a number of consent conditions detailed in the approved EIS and Appendix L.

7.8.2 Impact assessment

The biodiversity impact assessment has considered the following:

- biodiversity impacts under the *Biodiversity Conservation Act* 2016
- significant impact on Matters of National Environmental Significance (MNES) approval under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
- consultation with relevant Local, State or Commonwealth Government Authorities.

Vegetation clearance

The change in footprint associated with Modification 3 and Stage 2 Development have marginally impacted on vegetation clearing along the western boundary of Oakdale West. Vegetation that will be impacted is PCT Grey Box - Forest Red Gum grassy woodland on shale of the southern Cumberland Plain, Sydney Basin Bioregion (PCT 850).

However, these impacts are both negative and positive with areas of increased clearing and decreased clearing maintaining the net extent of PCT 850 clearing to that approved under SSD 7348.

Figure 2-1 illustrates the amended extent of PCT 850 clearing in comparison that proposed under SSD 7348 Modification 1.

The proposed Stage 2 Development and Modification 3 concept proposal do not affect the 172 ecosystem credits required to offset native vegetation removal (as per Condition D90 of approval SSD 7348).

Matters of National Environmental Significance

A referral to the Commonwealth Department of Environment and Energy (DoEE) was made for the SSD 7348 Concept Plan for the removal of native remnant vegetation that met the criteria for being considered as threatened ecological communities under the EPBC Act. These include the following PCTs:

- Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion (PCT 849)
- Grey Box - Forest Red Gum grassy woodland on shale of the southern Cumberland Plain, Sydney Basin Bioregion (PCT 850).

Approval (EPBC 2017/7952) was granted for the clearing of no more than 2.06 ha of Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest ecological community (CPW).

Although it should be noted that only 1.81 ha collectively of PCT 849 and PCT 850 meet the criteria for being considered as threatened ecological communities under the EPBC Act.

The proposed Stage 2 Development and Modification 3 concept proposal do not impact on the extent of CPW that has been approved to be cleared by DoEE.

SSD 7348 Modification 1 identified a small area of Casuarina glauca (Swamp Oak) regrowth (12.5 m^2 or 0.00125 hectares) that would require clearing from the construction of an outlet to Ropes Creek from Bioretention Basin no. 5. This area of regrowth emerged following the lodgement, assessment and approvals phase of the SSD 7348 Concept Plan. Stage 2 and Modification 3 do not result in any further clearing of this vegetation community.

The design of the Stage 2 Development and Modification 3 concept proposal has considered impacts on biodiversity and will not result in any increase in clearing nor affect the 172

ecosystem credits required to offset native vegetation removal. The proposal will not result in any additional impacts to that already approved by DoEE on the EPBC Act listed CPW.

No other MNES will be impacted on as a result of the Stage 2 DA and Modification 3 concept proposal. Therefore, additional approval under the EPBC Act is not required.

7.8.3 Mitigation measures

Where relevant, the mitigation measures outlined in the EIS and the approval conditions (number SSD 7348) for Stage 1 of the OWE would be carried out to ensure the works are undertaken with minimal impact. No additional mitigation measures are required.

7.9 Air quality

A summary of the results of the Requirement to Update Air Quality Impact Assessment prepared by SLR Consulting Australia Pty Ltd is provided in the following sections. The full report is provided in Appendix M.

7.9.1 Existing conditions

The proposal site is surrounded by rural activities (agriculture, market gardens) and rural residential houses to the south and west, industrial zone at Erskine Park to the north, and the Oakdale Central and Oakdale South Estates to the east. The main entrance to the Development Site is proposed to be via the future western north-south link road off Lenore drive. The site could also be accessed via the Old Wallgrove road through Oakdale Central Estate.

Stage 1 OWE

The air quality impact assessment (SLR, 2017) for the for Stage 1 of the OWE (approval number SSD 7348) concluded that air quality impacts during construction of the OWE proposal could be adequately managed using best practice mitigation and management measures. The risk of any residual impacts after the implementation of mitigation measures was concluded to be low.

For the operational phase, atmospheric dispersion modelling was used to assess potential air quality impacts at the nearest sensitive receptors due to air emissions from vehicular traffic associated with each of the precincts within the OWE.

Table 7-21 provides a summary of Dispersion Modelling Results for the fully developed OWE as approved in SSD 7348. This outlines the following results for the emission at the worst-affected sensitive receptor:

- the proposal only emissions (incremental impacts)
- total emissions (cumulative impact including emissions predicted from the proposal combined with regional background levels) where background data was available.

Table 7-21 Summary of Dispersion Modelling Results of key pollutants for the fully developed OWE

Pollutant	Averaging Period (Criteria)	proposal only emissions (µg/m3)	Total emissions (µg/m3)	Contribution of fully developed OWE to total emissions
TSP	Annual (90 µg/m^3)	13.8	44.2	31%
PM10	24-hour (50 µg/m3)	22.9	38.9	59%
	Annual (25 µg/m^3)	4.6	19.8	23%
PM2.5	24-hour (25 µg/m^3)	6.0	Data unavailable	Data unavailable
	Annual (8 µg/m^3)	1.2	Data unavailable	Data unavailable
NO2	1-hour (246 µg/m^3)	158.8 [1]	91.6	Data unavailable [1]
	Annual (62 µg/^{m3})	6.1 [1]	12.7	Data unavailable [1]

Note 1: The proposal only concentrations represent the predicted NOx concentrations, while the total concentrations represent the NO2 concentrations, calculated using the Ozone Limiting Method (OLM).

It was concluded from the modelling results that air emissions from the proposed operational activities (vehicle movements) at the OWE would comply with all relevant ambient air quality criteria at all representative surrounding sensitive receptors.

The maximum impacts due to air emissions from the whole of the OWE were predicted to occur at receptors R8 and R9. The location of receptors assessed in 2017 are shown in Figure 7-23.

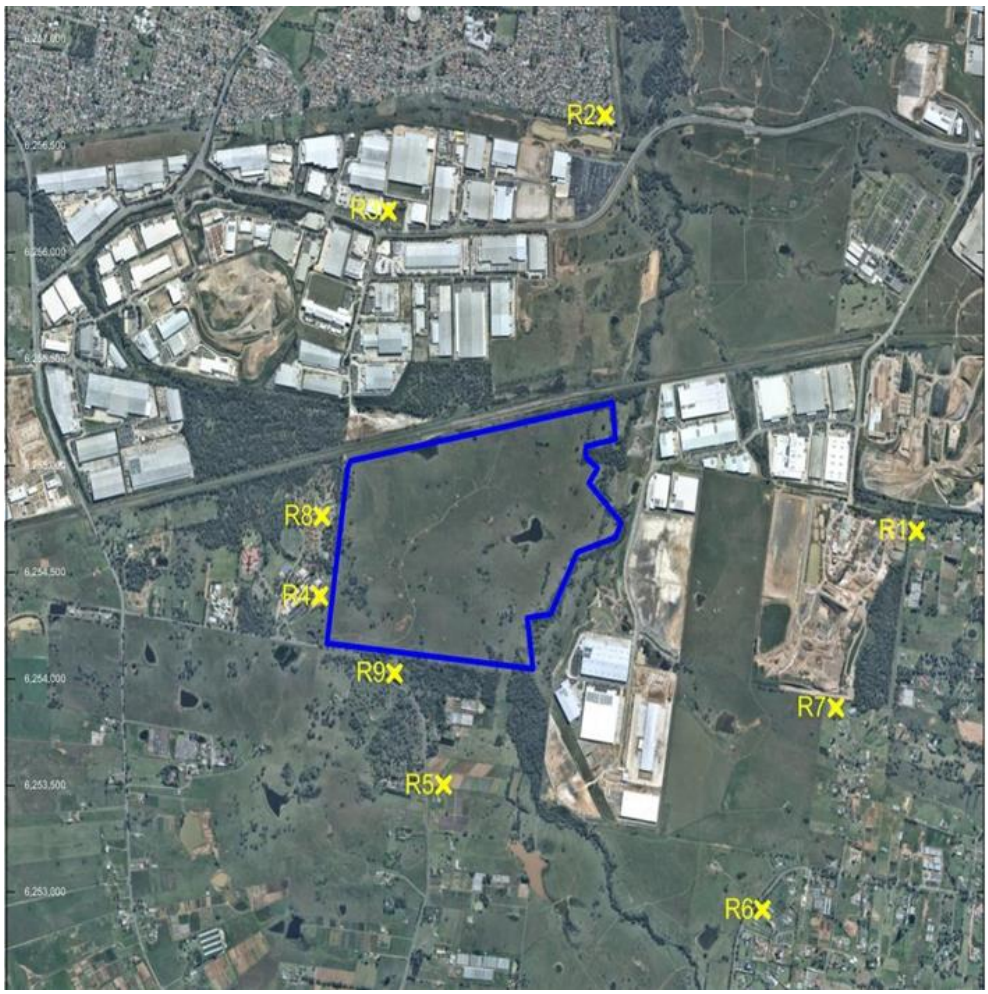


Figure 7-23 Sensitive receptor locations (SLR, 2017)

7.9.2 Impact assessment

Construction

The construction air quality impact assessment provided for the approved SSD 7348 assessed the potential air quality impacts associated with the construction of all five precincts within the OWE, and concluded that air quality impacts during construction of the OWE could be adequately managed using best practice mitigation and management measures.

An assessment of the proposal has concluded that the magnitude of construction impacts is unlikely to change, and therefore the residual risk of dust emissions during construction associated with Modification 3 and the Stage 2 Development remains low. No additional mitigation measures have been identified.

Operation

A comparison of the approved masterplan (approved in SSD 7348) shows that the revisions to the OWE masterplan through the Concept Proposal modification and the Stage 1 development modification will affect the road network considered in the AQIA modelling study. The revised road network is shown in Figure 7-24.

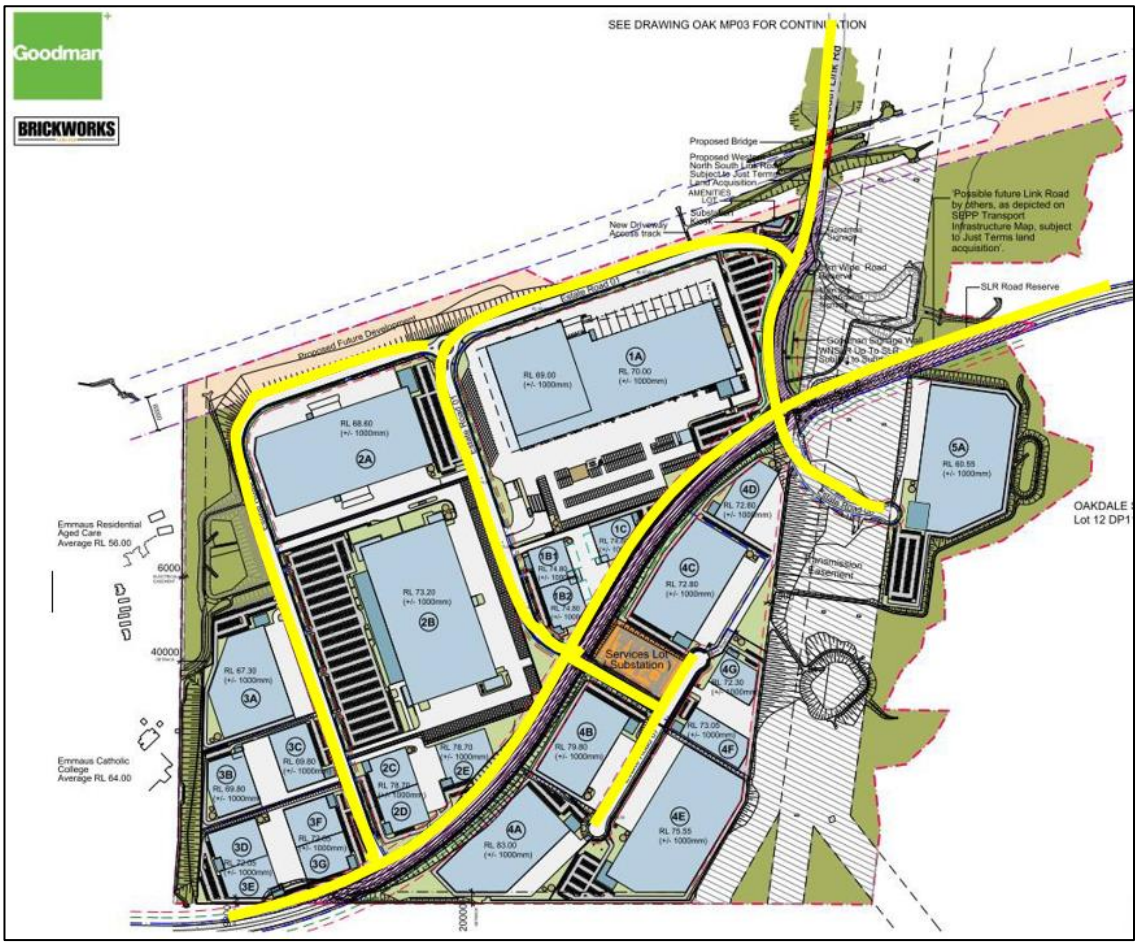


Figure 7-24 Revised site road layout

A review was carried out having consideration for the cumulative effect of the proposed Stage 2 Development and the Stage 1 Development as proposed to be modified by MOD 2.

The peak hourly traffic volumes and daily traffic volumes are calculated by:

- 1.892 daily vehicle trips per 100 m^2 of industrial gross floor areas (GFA) including ancillary office floor space
- 0.163 peak hour vehicle trips per 100 m^2 of industrial GFA including ancillary office floor space.

A review of the proposed GFAs for the fully developed revised OWE masterplan has identified a minor change in all of the precincts' GFAs, with the exception of Precinct 5. A summary of the individual precinct GFA and associated peak and daily vehicle numbers is shown in Table 7-22 and compared to that assessed in the Air quality impact assessment (SLR 2017) for the Stage 1 of the OWE (approval number SSD 7348).

Table 7-22 Projected vehicles volumes

Precinct	Approved SSD 7348 GFA (m2)	Proposed GFA (m2)	Peak Vehicles per Hour (vph)	Vehicles per Day (vpd)
1	116,359	122,082	103	2,503
2	105,425	254,350	920	4,901
3	99,967	57,820	94	1,094
4	120,988	113,693	185	2,151
5	32,530	35,640	58	674
Total Revised OWE (including Concept Proposal modification, Stage 1 development modification Lot 2B)		**583,585**	**1,360**	**11,324**
Total - Approved OWE masterplan (2017) (SSD 7348)	475,269		1,426	16,544

The Air quality impact assessment (SLR 2017) for the Stage 1 of the OWE (SSD 7348) was based on significantly higher peak and daily traffic estimates than currently proposed under the modified masterplan with Lot 2B.

Even though the distribution of emission sources within the OWE will change as the locations of roads within the OWE are proposed to change, the change in downwind concentration attributed to the source location is considered negligible due to the separation distance between the modelled source and the receptors.

The predicted dispersion modelling results shown in Table 7-22, are well below guideline levels, and provide a very conservative assessment of the expected worst case air quality impacts at the sensitive receptor locations. Therefore there is not predicted to be a decrease in air quality as a result of the proposal.

7.9.3 Mitigation measures

No additional or amended mitigation measures above those already outlined in the EIS and the approval conditions (number SSD 7348) for Stage 1 of the OWE have been identified for the Concept Proposal modification, Stage 1 development modification and Lot 2B development.

7.10 Sustainability and energy efficiency

A summary of the results of the Sustainability Management Plan prepared by SLR Consulting Australia Pty Ltd is provided in the following sections. The full report is provided in Appendix N.

7.10.1 Existing conditions

The approval (number SSD 7348) for Stage 1 of the OWE included an energy efficiency and water management assessment. An Energy Management Plan was prepared in respect of the proposed Stage 1 Precinct Development, with the principal objective being:

> "*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.*"

The Energy Management Plan considered Section J of the Building Code of Australia which establishes the minimum requirements for energy efficiency in buildings. The plan concluded

that the Stage 1 Precinct Development achieved an approximate 20 per cent reduction in greenhouse gas (GHG) emissions.

A site water balance was prepared for the Stage 1 Precinct Development. The proposed development of the OWE would result in changes to the existing water balance of the site by changing it from a largely undeveloped, low intensity rural/agricultural use, to a developed, higher intensity warehousing use.

Opportunities for water reuse and volumes available for capture were estimated and considered in the design of the Stage 1 Development. It was estimated that up to 50 per cent of predicted water demand for the OWE could be met by the reuse of rainwater. In order to maximise water reuse on the site, rainwater harvest tanks would be provided for each development site with size determined in accordance with the requirements of Penrith Council's DCP. The remaining 50 per cent of estimated water demand for the OWE would require a potable water source to be provided as part of the servicing of the site as described in Section 4 of the EIS.

Rainwater captured from the development would be used for irrigation and toilet flushing and buildings would be plumbed to rainwater tanks to facilitate reuse. Consideration was also given to other possible rainwater reuse opportunities such as truck washing as part of specific on site operations.

7.10.2 Impact assessment

Overview

A sustainability management plan has been prepared collectively for the Concept Proposal modification, Stage 1 development modification and Lot 2B development. Although the energy consumptions of equipment and warehouse operations will be specific to a tenant's application, the precincts and future buildings are assumed to meet where possible, the recommendations set out in the sustainability management plan.

This plan considers Section J of the Building Code of Australia (2016). 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 proposal
- 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.
- to ensure the long term sustainability of resource use through more efficient and cost effective energy use practices for the life of the development.

Energy usage

The major energy use components of the proposal site and future buildings comprise:

- lighting (include natural and artificial lighting and shading)
- air conditioning
- power.

The main source of energy for the proposal site is electricity, but it is also proposed to have gas available at the site as required.

Energy efficiency.

Building Code of Australia (2016) *Sections J Deem-to-Satisfy compliant building* has been used as the baseline building design (reference building) for energy consumption savings and minimum requirement for energy efficiency. The energy consumptions of equipment, warehouse ventilation fans and domestic hot water will specific to the tenant's application. However, it is assumed they will be the same as the reference building energy consumption.

An energy simulation analysis has compared the proposal with the reference building. The proposed methods for energy efficiency are:

- Artificial lighting - The proposed warehouses will adopt energy efficiency measures to reduce the lighting energy consumptions, likely to achieve a 40.3 per cent lighting energy reduction when compared with reference building.
- Mechanical air conditioning - The mechanical service design is not available at this stage of design however certification demonstrating compliance with Section J5.2e of the Building Code of Australia (2016) will be submitted with the application for a Construction Certificate.
- Building fabric requirements - All fabrics of the proposed building shall comply with Section J with details submitted with the application for a Construction Certificate.
- Domestic hot water – The proposal will include a solar hot water reticulation system generated from the roof mounted solar water packaged plant.

The energy simulation predicted the Total Energy Consumed annually by the reference building compared with the proposed building. The results are summarised in Table 7-23.

Table 7-23 Comparison of Annual Energy Consumption between the reference and proposed building

Electricity Usage	Reference building (MWh)	Proposed building (MWh)
Heating	679.7	204.2
Cooling	1432.9	442.0
Auxiliary	150.1	150.1
Lighting	3843.2	2296.0
Equipment	Same	Same
Domestic hot water	Same	Same
PV System	-	-123.8
Total	**6105.9**	**2968.5**

By implementing all the energy efficiency measures described in the Sustainability Management Plan, the proposal is predicted to achieve a 51.4 per cent GHG emission reduction when compared with the reference building.

Water use

The proposal has been proposed to 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

- water sensitive landscape design.

In addition to these water saving 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 toilet facilities and the proposed rainwater harvesting facility, the proposal will reduce its potable water demand by approximately 33 per cent.

7.10.3 Mitigation measures

All sustainable measures will be implemented into the proposal where relevant. These measures will need to be commissioned and fine tuned once construction is completed and the building is made operational. The tuning will be required to ensure all services operate to their full potential and as designed. Building tuning will be overseen by an independent assessor and reported to the tenant, at least once a month within the Defects Liability Period.

An energy usage review should be undertaken and documented 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 proposal site will help to measure the development's baseline energy use and assess what appliances, equipment and processes are consuming energy.

Energy usage data obtained during the review process may be used to establish key performance indicators and annual energy targets for the proposal. Energy usage considered 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)
- 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.

An energy audit and management review should also be undertaken and documented on a half-yearly basis to identify:

- if employees are following energy savings procedures correctly
- if additional employee training is needed
- if signage and procedures need to be re-examined
- to identify opportunities for improvement.

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 proposal site.

In accordance with the Goodman's Industrial Building Specification, a Building Users' Guide is to be prepared for the proposal.

8. Assessment of other issues

8.1 Building Code of Australia

A detailed Building Code of Australia (BCA) Assessment for the proposal has been undertaken by Blackett Maguire + Goldsmith Pty Ltd (BM+G) to compare the proposal, against the Deemed-To-Satisfy (DTS) provisions of the BCA 2019. This report is provided in Appendix O.

The BCA assessment has considered the following documents:

- Clause 145 of the *Environmental Planning and Assessment (EPA) Regulation 2000* all new building work must comply with the current BCA however the existing features of an existing building need not comply with the BCA unless upgrade is required by other clauses of the legislation.
- The proposed development involves the construction of Building 2B in the Oakdale West Estate, which consists of a 4-storey warehouse & distribution facility, with ancillary offices, internal automation and sortation equipment, and associated external hardstand and car parking.

Table 8-1 presents a summary of relevant building classification items of the Stage 2 Development:

Table 8-1 Building characteristics

Items	Classification
BCA Class	Class 5 (Office and Gatehouse) & Class 7b (Warehouse)
Rise in Storeys	Five (5)
Effective height	Greater than 12m & Less than 25m – 16.72m
Type of Construction	Type A Construction (Large Isolated Building)
Climate Zone:	Zone 6
Maximum Floor Area	Large Isolated Building 18,000m2
Maximum Volume	Large Isolated Building 108,000m3 (Note: Architect to confirm exact volume)

Summary of key compliance issues

Table 8-2 provides a summary of the key compliance issues identified through the assessment. These matters will be addressed prior to issue of the Construction Certificate.

Table 8-2 Matters requiring further resolution/plan amendments

BCA Clause/s		Description
1	C1.9 & C1.14	Details of the non-combustible external walls to the Office, Pedestrian Bridge and carpark Access Stair/Lobby are required to be provided for assessment.
2	D1.2/D1.4	Details of the resolution of any “dead-end” egress distances on Ground Level and egress from enclosed areas in the equipment zones on Ground & Levels 1-3 are required to be provided for further assessment.
3	D1.3	Details of the fire rated construction to the proposed fire stairs serving all levels of the building are to be provided for review along with details of the interface between the glazed western façade of the main office fire stairs and the office roof below.

BCA Clause/s		Description
4	Part D2	Details of all proposed stairways and balustrades to the mezzanine structures within the warehouse are to be provided for review to determine if they are compliant with the dimensional requirements of Part D2 or if a Performance Solution is required.
5	Part D3 & AS 1425.1-2009	Access to the building is required from the following: • All main entry points on the allotment boundary; and • Any accessible car parking within the site. The reference plans indicate that compliance with the above is readily achievable in this instance, however further details are required with respect to levels from the site entry to the main entry of the building. Note: Confirmation of a D3.4 concession for the warehouse is required to be provided by the Operator of the facility to confirm all areas that maybe exempted from compliance with AS 1428.1-2009,
6	Section J	A separate report will be required from an Energy Efficiency consultant to outline the applicable requirements for the building.

Conclusion

The BCA assessment concluded that the proposed development can readily achieve compliance with the relevant provisions of the BCA. The following essential fire safety measures will be required for the building (Table 8-3);

Table 8-3 Essential fire safety measures

Essential Fire and Other Safety Measures	Standard of Performance
Alarm Signalling Equipment	AS1670.3 – 2018
Automatic Fail-Safe Devices	BCA Clause D2.21
Automatic Fire Detection & Alarm System	BCA Spec. E2.2a & AS/NZS 1668.1 – 2015 and *Fire Engineered Alternative Solution
Automatic Fire Suppression Systems	BCA Spec. E1.5 & AS 2118.1-2017 and *Fire Engineered Performance Solution
Building Occupant Warning System activated by the Sprinkler System	BCA Spec E1.5 Clause 8 and/ or AS 1670.1 – 2018
Emergency Lighting	BCA Clause E4.4 & AS 2293.1 - 2018
Exit Signs	BCA Clauses E4.5, E4.6 & E4.8 and AS 2293.1 – 2018 and *Fire Engineered Performance Solution
Fire Control Centre	BCA Spec E1.8
Fire Hose Reels	BCA Clause E1.4 & AS 2441 – 2005
Fire Hydrant Systems	BCA Clause E1.3 & AS 2419.1 – 2005 and *Fire Engineered Performance Solution
Mechanical Air Handling Systems	BCA Clause E2.2, AS/NZS 1668.1 - 2015 & AS 1668.2 – 2012
Paths of Travel	EP & A Regulation Clause 186 and *Fire Engineered Performance Solution
Perimeter Vehicular Access	BCA Clause C2.4 and*Fire Engineered Alternative Solution
Portable Fire Extinguishers	BCA Clause E1.6 & AS 2444 – 2001
Required Exit Doors (power operated)	BCA Clause D2.19(d)
Smoke Hazard Management Systems (Smoke Exhaust System)	BCA Part E2 & AS/NZS 1668.1 - 2015 *Fire Engineered Alternative Solution
Warning & Operational signs	Section 183 of the EP & A Regulations 2000, AS 1905.1 - 2015, BCA Clause D2.23, E3.3

Note the above fire safety schedule is indicative only and could be subject to change as result of design changes

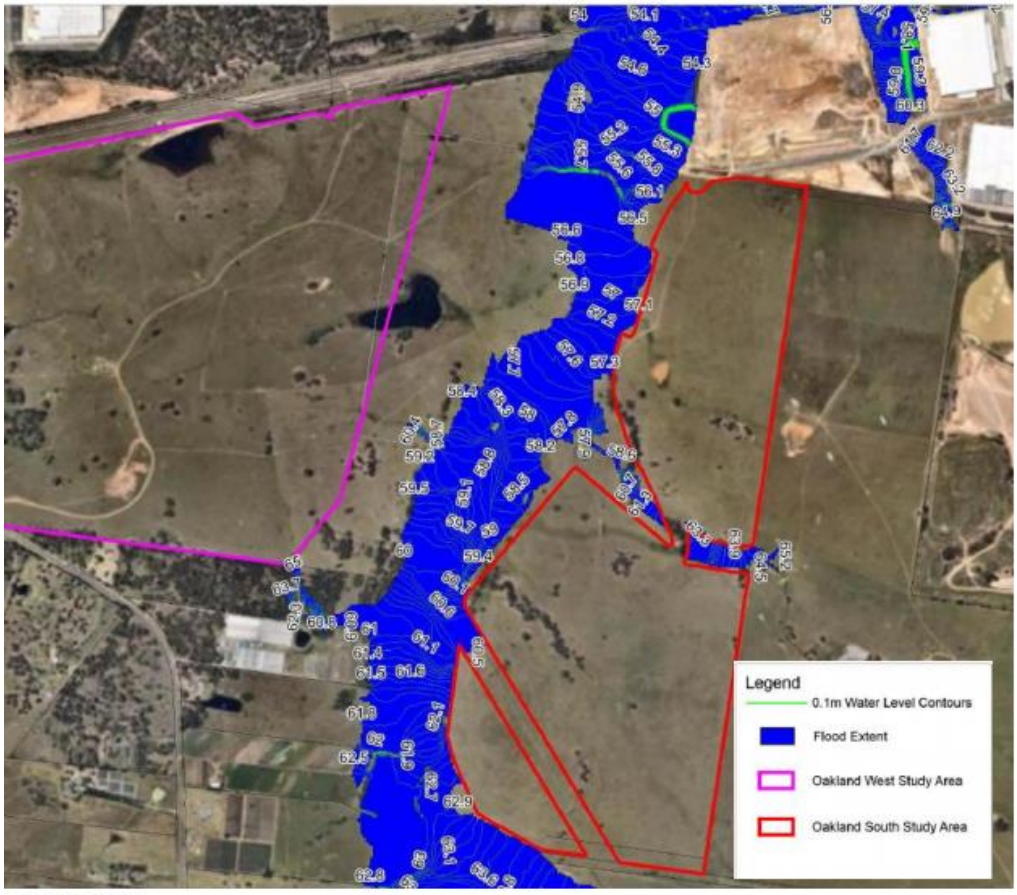
8.2 Flooding

A Flood Impact Assessment was prepared for the approved SSD 7348 Concept Proposal and Stage 1 development EIS.

The post-development flood extent is provided in Figure 8-1 and conclusions of the initial assessment are provided below:

- the proposal would result in zones of both minor reductions and minor increases in the 100 year ARI flood level within the Ropes Creek floodplain
- the minor changes in flood levels predicted do not change the flood extents on any adjoining properties
- there is a zone of significant local increase in the 100 year ARI flood levels within the power line easement adjacent to the eastern boundary of the OWE as a result of the proposed development.

Modifications to the Concept Proposal and Stage 1 Development and the Stage 2 Development are located outside the modelled 100 year ARI flood levels and are not anticipated to impact upon flood levels or flood behaviour within the catchment. The extent of the floodplain modelled and identified impacts have not changed in relation to the proposal. Considering the changes under Modification 3 and Stage 2 Developments, the impacts to OWE have been determined acceptable.



Source: Cardno

Figure 8-1 Post-development flood extent

8.3 Heritage

A Heritage Impact Assessment has been prepared as part of the approved SSD 7348 Concept Proposal and Stage 1 development EIS. The initial HIA assessed the entirety of the OWE and the works involved, specifically earthworks forming part of the Stage 1 Development as the most likely to impact heritage items.

The Heritage Impact Assessment identified areas of archaeological sensitivity within OWE and areas likely to contain subsurface artefacts. Eight indigenous heritage sites were identified, of which five were of moderate significance and three of low significance. The approved development would disturb or destroy three Indigenous heritage sites. The five remaining would be unharmed by the development of OWE.

- Indigenous sites to be disturb or destroyed:
- Oakdale Campsite 4 (#45-5-3385 - Moderate Significance)
- OW IF 2 (#45-5-4675 - Moderate Significance)
- OW IF 3 (#45-5-4676 - Low Significance).
- The proposed changes under Modification 3 and the Stage 2 Development would not affect the conclusions made in the approved Heritage Impact Assessment, as the footprint to be disturbed has not changed. Compliance with the mitigation measures outlined in the approved Heritage Impact Assessment will be applied to the proposal, including but not limited to:
- test excavations in accordance with OEH Code of Practice within archaeological sensitive areas
- OEH Code of Practice in the event of a new artefact is discovered.
- The approved Heritage Impact Assessment found no listed non-indigenous heritage and had low potential for archaeological remains. A potential archaeological site, ‘Collapsed Cottage Site’, was identified and investigation, removal and salvage process was undertaken.
- Existing mitigation measures include an unexpected finds procedure.

8.4 Fire safety

A summary of the results of the Fire Safety Strategy (FSS) prepared by Australian Bushfire Protection Planners Pty Ltd is provided in the following section. The full report is provided in Appendix P.

The objective of a FSS is to inform the design of the building and meet the requirements of the acceptable level of fire safety. The Building Code of Australia (BCA) aims to increase life safety of occupants, facilitate fire brigade operations and protect adjacent buildings through the Performance Requirements of the BCA. This report has been prepared in alignment with the Performance Requirements and in accordance with the International Fire Engineering Guidelines.

The fires safety assessment considered the following:

- Dominant occupant characteristics, including:
  - population and distribution
  - state, physical and mental attributes
  - familiarity with the buildings
  - level of assistance and emergency training
  - disabled occupants

- Hazard identification, those typical and unique to the building:
  - general building layout and construction
  - building activates
  - potential ignition sources
  - combustible contents

The FSS incorporates a fire engineering analysis completed in accordance to the relevant restrictions detailing variations, requirements and compliance method. A design strategy has also been developed that details early detection fire safety measures to ensure compliance with the Performance Requirements.

All design recommendations and non-compliances will be addressed in the detailed design stage. This will safeguard the occupants to the accepted levels under the BCA and International Fire Engineering Guidelines. This may be via a combination of the following:

- Becoming deemed to satisfy by way of design development
- Comparison to the BCA Deemed-to-satisfy provisions to demonstrate equivalence
- Compliance with BCA Performance Requirements

It is considered that the preparation of the Performance Solutions and corresponding fire safety measures will not result in significant changes to the building design presented as part of the Stage 2 Development. .

8.5 Bushfire

A summary of the results of the Bushfire Protection Assessment (BPA) prepared by Australian Bushfire Protection Planners Pty Ltd (ABPP) is provided in the following section. The full report is provided in Appendix Q.

The Penrith Council Bushfire Prone Land Map indicates that the Kemps Creek corridor contains Category 1 Bushfire Prone Vegetation with Category 1 vegetation occupying the land to the south and west of the OWE site. The vegetation within the OWE is mapped as Category 2 Bushfire Prone Vegetation.

Therefore, measures are required to be provided to minimise bushfire risk on the proposed development in accordance with the provisions of *Planning for Bushfire Protection 2006*. A review as part of the proposed Modification 3 works was undertaken and confirmed the protection measures provided in the approved SSD 7348 Concept Proposal will satisfy the requirements.

The Stage 2 Development must comply with the relevant legislation outlined in the Bushfire Protection Assessment, including:

- The relevant provisions of Planning for Bushfire Protection 2006;
- The construction standards and asset protection zone requirements recommended in the Oakdale Industrial Estate – West Bushfire Protection Assessment prepared by ABPP, dated September 2016; and
- AS2419.1 – 2005 for fire-fighting water supply.

The Stage 2 Development is determined to satisfy the requirements outlined above and the location of Buidling 2B exceeds the width of defendable space required by *Planning for Bushfire Protection 2006*. The following additional construction standards are recommended to apply:

- The downpipe/stormwater system to the internal box gutters shall be sized to provide a self flushing of combustible materials from the roof/gutter. This shall include increased fall in the box gutters to the sumps;
- any operable windows shall be fitted with aluminium/stainless steel mesh flyscreens having a maximum mesh aperture size of 2mm;
- access doors [PA and Vehicle] to the buildings shall be fitted with seals that seal the bottom, stiles and head of the door against the opening/frame to prevent the entry of embers into the building. Particular attention shall be given to the gap at the head of the curtain of the roller doors, where mohair type seals can be used;
- External timber doors shall be fitted with a stainless steel/Colorbond kick plate of 400mm high on the outside of the door;
- External glazed doors and windows shall comply with the requirements for glazing less than 400mm above finished ground level; paths / pavement and elevated roofs;
- Any external vents, grilles and ventilation louvres shall have stainless steel mesh with a maximum aperture of 2mm square fitted to prevent the entry of embers into the building or be fitted with a louvre system which can be closed in order to maintain a maximum aperture or gap of no more than 2mm.
- Roof ventilators shall be fitted with stainless steel flymesh [2mm aperture] to prevent the entry of embers into the building or be fitted with a louvre system which can be closed in order to maintain a maximum aperture or gap of no more than 2mm..

9. Environmental management and mitigation

9.1 Risk assessment

A risk screening was carried out and summarised in Section 7.2. This aim of this process is to identify potential environmental impacts that may arise as a result of the proposal. The subsequent environmental impact assessment was undertaken to broadly assess the potential environmental risks that may arise as a result out of the proposed amendment and to identify any areas requiring further detailed assessment.

In this regard the approach to the impact assessment has been to identify mitigation measures to ensure that there will be minimal environmental risk associated with the Concept Proposal modification, Stage 1 development modification and Lot 2B development. This has considered additional or amended mitigation measures above those already outlined in the EIS and the approval conditions (number SSD 7348) for Stage 1 of the OWE.

9.2 Environmental management

9.2.1 Construction Environmental Management Plan

The proposal would proceed in accordance with a detailed CEMP to be prepared for the site to capture both standard construction methodology, mitigation and management measures and specific measures recommended for the OWE proposal by technical assessments and studies.

The standard construction methodology to be followed in respect of the proposed development includes:

- Diversion of “clean” water away from the disturbed areas and discharge via suitable scour protection.
- Provision of hay bale type flow diverters to catch drainage and divert to “clean” water drains.
- Diversion of sediment laden water into temporary sediment control basins to capture the design storm volume and undertake flocculation (if required).
- Provision of construction traffic shaker grids and washdown to prevent vehicles carrying soils beyond the site.
- Provision of catch drains to carry sediment-laden water to sediment basins.
- Provision of silt fences to filter and retain sediments at source.
- Where future construction and building works are not proposed, the rapid stabilisation of disturbed and exposed ground surfaces with hydroseeding.

The above measures would remain in place for the duration of the total construction period of the full development until such time as the individual development lots are completed. Regular inspection of erosion and sediment control measures and other construction mitigations would be undertaken by the site contractor in accordance with the protocols established under the CEMP.

A CEMP was be prepared prior to the commencement of construction works on the site and would continue to be reviewed as each stage of the OWE is progressed.

9.2.2 Operational Environmental Management Plan

An overarching OEMP has been prepared for the OWE to guide the ongoing operations of the site once development is completed. This document would capture standard and specific operational management measures addressing issues such as:

- Control of noise and air emissions
- Biodiversity and vegetation management
- Management of water and waste
- Emergency procedures and protocols
- Engagement with adjoining landowners
- Sustainability and energy efficiency
- Compliance and approvals
- Environmental management and reporting.

The OEMP was be prepared prior to the commencement of operations at the site and would continue to be reviewed as each stage and Lot of the OWE is completed and becomes operational.

9.3 Consolidated mitigation measures

Table 9-1 provides a consolidated summary of the proposed environmental management and mitigation measures for the proposal.

Table 9-1 Summary of safeguards and mitigation measures

Issue	Mitigation measures
General	• Preparation of updated CEMP for OWE Stage 2 Developments • Preparation of updated OEMP for OWE Concept Proposal for Stage 2 Developments
Visual amenity	• the existing vegetation on the eastern, southern and western boundary be retained where possible to assist filtering views to the proposed buildings • The proposed landscape design provides sufficient visual mitigation of the development by creating a 40 metre vegetated embankment with extensive tree and understorey planting along the western boundary bordering Emmaus Catholic College • Landscaped embankment along the western boundary will be completed six months prior to the commencement of the Stage 2 DA.
Traffic and transport	• Temporary use of Bakers Lane until WNSLR is operational • Alternate Stage 2 construction vehicle route via Adlington Road during school peak hours • Ban Right-Out movements at Abbotts Road/Mamre Road intersection

Issue	Mitigation measures
	• Detailed STP
Noise and vibration	• Detailed Construction Noise and Vibration Management Plan • Vibratory rollers and plate compactors have the potential to be operated within 20 m and within the recommended safe working distances of structures in Emmaus Village, Emmaus Catholic School and immediately adjacent to the south boundary in Kemps Creek. Locations for vibration intensive equipment should be reviewed during the preparation of the site specific Construction Noise and Vibration Management Plans (CNVMPs) for construction works adjacent to the most affected receivers. • Potential receiver based treatment at N4 and N5 • Construction hours to be limited to 3.00am - 10.00pm • Where construction noise levels are predicted to be above the NMLs, all feasible and reasonable work practices are investigated to minimise noise emissions. • If construction noise levels are still predicted to exceed the NMLs, potential noise impacts would be managed via site specific construction noise management plans, to be prepared during the detailed design phase. • Noise barriers possessing surface mass of no less than 15 kg/m^2 to be installed at the locations and to the heights detailed in Appendix H and shown on Figure 7-19. Construction of noise barriers as shown in Figure 7-19. • On-site speed limits of 25 km/hour for heavy vehicles and 40 km/hr for light vehicles to be imposed. • Tonal reversing alarms not to be used on the OWE. • During detailed design, Lot 2B rooftop mechanical services plant to be reviewed to ensure that cumulatively emissions are controlled to not exceed LAeq,15min 37 dBA at the western site boundary or LAeq,15min 41 dBA at the southern site boundary. The inclusion of silencers/attenuators and/or barrier solutions may be considered to ensure these acoustic design standards are achieved, as confirmed by noise modelling. • Subject to the findings of further detailed design, the provision of mechanical ventilation systems to receivers N4 and N5 to be considered, to enable windows to be closed without compromising internal air quality/amenity. • Cumulative sound power levels of fixed plant for each building within the OWE to be limited to 95dBA • Further assessment of potential operational noise impacts to be undertaken in respect of any specific operations proposed within the OWE with an atypical noise profile.

Issue	Mitigation measures
Soil and water	• All stormwater drainage within the lot 2B will be the responsibility of Goodman. • Finished Floor Levels (FFL) of proposed buildings within the precinct (separate approval) to have minimum 500mm freeboard to 100 year overland flows. • A gross pollutant trap (GPT) will be installed within Lot 2B on the final downstream stormwater pit prior to discharging. As these GPT's will be located on-lot as they will be owned and maintained by Goodman. The GPT will capture 90% of Gross Pollutants from Lot 2B as per water sensitive urban design guidelines. • all design, documentation, installation and maintenance of sediment and erosion controls will be in accordance with the correct requirements • a SWMP will be prepared for the construction phase of the development • site inspection and maintenance specified in Section 5.2 of the report provided in Appendix I • sediment basin maintenance, including drainage within 5 days, implementation of flocculation when the 5 day target cannot be met.
Waste management	• Detailed Construction Waste Management Plan and Waste Management Plan • Installation of a baler and compactor in Lot 2B
Biodiversity	• Implementation of the Biodiversity Offset Strategy for the site. • Preparation of a Biodiversity Management Plan for the site to inform the CEMP and OEMP as relevant to manage potential impacts to biodiversity during construction and operation. • Restoration of retained areas of vegetation on the site including riparian corridors and the Biodiversity Offset Area. • Native grassland restoration to other areas of the site including road batters and outside batters of bio-retention basins. • Ongoing maintenance and management of these areas in accordance with the provisions of the Biodiversity Offset Strategy.
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

Issue	Mitigation measures
	vapour extraction systems and regular monitoring of discharges as appropriate. • Specific operations proposed within the OWE with the potential for generation of odour would be subject to further assessment. • Further assessment of potential air quality impacts to be undertaken in respect of any specific operations proposed within the OWE with an atypical air emissions profile. •
Energy efficiency	• all purchased electricity and energy which is consumed by stationary equipment on site • energy consumed by mobile equipment (e.g. forklifts) • 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. • Detailed Energy Management Plan - updated regularly An energy audit and management review on a half-yearly basis to identify: • if employees are following energy savings procedures correctly • if additional employee training is needed • if signage and procedures need to be re-examined • to identify opportunities for improvement.
BCA	• Preparation of the Performance Solutions and corresponding fire safety measures during detailed design to ensure compliance with BCA and International Fire Engineering Guidelines
Flooding	• OSD designed to ensure that development does not increase stormwater peak flows in downstream areas for events up to and including 1:100 year ARI • OSD designed to mitigate post-development flows to pre-development flows for peak ARI events • Finished floor levels to have minimum 500mm freeboard to 100 year overland flows • Flood impacts on Transgrid easement would be mitigated through minor compensatory earthworks on the floodplain to convey locally diverted flows. These works are detailed in the civil drawings at Appendix J.
Heritage	• Implementation of unexpected finds procedure

Issue	Mitigation measures
	• Archaeological salvage excavation and monitoring to be undertaken in the presence of relevant Aboriginal stakeholders prior to ground disturbance and excavation work in identified areas. • Results of detailed archaeological excavation and any suitable salvaged materials to be managed in accordance with the NPW Act and direction from relevant Aboriginal stakeholders.
Fire safety	• Preparation of Performance Solutions and fore safety measures will be presented in the building design phase
Bushfire	• The downpipe/stormwater system to the internal box gutters shall be sized to provide a self flushing of combustible materials from the roof/gutter. This shall include increased fall in the box gutters to the sumps; • any operable windows shall be fitted with aluminium/stainless steel mesh flyscreens having a maximum mesh aperture size of 2mm; • access doors [PA and Vehicle] to the buildings shall be fitted with seals that seal the bottom, stiles and head of the door against the opening/frame to prevent the entry of embers into the building. Particular attention shall be given to the gap at the head of the curtain of the roller doors, where mohair type seals can be used; • External timber doors shall be fitted with a stainless steel/Colorbond kick plate of 400mm high on the outside of the door; • External glazed doors and windows shall comply with the requirements for glazing less than 400mm above finished ground level; paths / pavement and elevated roofs; • Any external vents, grilles and ventilation louvres shall have stainless steel mesh with a maximum aperture of 2mm square fitted to prevent the entry of embers into the building or be fitted with a louvre system which can be closed in order to maintain a maximum aperture or gap of no more than 2mm. • Roof ventilators shall be fitted with stainless steel flymesh [2mm aperture] to prevent the entry of embers into the building or be fitted with a louvre system which can be closed in order to maintain a maximum aperture or gap of no more than 2mm.

10. Justification and conclusion

10.1 Justification of the proposal

The proposed staged development of the OWE as described in the EIS and SSD 7348 is justified on strategic, economic and environmental grounds. Key justification for the proposed development includes:

- Outcomes that support the strategic role and objectives of the OWE as part of the broader WSEA.
- Outcomes that align with the future context and role of the WSEA as an economic hub for Greater Sydney.
- The delivery of critical infrastructure and services to the WSEA for the benefit of the broader area.
- Significant private sector investment in the area with direct and indirect benefits for productivity and the local economy.
- Generation of employment for the Western Sydney Region.

10.1.1 Likely impacts of the proposal

Technical consultants practicing in each of the fields identified in the SEARs have been engaged to conduct assessments of the impacts of the proposed development. The consultants have determined the proposal can be carried out with minimal environmental impacts. No significant impacts will take place as a result of the proposal.

10.1.2 Suitability of the site

The site is considered suitable for the development given the following:

- the site zoning which permits warehouse and distribution uses;
- the proposal is consistent with the approved Concept and Stage 1 SSD approval 7348 and the proposed Section 4.55 modifications currently being assessed by DPI&E which establishes the overall use of the precinct for warehouse and distribution purposes;
- the proposal is compatible with surrounding development and zoning;
- adequate separation is provided from sensitive land uses including residential;
- all potential environmental impacts of the proposal can be suitably mitigated within the site;
- the proposed use is suitably proximate to the regional road network with a good level of accessibility;
- the Concept Proposal and Stage 1 Development for the site has been approved and has assessed in detail the natural and cultural aspects of the site. No further impact on those will be proposed by the proposal.

10.2 Conclusion

Goodman is seeking consent for the Stage 2 Development (SSD 10397), which involves establishing a warehouse and distribution facility within a portion of Precinct 2 of the OWE. Modification 3 to SSD 7348 includes amendments to the Concept Proposal and Stage 1 Development which are required to facilitate the Stage 2 Development.

The proposal is a type of development listed in Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011. Schedule 1 item 12 identifies Warehouses and Distribution Centres with a capital investment value over $50 m as State Significant Development (SSD) under the SEPP framework.

The capital investment value proposed works is approximately $500 m (excluding GST) for Modification 3 and Stage 2 Development. Tenant fit out cost is projected to be $180 m. The proposal is therefore appropriately characterised as SSD and accordingly approval is sought under Section 4.38 of the EP&A Act

The proposal has been considered and assessed in accordance with the requirements of the NSW EP&A Act as they apply to SSD. The EIS assesses matters prescribed under this Act and its Regulation, and those matters identified in the SEARs for the proposal.

Based upon a balanced review of key issues and in consideration of the benefits and residual impacts of the proposal is considered justified and warrants approval subject to the implementation of the management and mitigation measures described in EIS and nominated supporting documents.

11. References

Australian Standards (1997), AS1055.1:1997 Acoustics – Description and measurement of environmental noise

Australian Standards (2010), AS2436:2010 Guide to noise and vibration control on construction, demolition and maintenance sites

ABCB, 2005. International Fire Engineering Guidelines. Canberra, Australia. Australian Building Codes Board (ABCB), National Research Council of Canada, International Code Council & Department of Building and Housing.

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ABCB, 2016. Regulation Impact Statement Assessment of the National Construction Code's fire hose reel requirements for new (Class 5) office buildings, Canberra, ACT, Australia: Australian Building Codes Board

British Standards (1993), BS7385-2:1993 Evaluation and measurement for vibration in buildings

DECC (2009), Interim Construction Noise Guideline

DECCW (2011), Road Noise Policy

Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales

EPA (2017), Noise Policy for Industry

Transport for NSW (2018), Construction Noise and Vibration Strategy

Penrith City Council Strategic Plan

Penrith City Council Engineering Guidelines

Appendices

Appendix A – Secretary's Environmental Assessment Requirements (SSD 10397 and SSD 7348 Modification 3)

Appendix B – Development consent (SSD 7348)

Appendix C – Architecture plans

Appendix D – Landscape plans

Appendix E – Architectural Design Statement

Appendix F - Visual amenity assessment

Appendix G – Traffic and transport assessment

Content

Appendix H – Noise and vibration assessment

Appendix I – Lot 2B Civil report

Appendix J – Civil, Stormwater and Infrastructure Service Report DA Modification 3

Appendix K – Waste management assessment

Appendix L – Biodiversity assessment

Appendix M – Air quality assessment

Appendix N – Energy efficiency assessment

Appendix O – BCA report

Appendix P - Fire Safety

Appendix Q – Bushfire protection assessment

Appendix R – Quantity surveyor report

Appendix S – Subdivision Layout Plan

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