Kariong Sand and Soil Supplies Facility

State Significant Development Assessment

SSD-8660

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Cover image: Photomontage of the Kariong Sand and Soil Supplies Facility (Davis Earthmoving and Quarrying Pty Ltd, 2020)

Glossary

Abbreviation	Definition
ACHA	Aboriginal Cultural Heritage Assessment
Applicant	Davis Earthmoving and Quarrying Pty Ltd
ARI	Average Recurrence Interval
BCD	Biodiversity and Conservation Division, DPIE (former Office of Environment and Heritage)
BDAR	Biodiversity Development Assessment Report
BPLS	Building Products and Landscaping Supplies
CCLHD	Central Coast Local Health District
CIV	Capital Investment Value
Commission	Independent Planning Commission
Council	Central Coast Council
Department	Department of Planning, Industry and Environment (DPIE)
DPI	Department of Primary Industries, DPIE
EIS	Environmental Impact Statement
ENM	excavated natural material
EPA	NSW Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
EPI	Environmental Planning Instrument
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
FRNSW	Fire and Rescue NSW
HNSW	Heritage NSW, Department of Premier and Cabinet
LEP	Local Environmental Plan
LGA	local government area

Abbreviation	Definition
Minister	Minister for Planning and Public Spaces
NHVR	National Heavy Vehicle Regulator
NRAR	Natural Resources Access Regulator, DPIE
PCT	Plant Community Type
Planning Secretary	Planning Secretary of the Department of Planning, Industry and Environment
RCS	respirable crystalline silica
RFS	NSW Rural Fire Service
RMS	Roads and Maritime Services
RRO	Resource Recovery Order
SEARs	Planning Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SIP	Somersby Industrial Park
SSD	State Significant Development
TAS	Todoroski Air Sciences
TfNSW	Transport for NSW
VENM	virgin excavated natural material
WQV	Water Quality Validation

Executive Summary

This report details the Department of Planning, Industry and Environment's (the Department) assessment of a State significant development application (SSD-8660) for the Kariong Sand and Soil Supplies Facility.

Davis Earthmoving and Quarrying Pty Ltd (the Applicant) proposes the construction and operation of a resource recovery facility (RRF) and a Building Products and Landscaping Supplies (BPLS) facility at 90 Gindurra Road, Somersby in the Central Coast Council (Council) local government area (LGA).

The site is approximately four kilometres (km) west of Gosford within the Somersby Industrial Park (SIP) and covers 10.8 hectares (ha) of IN1 General Industrial zoned land under the Gosford Local Environmental Plan 2014. The site is bordered by Gindurra Road to the north, rural residences fronting Acacia Road and Debenham Road South to the east, Kangoo Road to the south, and 76 Gindurra Road to the west. The northern portion of the site is primarily cleared, and the southern portion contains intact bushland. The nearest dwelling is approximately 22 metres (m) from the eastern boundary at 242 Debenham Road South, Somersby.

Development Background

The Applicant is an earthmoving and waste management company that undertakes environmental land clearing, constructs firebreaks, and operates a construction and demolition (C&D) waste processing facility (Greenwood Landfill & Waste Recovery Facility) in Belrose, NSW. The Applicant has identified a market need to expand its C&D processing business and is seeking development consent to construct and operate an RRF on the site. To complement the RRF, the Applicant also proposes to establish a building products and landscaping supplies business to sell the majority of the recycled materials produced by the RRF.

Statutory Context

The development is State significant development (SSD) pursuant to section 4.36 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) because it involves development for the purposes of an RRF that handles more than 100,000 tonnes per annum (tpa) of waste, which meets the criteria in clause 23(3), Schedule 1 to State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP).

The Independent Planning Commission (Commission) is designated as the consent authority for the development under section 4.5 of the EP&A Act and clause 8A of the SRD SEPP, as there are more than 50 unique public submissions by way of objection.

Amended Development

The original application was lodged and publicly exhibited in 2019 and sought approval for an RRF processing up to 200,000 tpa of C&D waste. In the original application, the majority of waste processing areas, except those within a warehouse building previously approved by Council, were proposed to be located outdoors and uncovered.

During the exhibition of the original Environmental Impact Statement (EIS), the Department received over 400 submissions from the general public objecting to the development based on site suitability and potential environmental impacts. Key issues raised included air quality and human health risk, noise, traffic and biodiversity. The Department and a number of government agencies, including the Environment Protection Authority (EPA), also raised concerns about air quality, noise impacts, traffic and access, and water management.

The Department extensively consulted with the Applicant, the EPA and the community throughout 2019 and 2020 seeking to improve the environmental performance of the development. Ultimately, the Applicant agreed to amend the development, and these changes were detailed in an amended EIS and a Response to Submissions (RtS) report (dated August 2020). The amendments to the development were targeted at minimising offsite impacts and included enclosing a number of activities within buildings and progressively increasing the throughput of the facility over three development stages. Stage 1 of operations would have a throughput limit of 100,000 tpa, increasing to 150,000 tpa for Stage 2 and up to 200,000 tpa for Stage 3. Progression to Stage 2 and Stage 3 would be contingent on environmental performance criteria being met once operation commences.

The development also includes upgrades to Gindurra Road near the future site access, vegetation removal, two weighbridges (one inbound and one outbound), acoustic barriers, construction of storage bunkers, buildings for waste receival, crushing and mulching activities, hardstand areas, and internal roads. It is proposed preserve of an existing native shrub, *Melaleuca biconvexa,* near the northwestern corner of the site.

The development has a capital investment value (CIV) of $14,866,000 and is expected to generate five jobs during construction and 20 operational jobs.

Engagement

The Department exhibited the original EIS for the development from 1 February 2019 until 21 March 2019 (49 days). During the exhibition period, the Department received 432 unique submissions from the public (nine special interest groups, 423 individuals) and advice from 11 government agencies, including Council. Of the 432 public submissions, 425 were objections. Key concerns raised in public submissions related to site suitability, silica dust impact and human health, noise impact, water pollution, traffic and access and site management.

The Department exhibited the amended EIS and the RtS from 28 August 2020 until 25 September 2020 (29 days). During the exhibition period, the Department received 165 unique submissions from the public (13 special interest groups, 152 individuals) and advice from 12 government agencies, including Council. This included 41 objections (36 individuals and five special interest groups) and 121 submissions in support of the development (114 individuals and seven special interest groups). The 114 supporting submissions from individuals included one form letter with 454 signatures and one form email with 319 signatures.

While the number of submissions received was less than during the original exhibition, public objections to the amended EIS raised a number of residual concerns regarding air and water quality, silica dust deposition and associated health impacts, noise and vibration, road network efficiency and safety and site suitability. Objections from residents on Debenham Road South and Acacia Road were supported by independent reviews of the Applicant's air, noise, and traffic assessments.

Submissions in support stated the development is suitably located, can be sufficiently managed, would support recycling initiatives, divert waste from landfills, and would create local employment.

Despite the updated technical studies and additional information provided in the amended EIS, several government agencies and Council advised outstanding concerns remained regarding the Applicant's assessment of air, noise, traffic, biodiversity, and water management.

During late 2020 and early 2021, the Applicant provided supplementary information to address the community and government agency concerns. This included supplementary reports for air, noise, water quality and biodiversity, additional information related to traffic and updated design and civil plans. All information provided was reviewed by the relevant government agencies, including Council, and made available on the Department's website. All outstanding information required to finalise the Department's assessment was provided by September 2021. Following reviews of the RtS reports and the extensive consultation process undertaken, relevant government agencies recommended conditions for the development. To ensure a robust assessment, the Department also engaged an independent consultant to review some of the air impact assessment reports from the Applicant and nearby residents.

Assessment

The Department's assessment of the application has considered all relevant matters under Section 4.15 of the EP&A Act, including the objects of the Act and the principles of ecologically sustainable development. The Department identified the key issues for assessment as operational air quality, noise, traffic and access, and water management.

Operational Air Quality

The Applicant's amended Air Quality Impact Assessment (AQIA) submitted with the amended EIS identified a range of onsite air emission sources including movement of vehicles and materials within the site, unloading and loading of materials, waste processing, wind erosion of storage areas, and emissions from vehicle and equipment exhaust. Key air pollutants identified included Total Suspended Particulates (TSP), deposited dust, and particulate matter (coarse particles less than 10 microns in diameter (PM_{10}) and fine particles less than 2.5 microns in diameter ($PM_{2.5}$)).

In response to issues raised by the EPA, the Department and the public submissions, the Applicant amended the design of the proposal to enclose crushing and mulching activities, conveyors and bunkers and equip the buildings with dust suppression and misting systems. The amended AQIA was subsequently revised to include a range of more conservative emission assumptions and submitted as an AQIA Addendum report. The Applicant's AQIA Addendum used AERMOD dispersion modelling to assess the predicted maximum incremental and cumulative operational impacts under a conservative operational scenario. This included material processing activities and vehicle and plant movements occurring simultaneously at the maximum throughput capacity.

The modelling predicted maximum 24-hour incremental and cumulative PM_{10} and $PM_{2.5}$ concentrations would comply with the relevant criteria at all receivers. Incremental and cumulative silica dust levels were also assessed and found would be well below the relevant annual average criterion of 3 $\mu g/m^3$ at all receivers. The EPA was generally satisfied with the Applicant's AQIA Addendum report and recommended the Applicant prepare an Operational Air Quality Management Plan (AQMP), including an ambient air monitoring strategy and install and operate an onsite meteorological station.

To ensure air quality impacts had been robustly considered, the Department engaged EMM to undertake an independent review of the Applicant's AQIAs and the independent review of the AQIA submitted by the residents. EMM found the Applicant's AQIA Addendum provided a robust assessment of the development's potential air quality impacts and any uncertainties in model inputs could be adequately addressed by the Applicant's proposed mitigation measures.

The Applicant has proposed limiting the initial waste throughput to 100,000 tpa to enable impacts at this level to be validated prior to increasing to a higher processing capacity. To formalise this, the Department has recommended conditions that require the actual air impacts of the operation to be verified against the predictions detailed in the AQIA Addendum following the commencement of each stage of the development, with further validation required prior to permitting a throughput increase up to a final limit of 200,000 tpa. This approach provides the opportunity for additional contingency measures to be implemented or alterations to onsite operational practices, if required to meet the relevant criteria.

Further, the Department has recommended a condition requiring the Applicant to prepare and implement an Operational AQMP to formalise the development's air quality control and contingency measures.

The Department's assessment concludes that subject to the conditions and the Applicant's proposed best practice management and mitigation measures, including enclosing the previously open-air development and misting and dust suppression systems, the development would have minimal air quality impacts on surrounding receivers.

Operational Noise

The Applicant's assessment submitted with the amended EIS identified a range of onsite noise emission sources including heavy vehicles moving to, from and within the site, the use of front-end loaders, crushing and grinding of C&D waste, and noise emissions from plant and equipment.

The Applicant's assessment used background noise data and receiver characterisations to develop Project Noise Trigger Levels (PNTLs) for the nearby receivers. The assessment predicted that in the worst-case scenario of maximum waste throughput and all plant operating simultaneously, the daytime noise levels would be below the PNTL of 48 dB(A) at all residential receivers.

The Department extensively consulted with the EPA and the Applicant to ensure residential noise amenity can be maintained during operation of the RRF. In response to community and agency concerns, the Applicant reduced the proposed operating hours, and enclosed a number of the high noise generating activities. In addition, a noise wall is proposed along the eastern boundary as well as noise barriers in the processing areas.

Following the design amendments, the Applicant submitted new noise modelling which adopted a more conservative, worst-case approach, including increased sound power levels for machinery and penalties applied for impulsive and tonal noise. The results of the new modelling showed an increase of 1 dB(A) in the predicted operational noise levels at 242 Debenham Road South to 48 dB(A), which is equal to the PNTL criteria. Noise levels at all other locations remained below the PNTL criteria. The EPA was generally satisfied with the noise modelling undertaken and advised the proposed amendments to the development, including enclosure of activities, were appropriate to mitigate noise impacts.

The Department considers the modelling to be conservative given it is unlikely all machinery and plant would operate simultaneously. However, to ensure actual noise emissions meet the criteria at all nearby receivers, a stringent set of conditions is recommended. These include undertaking noise monitoring following commencement of each stage of the development to verify actual noise against the Applicant's noise modelling predictions with further validation of operational noise impact prior to increasing processing capacity. This approach provides the opportunity for additional contingency measures to be implemented or alterations to onsite operational practices, if required to satisfy the PNTL criteria. An Operational Noise and Vibration Management Plan is also required to formalise the measures and strategies to be implemented by the Applicant to manage noise impacts.

Operational Traffic and Access

The development includes works and signage on Gindurra Road and at the site access to ensure right in, left out only movements can be achieved, thereby ensuring no vehicles would use Debenham Road South and travel via nearby residents to the east of the site. An assessment of onsite queuing, manoeuvring and parking concluded these activities could be safely undertaken and the internal layout would ensure the largest trucks can enter and exit the site in a forward direction and onsite plant can move without restriction.

The Department acknowledges the concerns raised by the community regarding potential traffic impacts. However, the Applicant's assessment demonstrates the two nearby key intersections would not be adversely affected by traffic generated from the development and the existing road network has sufficient capacity for the additional 164 daily vehicle trips (82 in and 82 out).

The Department is satisfied the operational traffic impacts of the development would be low. However in acknowledgement of concerns raised in public submissions, the Department has recommended conditions requiring the Applicant to monitor traffic following the commencement of operation of Stage 1 of the proposed development and to provide a traffic validation report prior to the commencement of Stages 2 and 3 of the development. As a further safeguard, conditions are also recommended requiring the preparation of an Operational Traffic Management Plan detailing the measures to ensure road safety, road network efficiency and management of onsite traffic movements during operation.

Water Management

The development includes a comprehensive water management system (WMS) designed to collect, treat, recycle, and reuse water within the site. The WMS divides the site into six sub-catchments based on the potential for water contamination risk associated with the proposed activities in each area. A suite of tailored treatment methods are proposed to ensure effective separation of clean and contaminated water, maximise water recycling and reuse onsite, minimise discharge to the retained bushland, and to meet the irrigation requirements for the retained *Melaleuca biconvexa* community.

The Department and EPA are satisfied the Applicant has provided a robust assessment of the potential water quality and quantity impacts associated with the proposed development. Notably, MUSIC water quality modelling sufficiently demonstrates the WMS would achieve Council and the Growth Centres Commission best practice pollution reduction targets for Total Suspended Solids, Total Phosphorus and Total Nitrogen in discharge water. Measures would be employed to reduce, as much as practicably possible, the volume of runoff from the site. Overall, the Applicant's assessment demonstrates the proposal would result in a beneficial outcome for water quality discharge from the site and harvesting and reuse of water would reduce both the frequency and volume of runoff.

The Applicant's assessment predicted compliance with all relevant human health criteria for stormwater treated in the onsite Stormwater Treatment Plant and concluded the proposed treatment plant would ensure all human health risks can be managed.

The Department considers the proposed WMS would efficiently minimise water pollution risks during operation. To ensure the WMS operates effectively and potential water quality impacts are mitigated, the Department has recommended conditions which include requiring the Applicant to monitor water quality against ANZECC Guideline criteria and validate the effectiveness of the WMS progressively at each of the three stages as the waste processing throughput is increased. An Operational Soil and Water Management Plan is also required detailing the water quality monitoring strategy and control, maintenance, and contingency measures.

With the implementation of the recommended conditions, the Department's assessment concludes that the Applicant's WMS represents best practice in water quality and quantity management and potential impacts can be effectively mitigated.

Summary

Overall, the Department's assessment concludes the development would:

- contribute to the State's waste recovery performance in the C&D waste sector
- provide a total of 20 operational jobs in the Central Coast LGA
- be consistent with the strategic objectives of the Central Coast Regional plan to deliver employment generating development in Somersby Industrial Park, close to key transport links
- not have a significant impact on the local environment subject to implementation of the recommended conditions.

The Department considers the staged increase of processing capacity would provide opportunities to validate and improve the proposed development's environmental performance and concludes the impacts of the development can be mitigated and managed to ensure an acceptable level of environmental performance, subject to the recommended conditions of consent.

Consequently, the Department considers the development is in the public interest and the application is approvable, subject to conditions. This assessment report is hereby presented to the Commission for determination.

Contents

1 Introduction

1.1 The Department's Assessment

1.1.1 This report details the Department of Planning, Industry and Environment's (the Department) assessment of the State significant development application (SSD-8660) for the Kariong Sand and Soil Supplies Facility at 90 Gindurra Road, Somersby (the site). The proposed development (the development) involves the construction and operation of a resource recovery facility (RRF) and building products and landscaping supplies (BPLS) business. The RRF would initially accept and process up to 100,000 tonnes per annum (tpa) of construction and demolition (C&D) waste with this increasing up to 200,000 tpa at full capacity. The majority of the recycled outputs would be sold to commercial customers via the BPLS part of the development.

1.1.2 The Department's assessment considers all documentation submitted by Davis Earthmoving and Quarrying Pty Ltd (the Applicant), including the Environmental Impact Statement (EIS), amended EIS, Response to Submissions (RtS), Supplementary RtS, advice from government agencies and public submissions. The Department's assessment also considers the legislation and environmental planning instruments relevant to the site and the development.

1.1.3 This report describes the development, surrounding environment, relevant strategic and statutory planning provisions, and the issues raised in government advice and in submissions received. The report evaluates the key assessment issues and provides recommendations for managing any impacts during construction and operation. The Department's assessment has concluded that the development is in the public interest and is approvable, subject to conditions.

1.2 Development Background

1.2.1 The Applicant is an earthmoving and waste management company that undertakes environmental land clearing, constructs firebreaks, and operates a C&D waste processing facility (Greenwood Landfill & Waste Recovery Facility) located in Belrose, NSW.

1.2.2 In 2017, the Applicant purchased the site and obtained development consent (DA 52541/2017) from Central Coast Council (Council) for the construction of a warehouse building in the northeastern part of the site near Gindurra Road, however this consent does not permit any waste activities. As the Applicant has now identified a market need to expand its C&D processing business, it is seeking development consent to construct and operate an RRF on the site. To complement the RRF, the Applicant also proposes to establish a building products and landscaping supplies business to sell the majority of the recycled materials produced by the RRF.

1.3 Site Description

1.3.1 The site is legally described as Lot 4 in Deposited Plan (DP) 227279 (see **Figure 1**) and comprises approximately 10.8 hectares (ha) of IN1 General Industrial zoned land located in Somersby, 4 kilometres (km) west of Gosford and 70 km north of Sydney.

1.3.2 The site is located within the Somersby Industrial Park (SIP), a strategically identified employment area, with approximately 300 ha of industrial zoned land, which is the largest industrial zoned area in the Central Coast region. The SIP has regional road freight linkages with Sydney via the M1 Pacific Motorway and the Central Coast region via the Central Coast Highway.

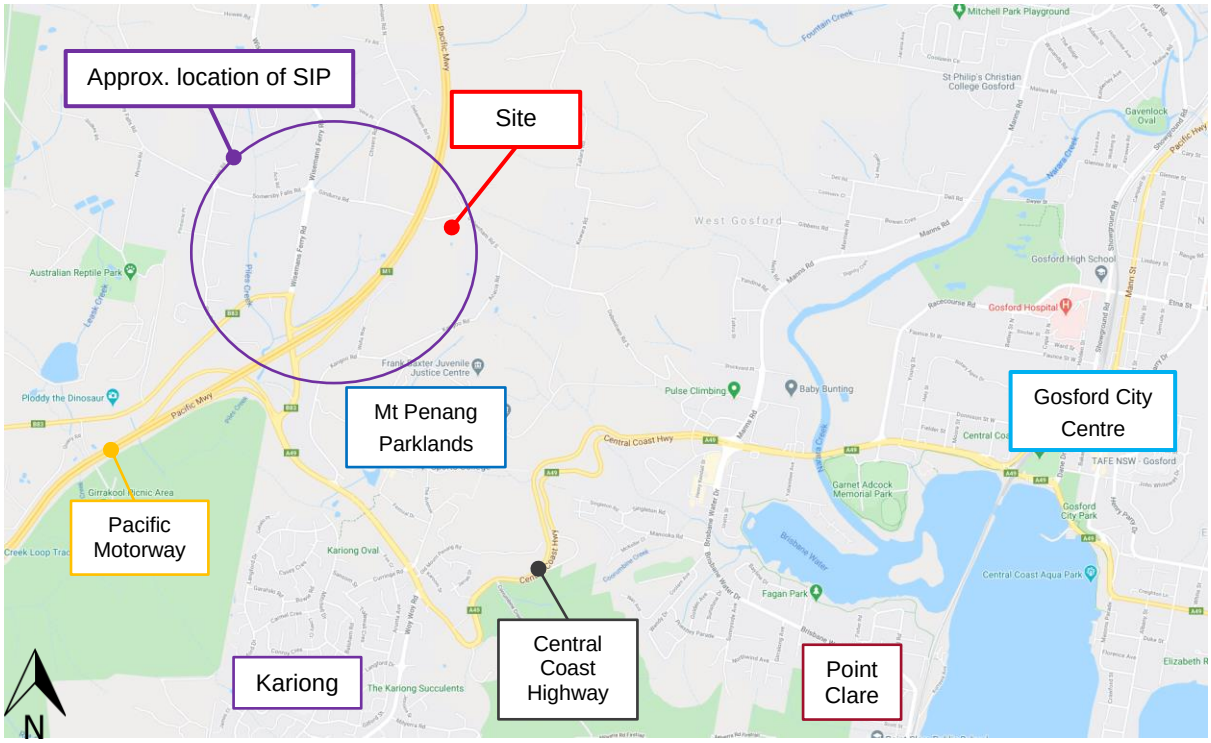

Figure 1 | Regional Context Map

1.3.3 The site falls from the northeast at Gindurra Road to the southwest at Kangoo Road and has one formal access point at Gindurra Road, leading to an existing unsealed internal driveway. The development would be located on 6.05 ha within the northern portion of the site (the development footprint). No works are proposed within the remaining 4.75 ha southern portion of the site (see **Figure 2**).

1.3.4 The site is connected with the Central Coast Highway and M1 Motorway via Gindurra Road and Wisemans Ferry Road (see **Figure 2**).

1.3.5 Between 1992 and approximately 2017, the site was used as a sand and metal recycling facility approved by the former Gosford City Council. Legacy stockpiles from these operations remain in the northern portion of the site and are currently overgrown with vegetation.

1.4 Surrounding Land Uses

1.4.1 The site is predominately surrounded by IN1 General Industrial and RU1 Primary Production zoned lands (see **Figure 2**). Current notable land uses in the vicinity include:

- to the north: undeveloped bushland at 83 Gindurra Road where a warehouse and distribution centre is approved by Council under DA 59244/2020
- to the east: rural residences fronting Debenham Road South, with Acacia Road and Gosford Quarry further to the east
- to the south: Kangoo Road, with Mount Penang Parklands, Frank Baxter Juvenile Justice Centre, and Central Coast Riding for the Disabled Centre located beyond
- to the west: undeveloped bushland and SIP (comprising mixed warehouses, offices, and bulky good retailers).

1.4.2 The nearest residence is located at 242 Debenham Road South, approximately 20 m northeast of the site (see **Figure 2**).

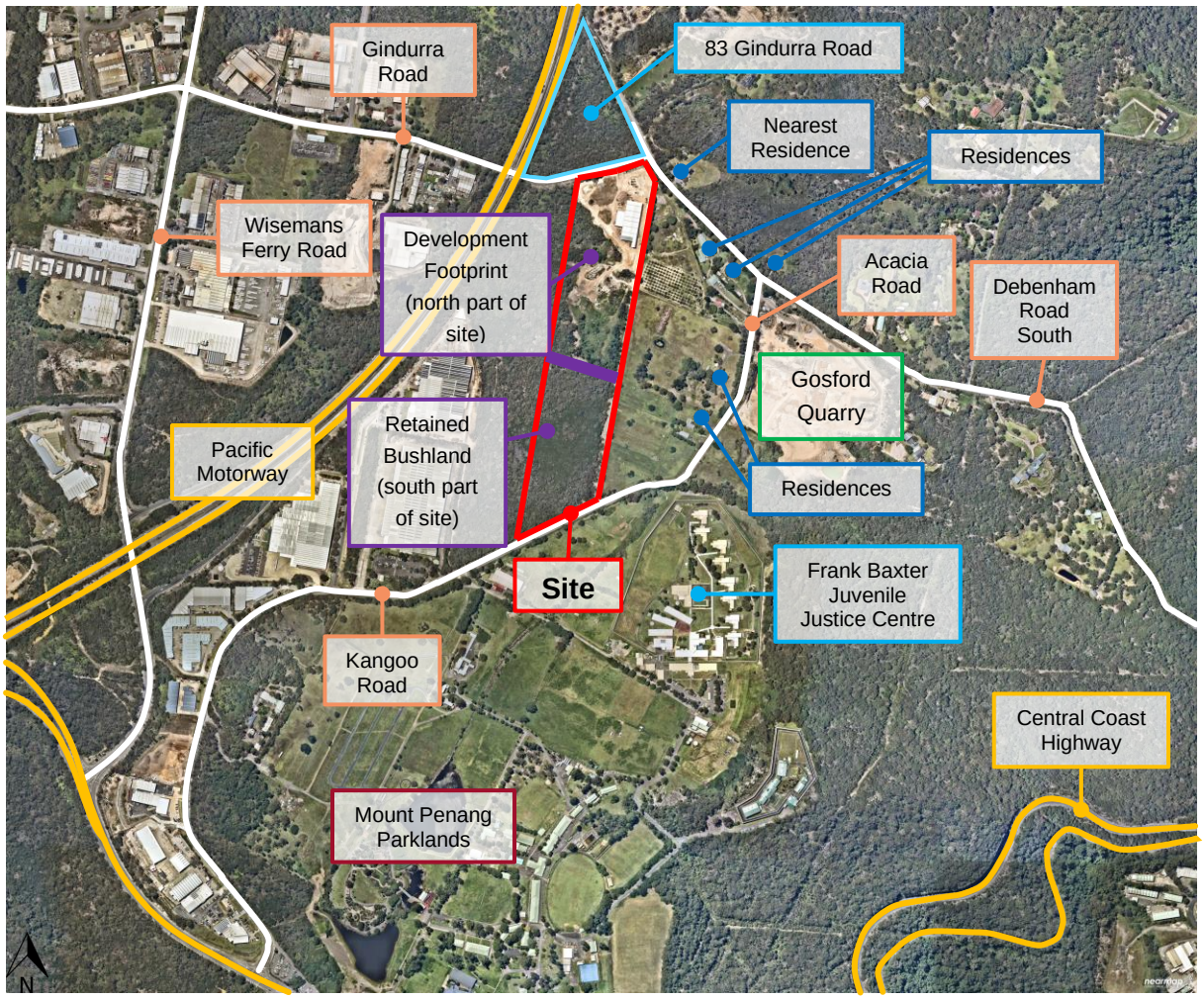

Figure 2 | Local Context Map

1.5 Planning Approval History

1.5.1 Activities at the site have previously been approved under two local development consents:

- DA 15377/1991 approved by the former Gosford City Council on 28 February 1992 for a sand and metal recycling facility (now lapsed)
- DA 52541/2017 and subsequent modifications approved by Council (as described below) for a warehouse building.

DA 52541/2017

1.5.2 On 17 November 2017, Council issued development consent (DA 52541/2017) for a warehouse building with offices, staff amenities, and a driveway located in the northern part of the site. DA 52541/2017 has been modified on two occasions:

- the first modification (Mod 1) was approved by Council on 21 September 2018. It authorised several amendments, including increases in building length and height, enclosure of an awning, addition of an awning to the southern end of the building, and additional car parking spaces
- the second modification (Mod 2) was approved by Council on 9 June 2020. It authorised a new washdown bay to the south of the warehouse building, extension of the external awning to cover the new washdown bay, and construction of retaining walls along the northern and eastern site boundary.

1.5.3 The approved plan under Mod 2 is shown in **Figure 3**. It is expected construction of the Council approved development, including the warehouse building with offices, washdown bay, retaining wall, services, and utilities, would be completed before the end of 2021.

1.5.4 Under this SSD application, the Applicant seeks to use the warehouse building approved under DA 52541/2017 as the Secondary Processing Building, including fit out of the building with mixed building waste processing equipment (see **Section 2.4** for further details).

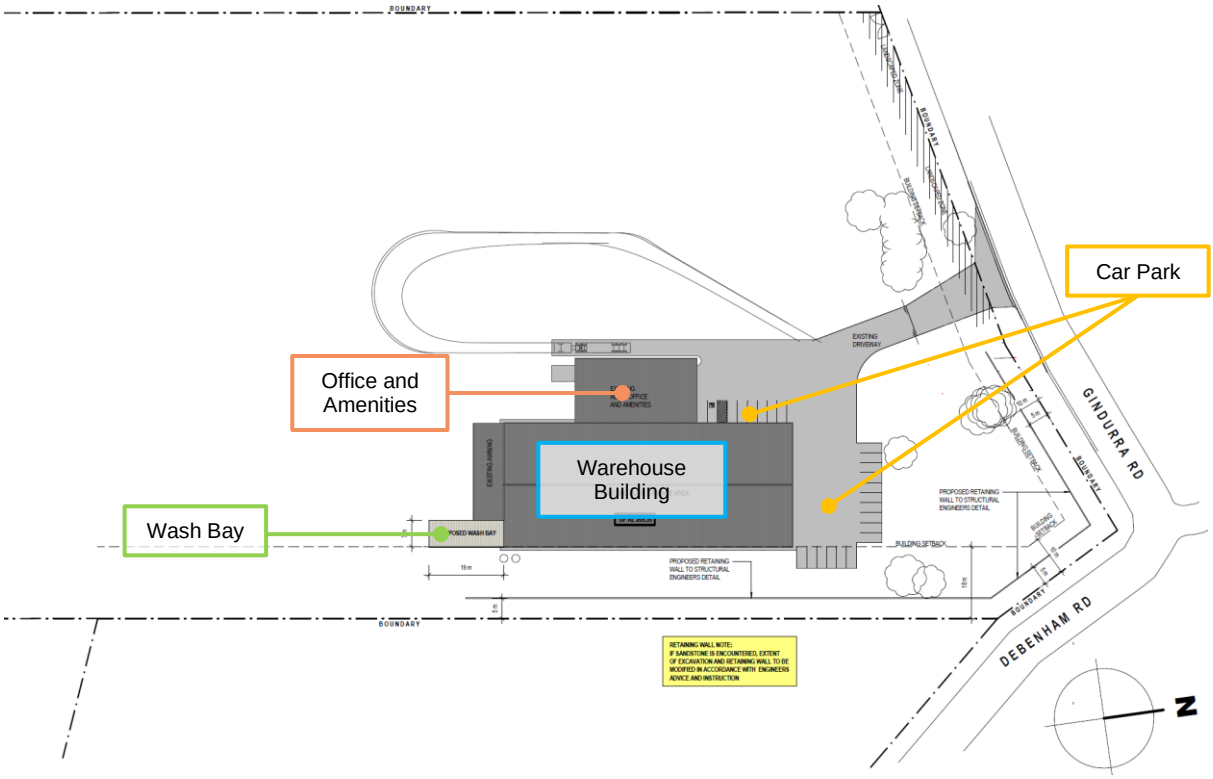

Figure 3 | DA 52541/2017 (Mod 2) Approved Plan

2 Development

2.1 Amended Development

2.1.1 The original application was lodged and publicly exhibited in 2019 and sought approval for an RRF processing up to 200,000 tpa of C&D waste with a BPLS business. In the original application, the majority of waste processing areas, except those within the Council approved warehouse building, were proposed to be located outdoors and uncovered.

2.1.2 During the exhibition of the original EIS, the Department received over 400 submissions from the general public objecting to the development based on its environmental impacts. The Department and a number of government agencies, including the Environment Protection Authority (EPA), also raised concerns about air quality, noise, traffic and access, and water management.

2.1.3 Following exhibition of the original EIS and ongoing consultation with the Department and government agencies, the Applicant sought to amend the development to address the concerns raised. The amendments were targeted at minimising impacts and included enclosing a number of operations within buildings and reducing the initial throughout rate to 100,000 tpa (Stage 1). Subsequent increases in throughput in a staged manner were proposed; up to 150,000 tpa for Stage 2 and up to 200,000 tpa for Stage 3. Progression to Stage 2 and Stage 3 would be contingent on environmental performance criteria being met once operation commences.

2.1.4 The key differences between the original and amended developments are outlined in **Table 1**.

Table 1 | Summary of Amendments to the Development

Component	Original Development	Amended Development
Staging of Annual Waste Throughput	One stage only (200,000 tpa)	Three stages: • Stage 1: 100,000 tpa • Stage 2: 150,000 tpa • Stage 3: 200,000 tpa
Hours of Operation (site access)	• 24 hours, 7 days per week	• 7 am to 6 pm, Monday to Saturday only
Stormwater Management	• one onsite detention basin • floating wetland	• a revised stormwater management system (without floating wetland) • installation of dust suppression, misting, and firefighting systems
Waste Receival and Processing Areas	• open-air waste receival, storage, processing and blending areas	• waste receival enclosed in a three-sided building • crushing and mulching areas located in enclosed buildings
Site Access	Upgrade of Gindurra Road and the site access:	Additional measures constructed at the site access to prevent vehicles associated with the RRF using Debenham Road South:

Component	Original Development	Amended Development
	• construction of medians and lane marking to create a new right-turn lane leading to the site.	• inbound and outbound lanes on the site driveway separated with a median • erection of a No Right Turn sign at the site exit (applicable to all vehicles).
Weighbridge and Traffic Control	• one inbound weighbridge • traffic control lights and boom gates at the inbound weighbridges entry and exit to control inbound vehicle movements.	In addition to the original: • one outbound weighbridge • additional traffic control lights and boom gates near the outbound weighbridge to control outbound vehicle movements.

2.1.5 The amended development is described below and forms the basis of the Department's assessment in this report. The Department considered the amended application to be consistent with the requirements of Clause 55 of the EP&A Regulation and recommends the Independent Planning Commission (the Commission), as the consent authority, accept the amended application.

2.2 Description of the Development

2.2.1 The main components of the development, as amended, are summarised in **Table 2**, shown in **Figure 4**, and described in full in the amended EIS (EIS 2020) and the Response to Submissions (RtS) included in **Appendix A**.

Table 2 | Development Summary

Aspect	Description
Summary	**Construction and operation of a RRF with a BPLS business. The RRF would initially receive and process up to 100,000 tpa of C&D waste, with this increasing up to 200,000 tpa at full capacity.**
Site Area and Development Footprint	• total site area: approximately 10.8 ha • development footprint: approximately 6.05 ha (56% of total site area) in the northern portion of the site (see **Figure 2**)
Maximum annual receipt of materials	• **RRF** (receiving mixed and source-separated C&D waste) – Stage 1: 100,000 tpa – Stage 2: 150,000 tpa – Stage 3: 200,000 tpa **Note**: Progression to stages 2 and 3 would be contingent on environmental performance criteria being met once operation commences. • **BPLS Facility** (selling building products and landscaping supplies such as aggregates, sands, soils, and mulches directly to commercial customers)

Aspect	Description
	– the BPLS Facility would receive up to 10,000 tpa (all stages) of mulches, gravels, sand, and specialist soils from third-party suppliers to blend with recovered materials from the RRF to create custom-made products for sale
Site Storage	• up to 40,000 tonnes of processed and unprocessed material at any one time
Earthworks and Civil Works	• vegetation clearing, legacy stockpile removal, and bulk earthworks • installation of hardstand and surfaces of crushed concrete sealed with geomembranes • installation of water management infrastructure • construction of Waste Receival (Tip and Spread) Building, Crushing Building, Mulching Building, waste storage bays, landscape supplies and aggregate storage bays
Plant and Equipment	• front-end loaders and excavators • crushers, grinders, mulchers, and shredders • water trucks • trommel screens • waste processing equipment installed within the secondary processing building, including telehandler, conveyors, stackers, magnet, air blower and chopper

Ancillary Structures	• two weighbridges (one inbound, one outbound)
	• boom gates and traffic lights
	• dust suppression system for onsite roads and stockpiles
	• misting systems in T&S Building and Secondary Processing Building
	• firefighting water system
	• sewers and drainage
	• noise walls (see **Figure 12**)
	  ○ parallel to and 5 m away from the eastern site boundary at various heights (2 m, 4 m, and 5 m in the northern, middle, and southern sections respectively)
	  ○ around the waste receival and storage areas and the primary processing area (3 m high)

Operational Traffic	164 vehicle trips (in and out) per day comprising:
	• 20 operational staff vehicle trips
	• 144 heavy vehicles trips:
	  – 12 t tippers (10 m in length): 77 trips
	  – 32 t truck and dog/semi-trailers (up to 19 m in length): 41 trips
	  – 40 t B-Doubles (up to 26 m in length): 14 trips
	  – delivery of building and landscaping products sourced from third-party suppliers (19 m semi-trailers): 12 trips.

Aspect	Description
Road and Intersection Works	• a new 60 m right-turn lane on Gindurra Road for vehicles turning into the site • line marked medians on Gindurra Road on either side of the site entrance for a distance of approximately 60 m (west) and 25 m (east) • dual lane access (one inbound lane, one outbound lane) on the internal driveway • erection of a 'No Right Turn' sign at site exit
Stormwater and Leachate Management System	• division of the operational area into six sub-catchments • rainwater tanks • bioswale • six gross pollutant traps (GPT) • stormwater treatment plant • emergency spill pond • water treatment pond • level spreader
Landscaping	• landscaping with a mix of tree and shrub planting along the Gindurra Road frontage • preserving an existing vulnerable *Melaleuca biconvexa* plant community near the western boundary, irrigated by recycled stormwater
Construction Timeframe	3 months
Hours of Operation	7 am to 6 pm, Monday to Saturday, including: • waste deliveries: 7 am to 6 pm, Monday to Saturday • waste processing: 8 am to 5 pm, Monday to Friday • landscaping products sale: 7 am to 6 pm, Monday to Saturday
Employment	Construction • five construction-related jobs Operation • 20 employees when the RRF is operating at full capacity (200,000 tpa), including truck drivers
CIV	$14,866,000

2.3 Process Description

2.3.1 The end to end processing procedure for the development is shown in **Figure 5** and detailed below.

RRF - Incoming Waste Streams

2.3.2 At its full capacity, the RRF would receive up to 200,000 tpa of C&D waste. The proposed incoming waste types and volumes (at maximum Stage 3 capacity) are detailed in **Table 3**. During Stage 1

(100,000 tpa) and Stage 2 (150,000 pa), the percentage breakdown of types of incoming waste would remain the same as described in **Table 3**. Asbestos waste would not be received or processed onsite.

Table 3 | Incoming Waste Streams (Stage 3)

Waste Stream	Annual Waste Input (t)	Percentage
Excavated Natural Material (ENM)	80,000	40%
Concrete, tiles, masonry	46,000	23%
Asphalt	20,000	10%
Timber, stumps, and root balls	20,000	10%
Virgin Excavated Natural Material (VENM)	20,000	10%
Mixed building waste	10,000	5%
Metals (ferrous and non-ferrous)	4,000	2%
Total	**200,000**	**100%**

RRF Process Description

Waste Arrival and Acceptance

2.3.3 Incoming waste would either be source-separated (where delivery vehicles carry one particular type of waste (e.g. asphalt, metals, VENM) at one time) or be mixed loads of the wastes described in **Table 3**. The waste arrival and acceptance process for both source-separated and mixed wastes would consist of the following steps:

- trucks enter the site in a forward direction via the site access on Gindurra Road
- vehicle mass is recorded at the inbound weighbridge. The driver would be interviewed to confirm the contents of the load and the load surface inspected to determine whether to accept or reject the materials. Where any asbestos (i.e. non-conforming waste) is identified, the entire load is rejected, and the driver is instructed to leave the site immediately
- if the load passes the surface inspection, it is transported to the Tip and Spread Building (T&S Building) and unloaded into one of the three receival areas (see **Figure 4**) where excavators spread the load for further inspection. If non-conforming waste is discovered, the entire stockpile is reloaded and removed off-site immediately
- if an accepted load contains other non-conforming items, such as gas bottles and fire extinguishers, these are manually removed and stored in skip bins adjacent to the T&S Building before being disposed of off-site
- following inspection, front-end loaders move the inspected waste to individual storage bays within the external waste storage area according to the type of waste (e.g. mixed waste, metals, asphalt, ENM, VENM) See **Figure 4**.

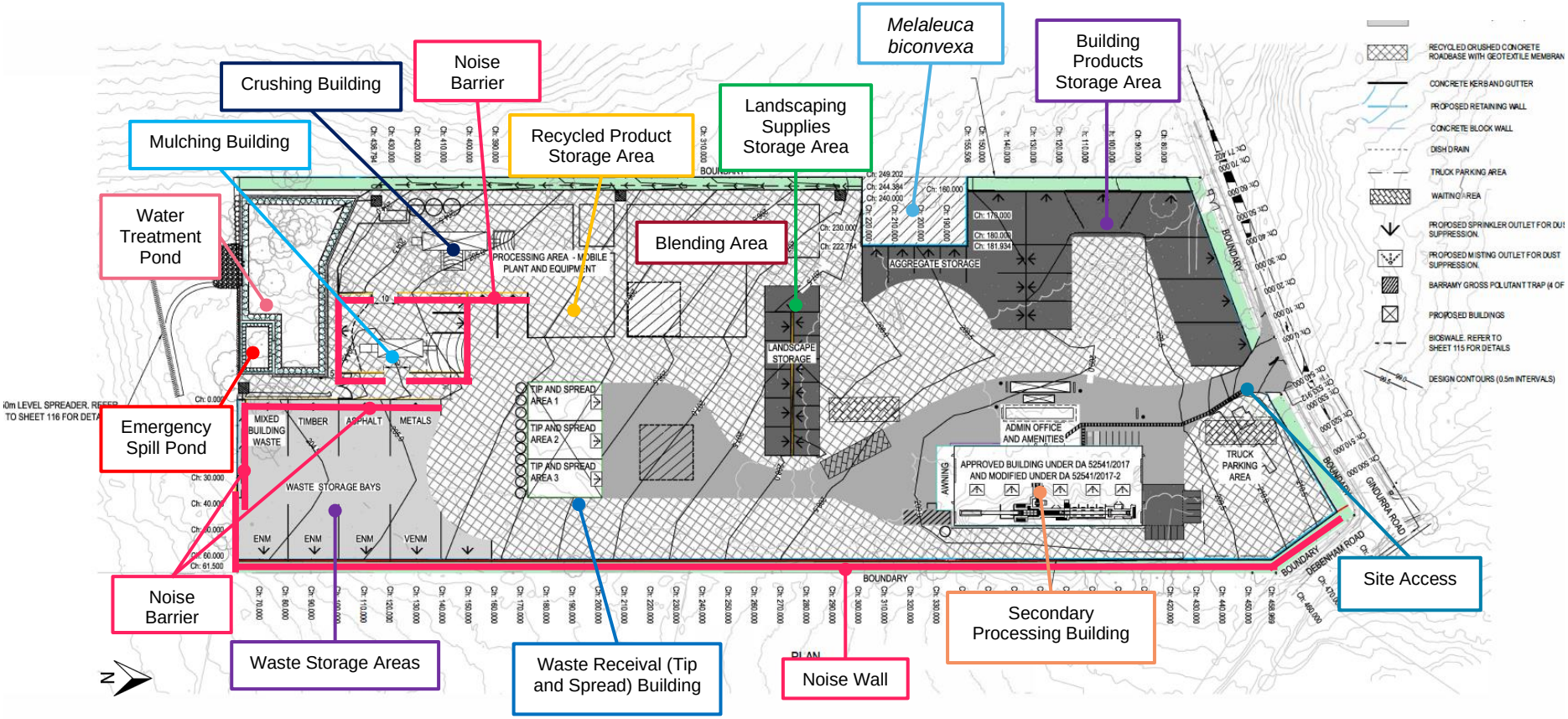

Figure 4 | Proposed Site Plan (development footprint)

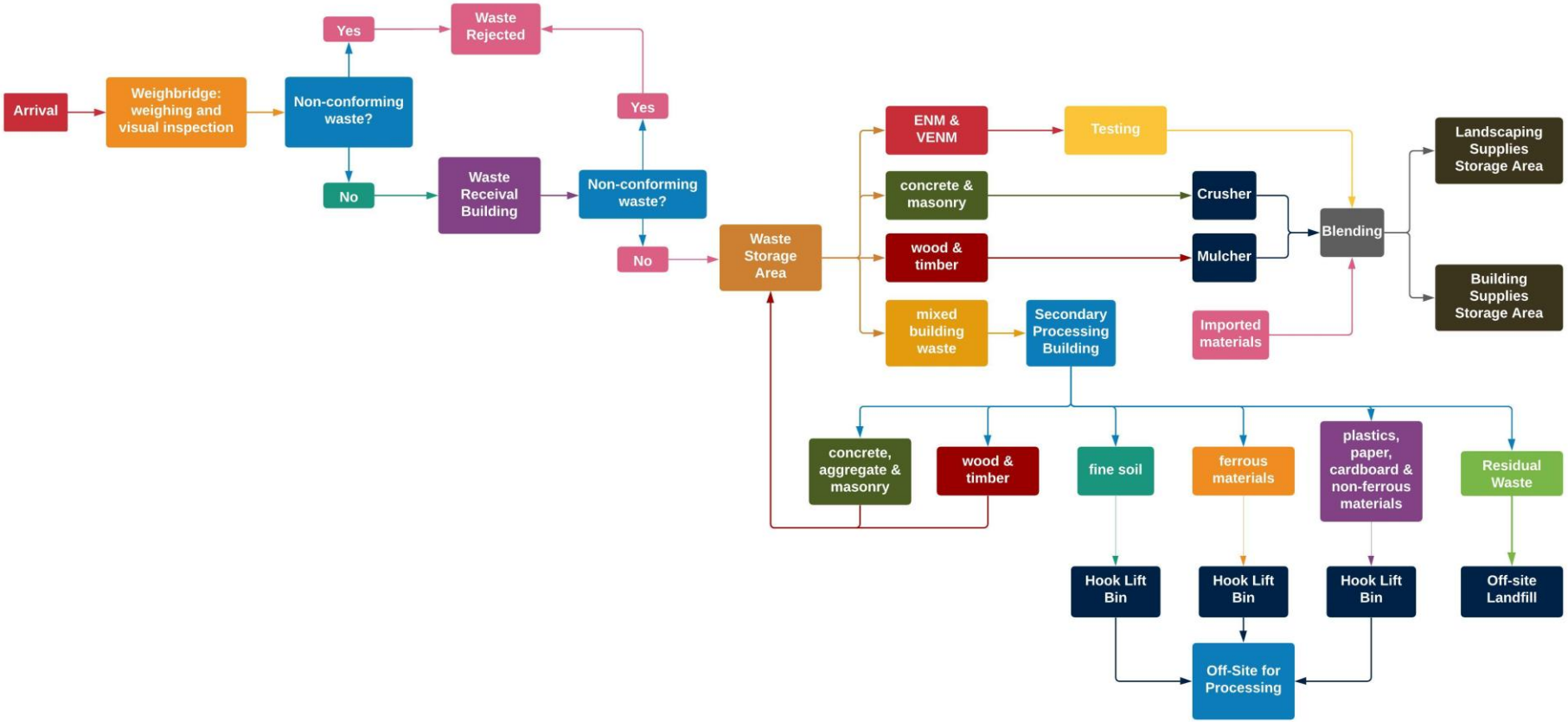

Figure 5 | Waste Processing Procedure

Waste Processing

2.3.4 Waste processing would occur at the primary processing area and in the secondary processing building.

Primary Processing Area: processing of Concrete, Asphalt, and Timber waste (RRF)

2.3.5 Concrete, masonry, tiles, asphalt, wood, and timber wastes would be processed in the primary processing area, which comprises the crushing and mulching buildings (internal) and the recycled product storage area and blending areas (external). The following steps would occur:

- concrete, masonry, tiles, asphalt, and timber waste is moved from the external storage bays via front-end loaders
- concrete, masonry, tiles, and asphalt are crushed in the Crushing Building, whereas wood and timber are mulched in the Mulching Building
- crushed and mulched materials are temporarily stored in the recycled product storage area (see **Figure 4**) before being moved by front-end loaders to the blending area. In the blending area, they are mixed as needed with other recycled materials, VENM and/or ENM, or imported materials to produce various finished aggregates, engineering soils and mulches in accordance with quality standards and site-specific Resource Recovery Orders and Exemptions
- the blended and finished building and landscaping materials are moved to dedicated concrete bunkers (according to their specification and type) in the landscaping supplies and building supplies storage areas in the BPLS Facility. These are then sold directly to commercial customers who supply building products and landscaping supplies.

Secondary Processing Building

2.3.6 The secondary processing building is the warehouse previously approved by Council (see **Figure 4**) and houses a range of waste separation equipment, including conveyors, screens, blowers and a picking line. Mixed building waste would be transferred from waste storage bays to the secondary processing building by front-end loaders. Processing of mixed building waste generally consists of the following steps:

- mixed building waste is loaded into an electric feed hopper and conveyor to screen fine soils for separation into a hook lift bin
- the remaining materials travel downstream to a trommel screen where masonry and aggregate are separated, and ferrous materials are extracted by a magnet
- masonry and aggregate are then transferred back to the waste storage area for further processing at the primary processing area. Ferrous materials are stored in a hook lift bin
- remaining materials pass through a blower where light materials, such as paper and cardboard, are separated and deposited into a hook lift bin. A conveyor then transfers the remaining material to six picking lines where employees manually sort and separate timber, plastics, concrete, and non-ferrous materials
- timber and concrete are moved to the waste storage area by front-end loaders to be reprocessed in the primary processing area. Plastics and non-ferrous materials are placed into a hook lift bin
- separate hook lift bins containing sorted fine soils, ferrous and non-ferrous metals, paper and cardboard, and plastics are regularly transferred off-site for further processing
- any residual materials from secondary processing are removed from the site to be disposed of at licenced landfills.

Building Products and Landscape Supplies Sale (BPLS Facility)

2.3.7 The BPLS Facility would sell recycled, blended, and tested products from the RRF directly to building products and landscape supplies commercial retailers. To ensure a large range of suitable products are available for sale at the BPLS facility, up to 10,000 tpa of additional mulches, gravels, sand, and specialist soils would be purchased from third-party suppliers. These incoming materials would either be resold or blended in the blending area with outputs from the RRF, as needed, to produce new saleable products.

2.3.8 For commercial customers arriving to buy building products and landscape supplies, the following steps would occur:

- incoming trucks are weighed at the inbound weighbridge. Smaller trucks proceed to the landscaping supplies and building supplies storage areas for loading by front-end loader (see **Figure 4**)
- due to their size, semi-trailers and B-Doubles are directed to the blending area for direct loading of building products and landscaping supplies by front-end loader
- all trucks are weighed again at the outbound weighbridge prior to leaving the site.

2.4 Output Summary

2.4.1 The approximate breakdown of separated waste outputs (at maximum Stage 3 throughput) is summarised in **Table 4**.

Table 4 | Product Outputs (Stage 3)

Type	Annual Output (t)	Percentage
Aggregate and road base (sand, aggregate, road base and recycled terra cotta aggregate)	50,000	25%
Manufactured Soils	40,000	20%
ENM	40,000	20%
Timber mulch	22,000	11%
VENM	20,000	10%
Asphalt	20,000	10%
Metal (ferrous and non-ferrous)	4,000	2%
Residual waste sent to landfill	3,200	1.6%
Paper/cardboard	400	0.2%
Plastic	400	0.2%
Total	**200,000**	**100%**

2.5 Applicant's Need and Justification for the Development

2.5.1 The Applicant advised the development is needed to meet the growing demands for C&D waste recycling facilities in the Central Coast Region, driven by rapidly growing construction activities. As the

site is located close to major transport routes, is situated within the SIP and is industrially zoned, the Applicant considers it is suitable for the development.

2.5.2 Further, the Applicant notes the development would assist in increasing the C&D waste recycling rate in NSW, as it would divert around 196,200 tpa of C&D waste away from landfills.

3 Strategic Context

3.1 Central Coast Regional Plan 2036

3.1.1 The Central Coast Regional Plan 2036 (Regional Plan) aims to create a region with a healthy natural environment, a flourishing economy, and well-connected communities. The development is consistent with the outcomes sought under *Direction 2: focus economic development in the Southern and Northern Growth Corridors* and *Direction 3: support new and expanded industrial activity* of the Regional Plan.

3.1.2 The site is located within the Southern Growth Corridor between Somersby and Erina (see **Figure 6**). The Regional Plan identifies opportunities to expand the SIP to secure new jobs and support existing businesses. The development is consistent with the Regional Plan as it would create five construction and 20 operational jobs in the SIP.

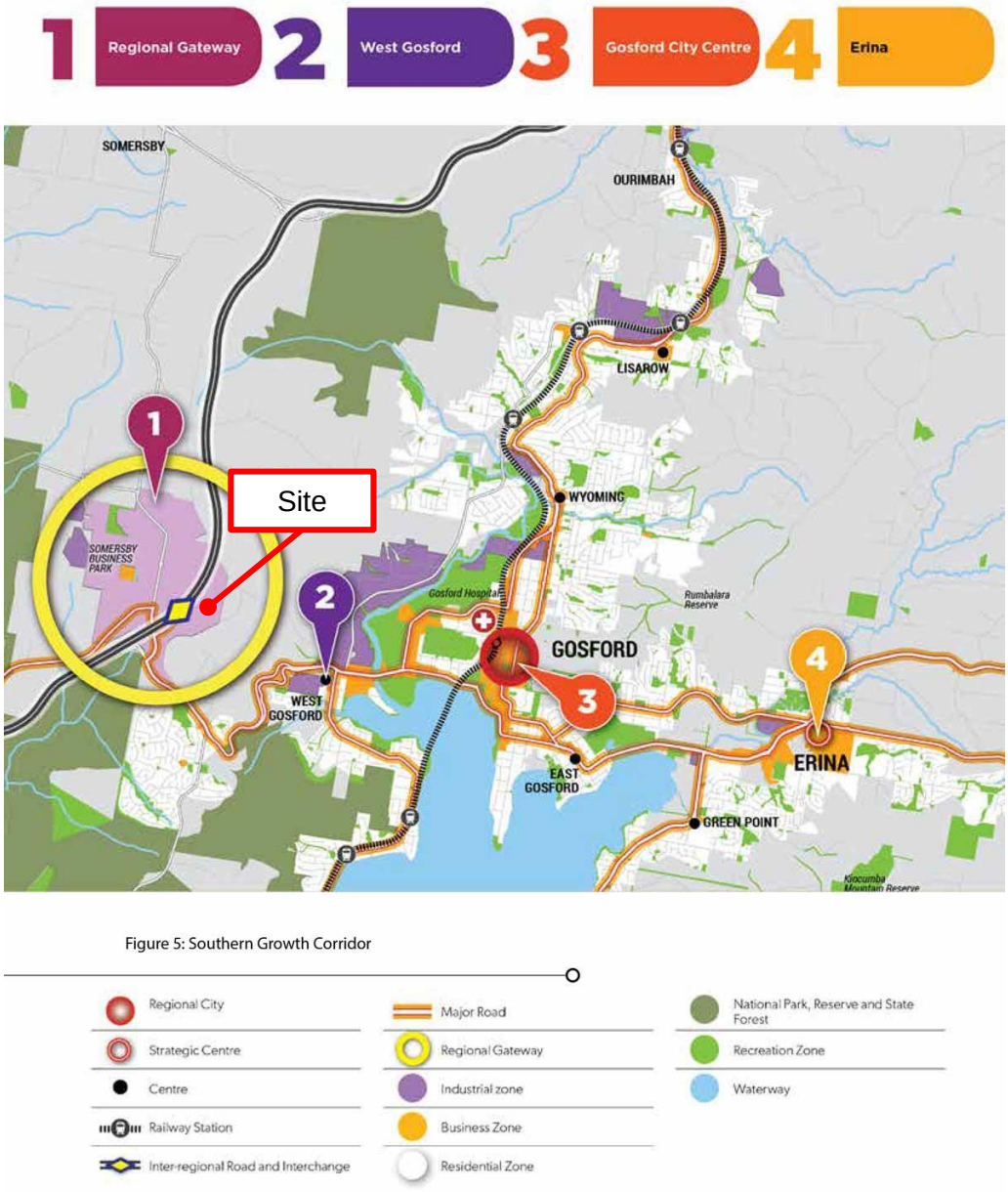

Figure 6 | The Southern Growth Corridor Map with the Site depicted

3.2 Somersby to Erina Corridor Strategy

3.2.1 The Regional Plan envisages the expansion of employment in the Regional Gateway, which includes the SIP (see **Figure 6**). Council has prepared the Somersby to Erina Corridor Strategy (Corridor Strategy) to provide strategic direction to fulfil the Regional Plan's vision.

3.2.2 The Corridor Strategy identifies Somersby as one of the six growth centres within the Corridor and recognises the SIP as the second largest industrial node north of Central Sydney, after Hornsby. Noting that approximately 50% of the SIP (159 ha of land) is undeveloped, the Corridor Strategy encourages locating new and diverse businesses in the SIP.

3.2.3 The development would establish a new business and create 20 operational jobs, thereby helping to fulfil the employment generating potential of the industrial zoned land.

3.3 NSW Waste Avoidance and Sustainable Materials Strategy 2041

3.3.1 The state-wide Waste Avoidance and Sustainable Material Strategy 2041 (WASM Strategy) updated the previous Waste Avoidance and Resource Recovery Strategy 2014-21. The WASM Strategy sets targets for waste reduction and landfill diversion to transition to a circular economy, including an 80% average recovery rate from all waste streams by 2030. Part 2 of the WASM Strategy identifies the need for expanding and modernising waste and resource recovery facilities in regional NSW.

3.3.2 The development is targeting a recycling rate of approximately 95%, exceeding the 80% WASM Strategy target rate. As such, the development would contribute to the State's waste recovery performance. The development would provide a new RRF in the Central Coast region, supporting the expansion and modernising of RRFs in regional NSW.

4 Statutory Context

4.1 State Significance

4.1.1 The development is State significant development (SSD) pursuant to section 4.36 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) because it involves development for the purposes of a resource recovery facility that handles more than 100,000 tpa of waste, which meets the criteria in clause 23(3), Schedule 1 to State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP).

4.2 Permissibility

4.2.1 The site is zoned IN1 General Industrial under the Gosford Local Environmental Plan 2014. Development for the purposes of a waste management facility is permissible with consent within the IN1 zone.

4.3 Consent Authority

4.3.1 The Independent Planning Commission (Commission) is designated as the consent authority for the development under section 4.5 of the EP&A Act and clause 8A of the SRD SEPP, given there are more than 50 unique public submissions by way of objection.

4.4 Other Approvals

4.4.1 Section 4.42 of the EP&A Act requires further approvals to be obtained, considered, or determined in a manner consistent with any Part 4 consent for the SSD under the EP&A Act. In the case of the development, an Environment Protection Licence (EPL) will need to be applied for and issued by the Environment Protection Authority (EPA) under the *Protection of the Environment Operations Act 1997* and a Section 138 approval for carrying out works on Gindurra Road will need to be applied for and issued by Council under the *Roads Act 1993*.

4.4.2 The Department has consulted with and considered advice of the EPA and Council in its assessment of the development and included suitable recommended conditions of consent.

4.5 Mandatory Matters for Consideration

4.5.1 Section 4.15 of the EP&A Act sets out matters to be considered by a consent authority when determining a development application. The Department's consideration of these matters is set out in **Section 6** and **Appendix B** of this report. In summary, the Department is satisfied the development is consistent with the requirements of section 4.15 of the EP&A Act.

4.5.2 Section 4.15 of the EP&A Act stipulates the consent authority, when determining a development application, must consider the provisions of any environmental planning instrument (EPI) and draft EPI (that has been subject to public consultation and notified under the EP&A Act) that apply to the development.

4.5.3 The Department has considered the development against the relevant provisions of several key EPIs, including:

- State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)
- State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)

- State Environmental Planning Policy No 33 – Hazardous and Offensive Development (SEPP 33)
- State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55)
- Sydney Regional Environmental Plan No 20 – Hawkesbury-Nepean River (No 2 – 1997) (SREP 20)
- Gosford Local Environmental Plan 2014 (GLEP 2014)
- draft State Environmental Planning Policy (Environment) (draft Environment SEPP)
- draft State Environmental Planning Policy (Remediation) (draft Remediation SEPP).

4.5.4 Development Control Plans (DCPs) do not apply to SSD under clause 11 of the SRD SEPP. However, the Department has considered the relevant provisions of the Gosford DCP 2013 in its assessment of the development in **Section 6**.

4.5.5 Detailed consideration of the provisions of all EPIs that apply to the development is provided in **Appendix D**. The Department is satisfied that the development generally complies with the relevant provisions of these EPIs.

4.6 Public Exhibition and Notification

4.6.1 In accordance with section 2.22 of Schedule 1 to the EP&A Act, the development application and any accompanying information of an SSD application must be publicly exhibited for at least 28 days. The Department publicly exhibited the application on two occasions:

- the original EIS was on public exhibition from 1 February 2019 to 21 March 2019 (49 days)
- the amended EIS and the RtS were on public exhibition from 28 August 2020 to 25 September 2020 (29 days).

4.6.2 Details of the exhibition process and notifications are provided in **Section 5** of this report.

4.7 Objects of the EP&A Act

4.7.1 In determining the application, the consent authority should consider whether the development is consistent with the relevant objects detailed in section 1.3 of the EP&A Act. The Department has fully considered the objects of the EP&A Act, including the encouragement of Ecologically Sustainable Development (ESD), in its assessment of the application. A summary of the Department's considerations against the relevant objects of the EP&A Act is provided in **Table 5**.

Table 5 | Considerations Against the Objects of the EP&A Act

Object	Consideration
1.3 (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,	The development has generated a high level of community interest due to its potential for impacts on surrounding residents. The Applicant has made amendments to the original development to address these concerns and, with the recommended conditions, the potential impacts of the development have been greatly reduced and are unlikely to impact on the social welfare of local residents. The development would promote social and economic welfare and a healthier environment by providing jobs, diverting recyclables away from landfill and contributing to meeting increased C&D waste recycling rate targets. Furthermore, the development would support a circular economy through recycling and recovering resaleable

Object	Consideration
	products and producing building products and landscaping supplies which feed back to the construction industry. The development would also assist in meeting the growing demands for resource recovery facilities and landscaping supplies within the Central Coast region.
1.3 (b) to facilitate ecologically sustainable development by integrating relevant economic, environmental, and social considerations in decision-making about environmental planning and assessment,	The Department has considered facilitation of ESD in its assessment of the development. The Department's assessment has considered all socio-economic and environmental considerations and seeks to avoid potentially serious or irreversible environmental damage based on the appraisal of risk-weighted consequences. Where potential environmental impacts have been identified, mitigation measures have been recommended. The Department is satisfied that the development can be carried out in a manner consistent with ESD principles.
1.3 (c) to promote the orderly and economic use and development of land,	The development is a permissible use and would provide five construction and 20 operation jobs within the SIP. The development would have a CIV of $14,866,000 thereby promoting economic growth within the Central Coast region.
1.3 (e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,	The development has been designed to avoid impacts on native flora and fauna where possible, with the remaining impacts to be offset through biodiversity credits and implementing ongoing management of the retained bushland. The development would also retain bushland in the southern part of the site and preserve a vulnerable *Melaleuca biconvexa* specimen. The Department's assessment in **Section 6** of this report demonstrates that with the implementation of the recommended conditions of consent, the impacts of the development could be mitigated and/or managed to an acceptable level.
1.3 (i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,	The Department has assessed the development in consultation with and giving due consideration to the technical expertise and comments provided by other government agencies (see **Section 5**), consistent with the objects of sharing the responsibility for environmental planning between the different levels of government in the State.
1.3 (j) to provide increased opportunity for community participation in environmental planning and assessment.	The original and amended developments were publicly exhibited in accordance with clause 9 of Schedule 1 of the EP&A Act to allow community involvement and participation in the assessment process. The Department has given due consideration to issues raised in public submissions in detail. **Sections 5 and 6** provide further details of the public participation process and the Department's assessment.

4.8 Ecologically Sustainable Development

4.8.1 The EP&A Act adopts the definition of ESD found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

(a) the precautionary principle
(b) inter-generational equity
(c) conservation of biological diversity and ecological integrity
(d) improved valuation, pricing, and incentive mechanisms.

4.8.2 The Department has considered and assessed the potential environmental impacts of the development, where potential impacts have been identified, mitigation measures, and environmental safeguards have been recommended. The development requires removing 3.1 ha of vegetation, which would be offset by the purchase and retiring of biodiversity credits according to NSW Biodiversity Offsets Policy for Major Projects. In addition, the Applicant has proposed a comprehensive water management system to collect, treat, and reuse water onsite. As such, the Department considers the development would not adversely impact the environment and is consistent with the objectives of the EP&A Act and the principles of ESD.

4.9 Biodiversity Development Assessment Report

4.9.1 Section 7.9(2) of the *Biodiversity Conservation Act 2016* (NSW) (BC Act) requires all applications for SSI and SSD to be accompanied by a Biodiversity Development Assessment Report (BDAR) unless the Planning Agency Head and the Environment Agency Head determine that the development is not likely to have any significant impact on biodiversity values.

4.9.2 Under the transitional arrangements set out in the *Biodiversity Conservation (Savings and Transitional) Regulation 2017*, SSD can be considered under the previous legislation being *Threatened Species Conservation Act 1995* (TSC Act), if environmental assessment requirements were issued before 25 August 2017 and the application was made before 25 February 2019.

4.9.3 The Planning Secretary's Environmental Assessment Requirements (SEARs) for the development were issued on 23 August 2017, and the application was made on 16 January 2019. Therefore, the SSD application could be considered under the TSC Act. The Applicant has submitted a BDAR prepared under the NSW Biodiversity Offsets Policy for Major Projects and the Framework for Biodiversity Assessment.

4.10 Commonwealth Matters

4.10.1 Under the EPBC Act, assessment and approval are required from the Commonwealth Government if a development is likely to impact on a matter of national environmental significance (MNES), as it is considered to be a 'controlled action'. The EIS included assessing the development against the MNES preliminary assessment requirements and concluded the development would not impact any of these matters and is therefore not a 'controlled action'. As such, the Applicant determined that a referral to the Commonwealth Government was not required.

5 Engagement

5.1 Application Timeframe

5.1.1 The Department notes the SSD 8660 application was submitted in early 2019 and has been ongoing for over two years. Due to the many concerns raised by the Department, government agencies, and the public regarding the potential environmental impacts of the original proposal, a substantial amount of additional information was required following the exhibition of the original EIS.

5.1.2 As the site is located at the interface of industrial and rural zoned lands and in close proximity to a number of residential receivers, there was a need to secure accurate and robust information around how the operations would be managed, particularly regarding mitigation measures to ensure impacts on nearby residents are minimised.

5.1.3 The Department extensively consulted with the Applicant and government agencies throughout 2019 and 2020 on improving the environmental performance of the development. Ultimately, the Applicant agreed to amend the development, and these changes were detailed in an amended EIS and an RtS report (dated August 2020).

5.1.4 The amended EIS and RtS were exhibited during August and September 2020, following which the Applicant further revised the development as detailed in a series of supplementary reports submitted during early 2021. The Department engaged a specialist consultant to independently review the air impact assessment report. The outstanding information required to finalise the Department's assessment was provided in September 2021.

5.2 Original EIS (2019)

Consultation by the Applicant

5.2.1 The Applicant undertook consultation with relevant parties throughout the preparation of the original EIS, including letterbox drops to nearby residences and meetings with relevant government agencies.

Consultation by the Department

5.2.2 After accepting the DA and the original EIS, the Department:

- made it publicly available from **Friday 1 February 2019** until **Thursday 21 March 2019** (49 days) on the Department's website, at Service NSW Centres and Council
- notified landowners in the vicinity of the site by letter
- notified and invited comments from relevant government agencies and Council
- advertised the exhibition in the Central Coast Express Advocate
- undertook a site inspection and conducted face to face discussions with landowners in the vicinity on 28 February 2019.

Submissions and Government Agency Advice

During the exhibition period, the Department received 432 unique submissions from the public (nine special interest groups, 423 individuals) and advice from 11 government agencies, including Council. A link to all the submissions and advice is provided in **Appendix A.**

Public and Special Interest Group Submissions (original EIS)

Three submissions were in support of the proposal, 425 submissions objected to the proposal and four submissions provided comments only. One objecting submission was a petition with 891 signatures and three were submitted as form letters.

A summary of the submissions is provided in **Table 6** below.

Table 6 | Summary of submissions on the original EIS

	Public	Special Interest Group	Total
Objection	419	6	425
Comment	1	3	4
Support	3	-	3
Total	**423**	**9**	**432**

5.2.3 Locations of submitters are shown on maps in **Figure 7** and Figure 8.

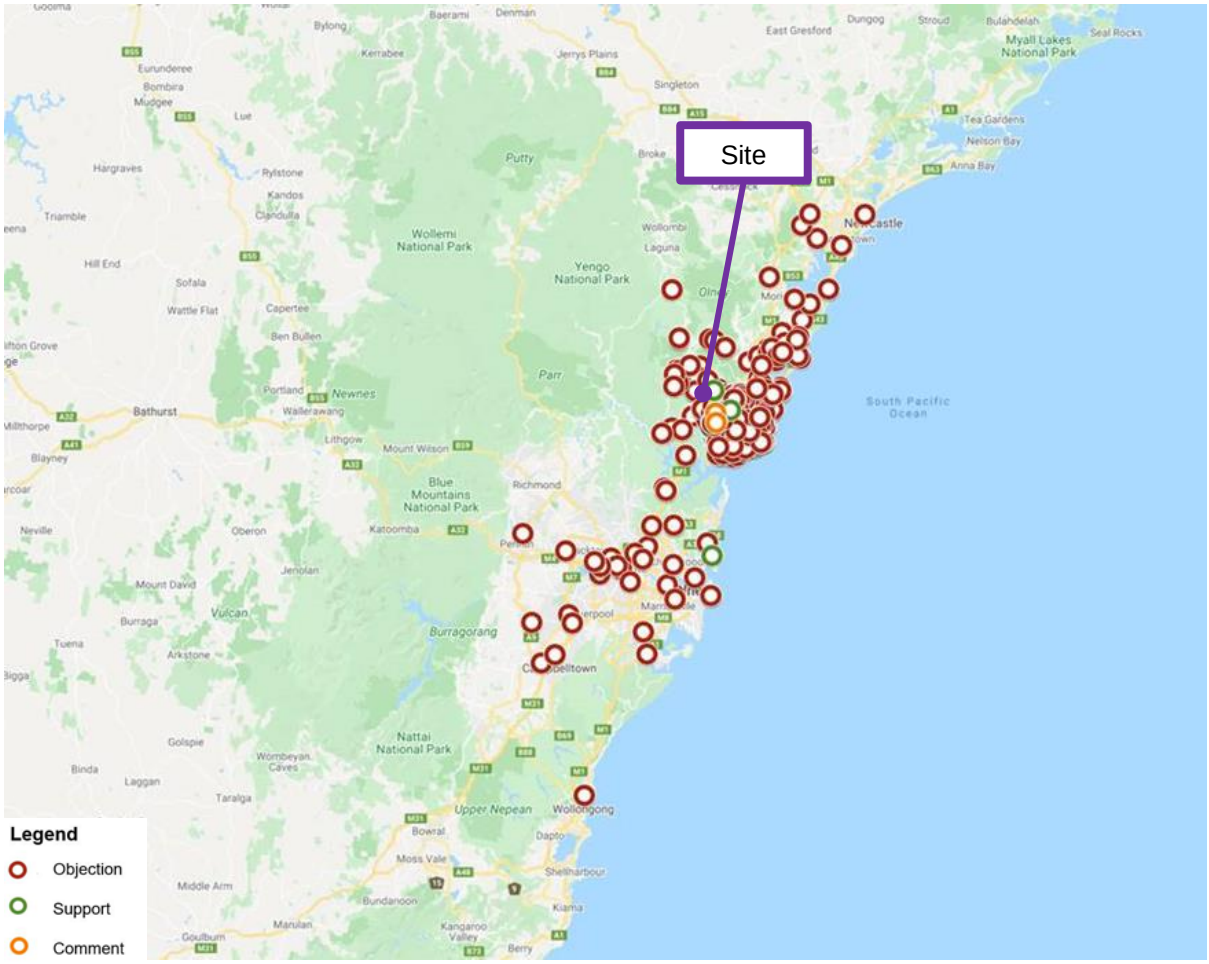

Figure 7 | Indicative location map of all submissions

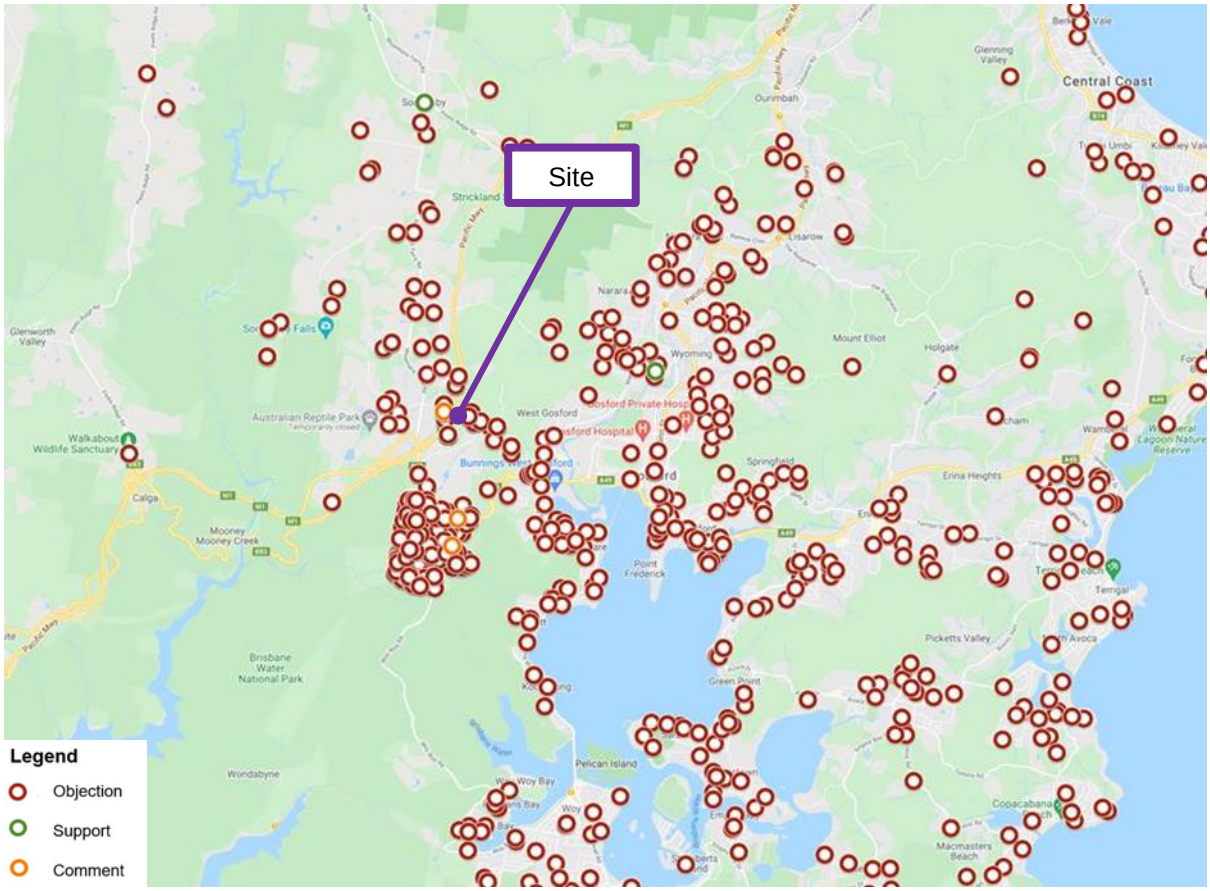

Figure 8 | Indicative location map of all submissions in 5 km radius of the site

Key Concerns – Public

5.2.4 The 419 objections from the public raised the following key concerns:

- site suitability, including the site's proximity to nearby sensitive receivers
- air quality impact, including reduced air quality, emission of silica dust during crushing activities and potential odour impacts
- human health risks, including the impact of pollutants on human health, unacceptable risks to human health for vulnerable residents
- noise and vibration impacts during construction, operation, and traffic noise
- additional heavy vehicle movements and impacts on the local road network's safety and efficiency
- biodiversity and habitat loss due to clearing of 1.5 ha of Pygmy-Possum's habitat
- land value loss
- visual impact
- consistency with strategic plans
- asbestos may become airborne during removal of legacy stockpiles and earthworks, and
- Aboriginal heritage loss due to land clearing and levelling.

5.2.5 A breakdown of the percentage of key issues above raised in submissions is shown in **Figure 9**.

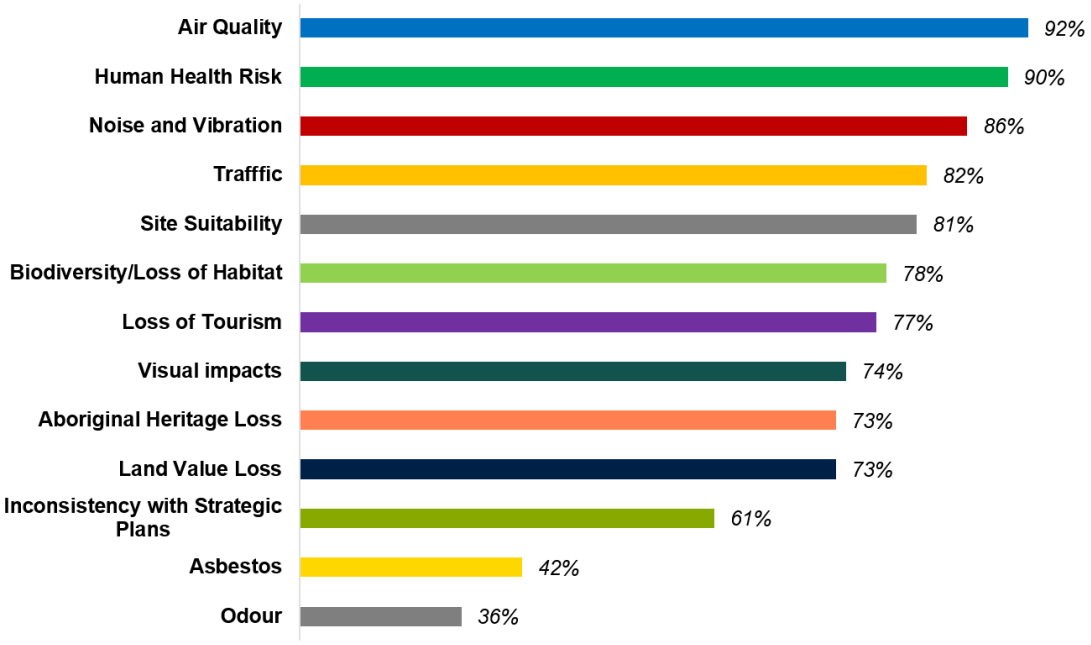

Figure 9 | Breakdown of the percentage of key issues raised in the public submissions

Key Concerns - Special Interest Groups

Community Groups

5.2.6 The Department received submissions from four community groups, including three objections and one providing comment. Key issues raised by community groups include inconsistency with the Central Coast Regional Plan and the Somersby to Erina Corridor Strategy, site suitability, air quality, particularly dust impacts, noise impacts, water pollution and traffic, site management, land value loss, and the appropriate consent authority for the development.

Private Businesses

5.2.7 There were five submissions from private businesses, of which three objected to the development (including one petition with 75 signatures) and two provided comment.

5.2.8 The issues raised in the objections include the potential impacts of silica dust on human health and the impact of additional truck movements on the efficiency and safety of local road networks.

Government Agency Advice (original EIS)

The Department received advice from 11 government agencies, including Council.

Key Concerns - Agencies

5.2.9 **Central Coast Council (Council)** requested the Applicant apply for a permit from the National Heavy Vehicle Regulator (NHVR) for Gindurra Road to be used by B-Doubles, recommended B-Doubles be restricted from using Debenham Road South and the Applicant upgrade Gindurra Road to facilitate eastbound vehicles turning right into the site. Council also raised issues regarding the calculation of biodiversity credits, Plant Community Types (PCTs), and the ecological survey method for targeted threatened species.

5.2.10 **Biodiversity and Conservation Division, DPIE (BCD)** requested the Applicant undertake a targeted survey for four threatened species and provide measures for protecting the *Melaleuca biconvexa* to be retained. BCD also requested the Applicant to formally consult with Aboriginal communities and submit an amended Aboriginal Cultural Heritage Assessment Report (ACHAR).

5.2.11 **Department of Primary Industries – Agriculture (DPI Agriculture)** requested the Applicant submit a Biosecurity Plan to ensure that potentially contaminated soils imported to the site would be treated appropriately to prevent the spread of biosecurity risks.

5.2.12 **DPIE Water** and the **Natural Resource Access Regulator (NRAR)** recommended conditions requiring the Applicant prepare and implement a Groundwater Monitoring and Management Plan, including installing a groundwater monitoring system for ongoing quality testing and analysis.

5.2.13 **Environment Protection Authority (EPA)** requested the Applicant use a CALMET air quality model and update the Air Quality Impact Assessment (AQIA) with a cumulative impact assessment which includes the Gosford Quarry plus the development at its maximum throughput and provide a detailed description including components and tonnages of waste to be received at the site. The EPA also requested clarification of the source of mixed building waste, the proposed product outputs, and measures for prohibiting the acceptance of hazardous waste.

5.2.14 **Fire and Rescue NSW (FRNSW)** recommended the preparation of an emergency plan in accordance with the relevant Australian Standard, a fire safety study report in accordance with FRNSW *Fire Safety in Waste Facilities Guideline* and the installation of a fire hydrant system.

5.2.15 **NSW Central Coast Local Health District (CCLHD)** raised concerns about air quality, noise and vibration impacts, water and sewage services, and ongoing monitoring and enforcement.

5.2.16 **NSW Rural Fire Services (RFS)** recommended bushfire protection related conditions.

5.2.17 **Transport for NSW (TfNSW)** (including Roads and Maritime Services (RMS)) advised that Gindurra Road was not approved to carry B-Double vehicles and requested clarification of the B-Double route, assessment of the impacts of increases in vehicle numbers if smaller vehicles substitute B-Doubles, and further swept path analysis for semi-trailers. TfNSW recommended conditions requiring the Applicant prepare a Stage 3 (Detailed Design) road safety audit before issue of a construction certificate.

5.2.18 **Water NSW** provided no specific comments.

5.3 Amended EIS and Response to Submissions (2020)

5.3.1 Due to the number of issues raised in submissions on the original EIS, the Applicant revised the development and submitted an amended EIS and a RtS report on 20 August 2020. The amendments to the development are described in **Section 2** of this report.

Consultation by the Applicant

5.3.2 During the preparation of the amended EIS and the RtS, the Applicant advised it carried out the following consultation activities:

- established a dedicated project website to assist the community in understanding the amended development
- held community information sessions, public meetings, and two site open days between October and November 2019

- meetings with community groups, local business, Council and government agencies, and the MP for Gosford
- letterbox drops of a fact sheet to properties in Kariong and Somersby.

Consultation by the Department

5.3.3 After accepting the amended EIS and the RtS, the Department:

- made it publicly available from **Friday 28 August 2020** until **Friday 25 September 2020** (29 days) on the Department's website
- notified landowners in the vicinity of the site and previous submitters about the exhibition period by letter
- notified and invited comments from relevant government agencies and Council
- advertised the exhibition in the Coast Community News.

Submissions and Government Agency Advice

5.3.4 During the exhibition period for the amended EIS, the Department received 165 submissions from the public (13 special interest groups, 152 individuals) and advice from 12 government agencies, including Council.

Public and Special Interest Group Submissions (amended EIS)

5.3.5 **Table 7** provides a summary of submissions received on the amended EIS.

Table 7 | Summary of submissions on the amended EIS

	Public	Special Interest Group	Total
Objection	36	5	41
Comment	2	1	3
Support	114	7	121
Total	**152**	**13**	**165**

Key Concerns – Public

5.3.6 The Department received 152 unique public submissions, including 36 objections, 114 in support, and two providing comments. The 114 supporting submissions included one form letter with 454 signatures and one form email with 319 signatures.

5.3.7 The submissions in support of the development stated the site is located within an industrial zoned area and noted the development is permissible with consent. The submissions also noted the proposed mitigation measures would sufficiently manage impacts, the RRF would recycle C&D waste and reduce the amount of waste delivered to landfills, and the development would create construction and operational jobs.

5.3.8 Public objections raised concerns about potential pollution of downstream rivers and creeks, air quality and silica dust deposition with associated health impacts, noise and vibration, heavy vehicle

movements and the potential impacts on the efficiency and safety of local and regional roads, suitability of the site for an RRF, and land value loss.

5.3.9 Residents on Debenham Road South and Acacia Road submitted the following documents to support their objections:

- a review of the amended AQIA, prepared by Todoroski Air Sciences (TAS) (TAS AQIA review)
- a review of the amended NVIA, prepared by Muller Acoustic Consulting (MAC NVIA review), and
- a review of the amended Traffic Impact Assessment (TIA), prepared by Intersect Traffic (TIA review).

5.3.10 The TAS AQIA review raised a range of issues, including concerns with the air dispersion modelling, use of insufficient dust emission sources and underestimation of the peak 24-hour average dust impact. Concerns were also raised with the exclusion of a proposed dwelling to the east of the site as a receiver, exclusion of the background dust monitoring data collected nearby to the site, underestimation of emissions from Gosford Quarry in the cumulative impact assessment and inadequate mitigation measures.

5.3.11 The NVIA review raised a range of issues, including concerns the adopted sound power levels of equipment were lower than the industry standard, particularly for the crusher and shredder, that noise levels measured in the site's vicinity were lower than those stated in the amended NVIA and therefore the adopted noise criteria should be lower. The NVIA review also stated that the predicted noise levels at multiple receivers on Debenham Road South and Acacia Road would exceed the project noise trigger level with a maximum potential exceedance of 9 dB(A) at 242 Debenham Road South.

5.3.12 The TIA review raised a number of concerns, including the potential for queuing on Gindurra Road, use of outdated traffic survey data, the potential for heavy vehicles to use Debenham Road South, and lack of cumulative impact assessment. In addition, the TIA review raised concerns that the SIDRA modelling had been undertaken in 2017 and the amended TIA had not considered the potential traffic impacts of the development on the signalised Central Coast Highway/Wisemans Ferry Road in 2030.

5.3.13 The Department referred the TAS AQIA review and NVIA technical review to the EPA, and the TIA review to Council and TfNSW for review and comment.

Key Concerns – Special Interest Groups

Community Groups

5.3.14 During exhibition of the amended EIS, the Department received four submissions from community groups, of which three objected and one provided comments. The objections raised concerns with:

- the proposed land use, identifying it as contrary to the Corridor Strategy and the role of SIP being designated for light industrial uses
- the increase in heavy vehicle movements
- air quality impacts, including silica dust and associated human health risks
- downstream impacts of discharged dust suppression water
- noise and vibration impacts on the amenity of nearby residents
- the consent authority, requesting Council assess and determine the application.

Private Businesses

5.3.15 The Department received nine submissions from private businesses, including two objections and seven submissions expressing support. The issues raised in the objections include the additional truck movements and associated impacts on efficiency and safety of local road networks and dust impacts

on assets of nearby vehicle sales and services premises. The submissions expressing support for the development noted the RRF would meet the growing demands for C&D waste recycling facilities in the Central Coast region, would divert materials from direct disposal at landfills, and would create 20 operational jobs in the SIP.

Government Agency Advice (amended EIS)

5.3.16 The Department received advice from 12 government agencies, including Council.

Key Concerns – Government Agencies

5.3.17 **Council** noted the Applicant had obtained a permit from the NHVR for Gindurra Road to be used by B-Doubles and recommended requiring this be an ongoing permit. Council also requested the Applicant address a number of issues in the amended BDAR relating to habitat loss and ongoing protection and management of the preserved bushland.

5.3.18 **BCD** requested the MUSIC-link modelling results report and a review of the post-development evaporation losses and harvested water values in the water balance. BCD recommended conditions for a vegetation monitoring program for the *Melaleuca biconvexa* community and a maintenance manual for the proposed water management system.

5.3.19 **CCLHD** requested an assessment of air quality impacts at the Central Coast Riding for Disabled Centre and confirmation that the proposed ceiling-mounted spray misters would effectively manage dust impacts. CCLHD sought confirmation that the volume of water collected onsite would be sufficient for dust suppression, and the traffic noise impacts had accurately considered the traffic generated by the development. CCLHD recommended conditions requiring comprehensive noise and air quality monitoring and ongoing community engagement.

5.3.20 **DPI Agriculture** recommended a condition requiring the Applicant prepare a Biosecurity Management Plan detailing management measures for preventing soil movements to the site from the Sydney basin Phylloxera Infested Zone that is prohibited under the *Biosecurity Act 2015*.

5.3.21 **DPIE Water** and **NRAR** recommended a condition requiring the Applicant prepare a Groundwater Monitoring and Management Plan for the operation of the development.

5.3.22 The **EPA** again requested the Applicant to revise the AQIA to include a cumulative impact assessment of particulate emissions from the nearby Gosford Quarry and studies relating to engineering controls to manage dust. The EPA also had concerns regarding the use of AERMOD modelling rather than the EPA's adopted CALMET modelling.

5.3.23 The EPA raised noise concerns, including the representativeness of the background noise monitoring and the predicted sound power levels for the plant equipment. The EPA requested the Applicant to fully enclose the processing areas and provide contingency measures should noise generating equipment exceed the relevant project noise trigger levels.

5.3.24 The EPA made a supplementary submission requesting the Applicant to provide additional information on the proposed floating wetland to prove its ability to prevent, control, and mitigate the potential water quality impacts caused by the operation of the development.

5.3.25 **Heritage NSW (HNSW)** recommended requiring the Applicant to prepare an Aboriginal Cultural Heritage Management Plan (ACHMP) in consultation with the Registered Aboriginal Parties and HNSW.

5.3.26 **RFS** recommended bushfire protection and emergency planning related conditions.

5.3.27 **TfNSW** (including **RMS**) advised the proposed right-turn lane with associated line marking and median on Gindurra Road should be designed in accordance with the current versions of Austroads Guide to Road Design.

5.3.28 **FRNSW** and **Water NSW** had no comments.

5.4 Supplementary RtS and Additional Information (2021)

5.4.1 Following the exhibition of the amended EIS and RtS, the Applicant submitted a series of responses to issues raised and proposed a number of additional changes to the development:

- amendments and extensions to buildings to further enclose crushing and mulching activities
- removal of a wetland from the stormwater system design
- changes to onsite detention basins and sumps.

Supplementary RtS

5.4.2 On 14 January 2021, the Applicant submitted the Supplementary RtS, including revised technical assessments. The Supplementary RtS was made publicly available on the Department's website and provided to key government agencies and Council for comment. A summary of the advice received is provided below.

5.4.3 **Council** noted the proposed median at the site access would obstruct the Gindurra Road footpath, create hazards for pedestrians, and requested the Applicant to refine the access design to minimise hazards prior to commencement of construction. Council requested the Applicant prepare a management plan outlining management measures for the retained bushland during operation of the development and install the water management system prior to commencing operation.

5.4.4 **BCD** advised the Supplementary RtS had adequately addressed its comments on the amended EIS and reiterated its recommendation of implementing a vegetation monitoring program for the reserved *Melaleuca biconvexa*.

5.4.5 **DPI Agriculture** requested the Applicant prepare and implement a Biosecurity Management Plan during the operation of the development.

5.4.6 The **EPA** advised that the Supplementary RtS had adequately addressed issues of air quality and noise impacts. The EPA requested the applicant confirm the removal of the floating wetland and the addition of controlled discharges would not change the total volume of discharged water to the bushland.

5.4.7 **HNSW** had no further comments.

Additional Information

5.4.8 On 3 March 2021, the Applicant responded to comments from government agencies and the Department on the Supplementary RtS. The response included additional water, air quality and traffic assessments, and an updated waste management plan. This included further confirmation the floating wetland was not required to achieve satisfactory water quality outcomes.

5.4.9 On 11 March 2021, one nearby resident provided a review (prepared by TAS) of the AQIA Addendum in the Supplementary RtS (TAS AQIA Addendum Review) that noted the issues raised previously in the TAS AQIA Review had not been resolved.

5.4.10 On 6 April 2021, the Applicant submitted a response to the TAS AQIA Addendum Review. The Applicant also engaged the consultancy firm ERM to carry out an independent review of the AQIA, AQIA Addendum, the TAS AQIA Review, and the TAS AQIA Addendum Review (known as the ERM Review).

5.4.11 To examine the arguments and outcomes of the various air quality studies commissioned by both the Applicant and the nearby resident, as part of its assessment, the Department engaged EMM, an expert environmental consultancy, to undertake an independent review of all AQIAs and TAS AQIA reviews (EMM Independent Review, dated 17 May 2021). **Section 6.1** provides details of the Applicant's AQIAs and all reviews.

5.4.12 On 23 July 2021, the Applicant submitted a further Supplementary NVIA responding to the Department's NVIA review comments.

5.4.13 A consolidated response comprising the Applicant's additional information above (relating to air and noise impacts) was formally submitted to the Department on 30 September 2021.

6 Assessment

6.1.1 The Department has considered both the original and amended EIS, the issues raised in the submissions, the Applicant's RtS and supplementary information, the peer reviews submitted by objectors, and the independent review commissioned by the Department in its assessment of the development. The Department considers the key assessment issues are air quality, noise, traffic and access, and water management. Several other issues have also been considered and are assessed in **Table 10** in **Section 6.5**.

6.1 Operational Air Quality

6.1.1 The development would accept and process C&D waste which has the potential to generate air quality impacts from dust and particulate matter emissions.

6.1.2 Responding to concerns raised by the public and the EPA during the exhibition of the original EIS, the Applicant submitted an amended AQIA (dated 30 June 2020) and an AQIA Addendum (dated 10 December 2020) assessing air quality impacts in accordance with the EPA's *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA, 2017) and relevant policies and guidelines.

Applicant's Assessment

6.1.3 The amended AQIA identified 21 sensitive receivers in the site's vicinity, including eight residential receivers to the east and southeast along Debenham Road South and Acacia Road in Somersby and to the south in Kariong. In addition, 13 non-residential receivers were identified, including the Frank Baxter Juvenile Justice Centre (the Justice Centre) and one recreation facility being the Central Coast Riding for the Disabled Centre (the riding facility) (see **Figure 10**).

6.1.4 The amended AQIA used updated AERMOD dispersion modelling to assess the incremental (i.e. the development alone) and potential cumulative (i.e. the development plus background) operational impacts under a conservative operational scenario. This included material processing activities and vehicle and plant movements occurring simultaneously at the maximum throughput capacity. The updated modelling also incorporated several emission reduction assumptions using a suite of best practice emission controls to reduce air impacts. This included limiting stockpile height, dust suppression outdoors (using water carts and misting systems), covering waste loads with a tarpaulin, undertaking continuous air quality monitoring, and ceasing crushing, screening and grinding activities in windy conditions.

6.1.5 The amended AQIA identified a range of onsite emission sources including movement of vehicles within the site, unloading of materials, movement of material around the site using front-end loaders, material processing, loading trucks, wind erosion of storage areas, and emissions from vehicle and equipment exhaust.

6.1.6 Key pollutants identified included Total Suspended Particulates (TSP), deposited dust, and particulate matter (coarse particles less than 10 microns in diameter (PM_{10}) and fine particles less than 2.5 microns in diameter ($PM_{2.5}$)).

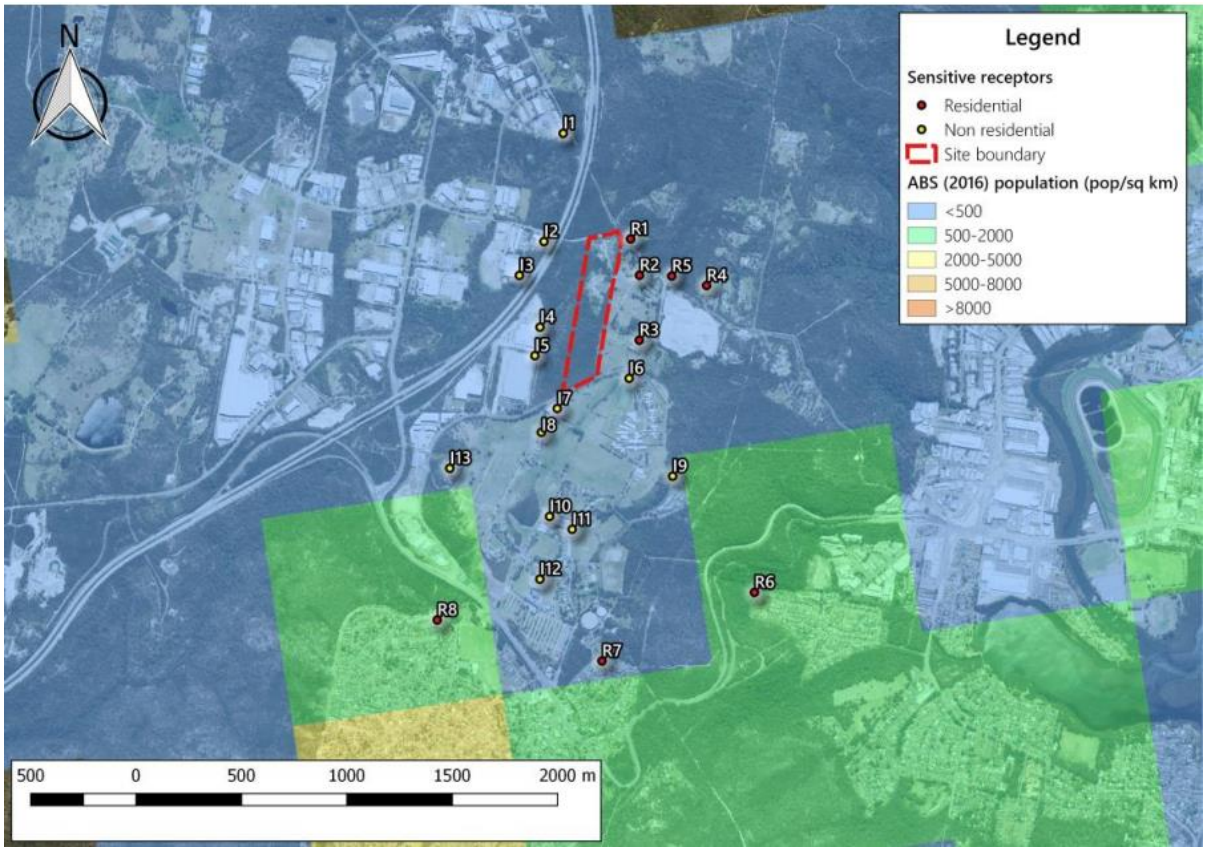

Figure 10 | AQIA identified Sensitive Receivers Location Map

6.1.7 The amended AQIA predicted the 24-hour maximum cumulative particulate concentrations for both PM_{10} and $PM_{2.5}$ to be below the EPA's impact assessment criteria of 50 µg/m^3 and 25 µg/m^3, respectively, at all receivers except at R3. At this receiver, PM_{10} concentrations exceeded the relevant criteria on a single day in the modelled year (2015) due to a background concentration surge caused by a dust storm on 6 May 2015. Incremental particulate emissions were predicted to be well below the relevant criteria at all receivers.

6.1.8 The amended AQIA also considered the annual cumulative impact of the development and the existing developments in the site's vicinity. Dispersion modelling showed that annually, cumulative PM_{10}, $PM_{2.5}$, TSP and dust deposition levels would be below the relevant criteria at all receivers.

6.1.9 Potential air quality impacts from crushing concrete, particularly silica dust generation and its impact on cardiopulmonary health, was one of the key issues raised in public submissions. The amended AQIA briefly assessed the potential respirable crystalline silica (RCS) dust impact to address these concerns, however, did not provide full details of incremental and cumulative predicted concentrations at each receiver.

Consideration of Issues in Submissions and Agency Advice

6.1.10 As discussed in Section 5, various government agencies provided advice during the exhibition of the amended EIS. In particular, the EPA requested the Applicant further revise the AQIA to include a range of additional impacts and studies and fully assess the RCS impacts. The EPA also raised concerns about meteorological uncertainties in the modelling used to predict impacts. CCLHD requested an assessment of air quality impact at the riding centre and confirmation that the proposed ceiling-mounted spray misters would effectively manage dust impacts.

6.1.11 Nearby residents commissioned a specialist consultant (TAS) to examine the amended AQIA. The TAS AQIA Review raised concerns about the air dispersion modelling, the use of insufficient dust emission sources and underestimation of the peak 24-hour average dust impact.

6.1.12 In response to issues raised by the EPA, the TAS AQIA review, the Department and the public submissions, the development was further revised. Amendments were made to the development to fully enclose crushing and mulching activities, enclose conveyors and bunkers with thick rubber curtains and equip the crushing and mulching buildings with misting systems. Construction of a three-sided roofed waste receival building was also included.

6.1.13 The design amendments were incorporated into a revised model which was presented in an AQIA Addendum. The Addendum considered more conservative factors such as emission from wind erosion, emissions from movement of haulage vehicles on paved/unpaved roads with adoption of conservative silt content and updated control efficiency assumptions. The AQIA Addendum used observational meteorological data from Gosford weather station, considered cumulative impacts of the nearby Gosford Quarry, clarified the effectiveness of the misting sprays, and confirmed the riding centre had already been considered in the assessment (as R17).

6.1.14 The AQIA Addendum predicted the following maximum 24-hour incremental and cumulative particulate levels (see **Table 8**):

Table 8 | 24-hour Maximum incremental and cumulative particulate levels (from AQIA Addendum)

Receiver	Max incremental (PM_{10})	Max incremental ($PM_{2.5}$)	Max Cumulative (PM_{10})	Max Cumulative ($PM_{2.5}$)[1]
Rural Residential	22.6 µg/m^3	3.5 µg/m^3	42.9 µg/m^3	14.0 µg/m^3
Industrial	20.7 µg/m^3	3.1 µg/m^3	42.8 µg/m^3	13.6 µg/m^3
Criteria	**N/A**	**N/A**	**50 µg/m^3**	**25 µg/m^3**

6.1.15 The AQIA Addendum found the predicted maximum 24-hour incremental and cumulative PM_{10} and $PM_{2.5}$ concentrations would comply with the relevant criteria at all receivers.

6.1.16 The Applicant noted cumulative PM_{10} impacts were modelled excluding the day where background concentrations already exceeded the criterion (i.e. the dust storm event referred to earlier). The results confirmed the development would not result in any additional exceedances of the relevant air quality criterion at all receivers, including R3. The assessment also confirmed the Gosford Quarry would generate less than 0.1 µg/m^3 of PM_{10} annually at all receivers.

6.1.17 The AQIA Addendum concluded that at full Stage 3 operation, the development would generate annual RCS concentrations between 0.1 µg/m^3 and 0.3 µg/m^3 at residential receivers and 0.1 µg/m^3 at all industrial receivers. The predicted annual RCS cumulative levels would range between 0.8 µg/m^3 and 1 µg/m^3 at residential receivers and be 0.8 µg/m^3 at all industrial receivers. Given both the incremental and cumulative RCS levels at all receivers would be well below the annual average criterion of 3 µg/m^3 (adopted from the Victorian EPA), the AQIA Addendum concluded the development would not have an adverse silica dust impact.

6.1.18 The TAS AQIA Addendum Review was commissioned by nearby residents to evaluate the responses provided in the Applicant's AQIA Addendum and generally repeated TAS's earlier concerns about air quality modelling and background data. The Applicant submitted a detailed response to the TAS AQIA Addendum Review and also engaged ERM to analyse all air assessments and reviews (ERM review) independently. The ERM review concluded:

- the Applicant's AERMOD modelling was adequate
- an onsite metrological station could provide site-specific meteorological data to be used by air quality validation programs
- the proposed mitigation measures were consistent with the best practice for processing C&D waste.

6.1.19 The EPA noted that in the updated air modelling, the maximum 24-hour incremental PM10 level at some receivers was predicted to be greater than 20 µg/m3. However, the EPA further noted the prediction was based on conservative assumptions with the maximum processing capacity of 200,000 tpa and the meteorological data still contained some uncertainties. However, these uncertainties could be reduced by use of an onsite meteorological monitoring station providing site-specific data for future validation. The EPA considered that through a ceiling-mounted dust suppression system, minimising drop heights, conducting visual monitoring, and implementing hand-held dust suppression, the potential air quality impact from waste receival activities could be effectively reduced. Based on its review, the EPA recommended the Applicant prepare and implement an AQMP including an ambient air monitoring strategy and install and operate an onsite meteorological station.

The Department's Assessment

6.1.20 The Department has reviewed all AQIA reports and reviews, the RTS and all submissions, noting the considerable public and agency concerns regarding air quality impacts.

6.1.21 To ensure air quality impacts had been robustly considered, the Department also engaged an independent air quality expert (EMM) to undertake a further, independent review of the Applicant's various AQIAs and the TAS AQIA reviews commissioned by the public. EMM concluded the Applicant had undertaken a robust air impact assessment and the AERMOD modelling was appropriate. EMM also found the uncertainties in meteorological data and Gosford Quarry baseline emissions could be adequately addressed by the Applicant's proposed mitigation measures.

6.1.22 The Department notes the dispersion modelling demonstrates that concentration levels at surrounding sensitive receivers would meet the relevant criteria for TSP, PM_{10}, $PM_{2.5}$, and dust, and the additional analysis demonstrates there would be no additional exceedances as a result of the development. It is also noted that design improvements comprising full enclosure of all waste processing activities, conveyors, and bunkers, would reduce air quality impacts from the proposed development.

6.1.23 The RCS assessment concluded that both incremental and cumulative RCS levels at all receivers would be well below the 3 $\mu g/m^3$ criterion. Noting the Applicant has fully enclosed the Crushing Building to ensure activities with high RCS generating potential would be undertaken indoors, the Department considers the development would not have an adverse silica dust impact on sensitive receivers.

6.1.24 The Department notes the Applicant revised the original development to fully enclose the crushing and mulching activities, locate waste receival inside a three-sided and roofed structure and add misting systems to control dust from outdoor storage bays and hard surfaces. The Applicant also committed to implementing a range of operational measures outdoors to manage dust, installing an onsite meteorological station and undertaking ongoing monitoring.

6.1.25 Importantly, the Applicant has proposed a conservative approach to increasing throughput at the RRF which involves limiting the initial waste throughput to 100,000 tpa to enable impacts at this lower level to be validated prior to increasing to a higher processing capacity. This would allow the actual air impacts of the operation to be verified against the predictions detailed in the AQIA Addendum and, if required, provide the opportunity for additional contingency measures and practices to be implemented to ensure the development operates without adverse air impacts. Throughput increase in two stages up to a final level of 200,000 tpa would be contingent on results from further validation which demonstrate compliance with the relevant air quality criteria.

6.1.26 To formalise the Applicant's commitment to validate and mitigate operational air quality impacts and ensure air quality risks are minimised, in line with the EPA's recommendations, the Department has recommended a range of conditions requiring the Applicant to:

- install an onsite meteorological station
- operate the development in line with the air quality criteria, air emission limits and air quality monitoring requirements from the relevant guidelines and the EPL for the site
- prepare and implement an Operational Air Quality Management Plan (OAQMP) detailing the development's air quality control and contingency measures. in consultation with the community.
- prepare an ambient air quality monitoring strategy as part of the OAQMP
- undertake air quality monitoring following commissioning of each stage of the development in a Post Commissioning Air Monitoring (PCAM) report that analyses the compliance of each stage and outlines actions to address any air quality limit exceedances
- verify the predictions of operational air impacts in an Air Modelling Report (AMR) using actual operational air quality monitoring data prior to increasing processing capacity from Stage 1 to Stage 2 and subsequently from Stage 2 to Stage 3. Progression to Stages 2 and 3 would be contingent on satisfactory performance of the previous stage.

6.1.27 The Department's assessment concludes that, subject to the conditions and the Applicant's proposed best practice management and mitigation measures, including enclosing the previously open-air development and misting and dust suppression systems, the development would have minimal air quality impacts on surrounding receivers.

6.2 Operational Noise Impact

6.2.1 As the development would generate noise from operational activities, it has the potential to impact the amenity of nearby residences and industrial receivers in the SIP. The Applicant submitted a number of documents assessing noise impacts. These included an amended Noise and Vibration Impact Assessment (amended NVIA) (dated 3 July 2020), a NVIA Addendum (dated 9 December 2020), as well as two Supplementary NVIAs (dated 11 May, 25 May and 25 June 2021), all prepared in accordance with the EPA's *Noise Policy for Industry* (NPfI) 2017 and *Assessing Vibration: A Technical Guideline*.

Applicant's Assessment

6.2.2 The Applicant identified 21 nearby sensitive receivers, including 17 residential receivers to the east and southeast on Debenham Road South, Acacia Road, and Kowara Road. In accordance with the NPfI, the sensitive receivers also included one deemed residential receiver (the Justice Centre) and one recreation facility (the riding facility). All existing industrial premises to the west and southwest of the site were collectively deemed as one industrial receiver (see **Figure 11**).

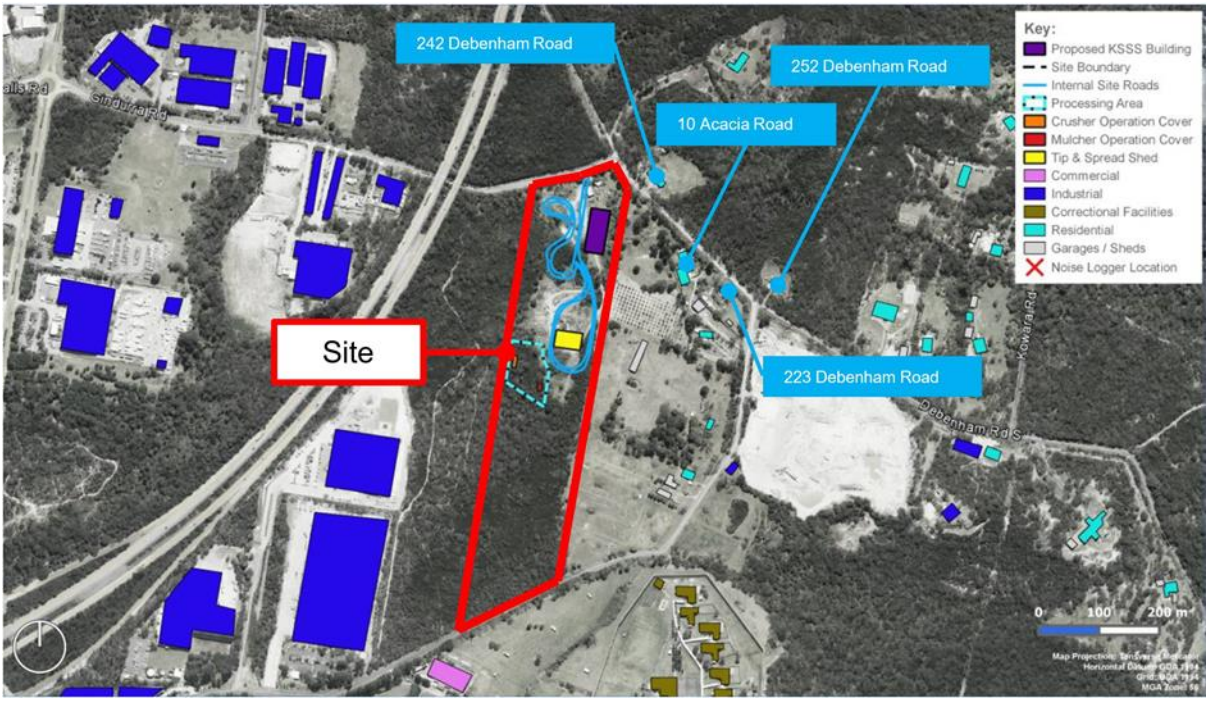

Figure 11 | Sensitive Receivers Location

6.2.3 The development includes construction of a noise wall parallel to and 5 m away from the eastern site boundary. The noise wall would have various heights of 2 m, 4 m, and 5 m in the northern, middle, and southern sections respectively (blue, orange, and purple in **Figure 12**). In addition to the noise wall, 3 m noise barriers would be installed around the waste receival and storage areas as well as the primary processing area (green in **Figure 12**).

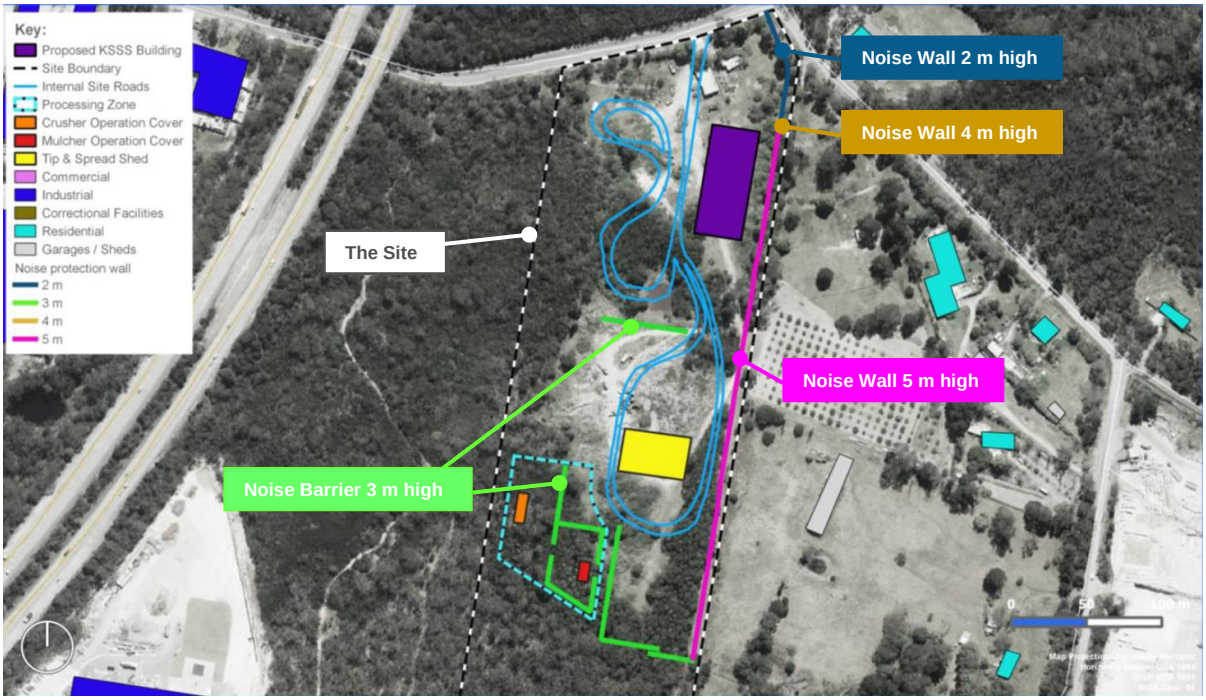

Figure 12 | Proposed Noise Walls Location

6.2.4 The 2020 amended NVIA identified the primary operational noise sources as heavy vehicles moving to, from and within the site, the use of front-end loaders, crushing and grinding of C&D waste, and noise emissions from plant and equipment.

6.2.5 The amended NVIA used background noise data and receiver characterisations to develop Project Noise Trigger Levels (PNTLs) for the nearby receivers based on the amenity criteria, as these were more stringent than the intrusiveness criteria (see **Table 9**). As the development would operate between 7 am and 6 pm, Monday to Saturday and would close on Sundays and public holidays, only daytime PNTLs would apply.

Table 9 | Project Noise Trigger Level for each type of receiver

Receiver	Period	RBL (dB)	Intrusiveness Level (dB)	Amenity Level (dB)	PNTL (dB)
Rural Residential	Day	45	50	48	**48**
The Justice Centre (deemed rural residential)	Day	45	50	48	**48**
Central Coast Riding for the Disabled Centre	When in use			53	**53**
Industrial	When in use			68	**68**

Note: day = 7 am to 6 pm, Monday to Saturday and 8 am to 6 pm

6.2.6 The amended NVIA predicted that in the worst-case scenario of maximum waste throughput and all plant operating simultaneously, with the noise wall and barriers in place, the daytime noise levels at residential receivers would range from 20 dB(A) to 47 dB(A). While the daytime noise levels at all residential receivers would be below the PNTL of 48 dB(A), it was noted the predicted noise level at 242 Debenham Road South was just 1 dB(A) below the criteria.

6.2.7 The EPA reviewed the amended NVIA and raised concerns about the noise monitoring locations and the plant sound power levels used in noise modelling and requested preparation of additional mitigation measures to be deployed in the event of non-compliance with the PNTLs.

6.2.8 Nearby residents were concerned about noise impacts and engaged Muller Acoustic Consulting (MAC) to undertake a technical review of the amended NVIA. Key issues raised included:

- underestimation of the sound power levels of equipment
- discrepancies between actual and predicted background noise levels
- noise impacts at 242 Debenham Road South.

Consideration of Issues in Submissions and Agency Advice

6.2.9 Following the exhibition of the amended EIS, in response to issues raised by the EPA, the MAC NVIA review, and public submissions, the Applicant made further amendments to the development to help reduce noise impacts. The amendments included fully enclosing the crushing and mulching activities and capping of conveyors and bunkers with thick rubber curtains. The Applicant assessed the resulting changes to noise impacts in the NVIA Addendum report.

6.2.10 The EPA reviewed the NVIA Addendum and disagreed with the Applicant's justification for the background noise monitoring location but noted the PNTL was determined by the amenity criteria for

rural residential land use, which is more stringent as it was 2 dB lower than the intrusiveness criteria. As such, the EPA considered the 2 dB margin was sufficient to mitigate any potential differences between the background noise levels recorded at the monitoring location and at nearby residences. The EPA also advised the proposed amendments to the development, including enclosure of activities, were appropriate to mitigate noise impacts.

6.2.11 The Department had comments on the NVIA Addendum, including requesting further details on the assumptions used in the noise model for plant sound power levels, noise corrections and building design. The Applicant submitted a number of Supplementary NVIAs in response to these issues, which included details of the assumptions used in the new noise modelling undertaken after the design amendments.

6.2.12 The new noise model adopted a conservative, worst-case approach, showing fixed and mobile plant operating for 100% of the time at full load (200,000 tpa), increased sound power levels for machinery, trucks with reversing beepers and +5 dB penalties applied for impulsive and tonal noise. Processing plant buildings were shown with 35 dB Weighted Sound Reduction Index (Rw) rated walls and roof.

6.2.13 Due to the amended assumptions, including the increased sound power levels, the results of the new modelling showed an increase of 1 dB(A) in the predicted operational noise levels at 242 Debenham Road South to 48 dB(A), which is equal to the PNTL criteria. Noise levels at all other locations were below the PNTL criteria.

The Department's Assessment

6.2.14 The Department has carefully considered the potential noise impacts and liaised regularly with the EPA and Applicant to ensure potential impacts on nearby residents are adequately managed during operation of the RRF. Noise impact was one of the key issues raised by the public on the original and amended developments and, in response to community and agency concerns, the Applicant reduced the proposed operating hours, and enclosed a number of the high noise generating activities. In addition, a noise wall is proposed along the eastern boundary as well as noise barriers in the processing areas to further mitigate potential noise generation.

6.2.15 The Department was concerned about the potential noise impacts on 242 Debenham Road South, recognising the predicted operational noise levels at the receiver would be equal to the PNTL. The Department notes noise levels were modelled under a worst-case scenario with the maximum waste throughput of 200,000 tpa and with all machinery and plant operating simultaneously. As such, the Department was satisfied the modelling was conservative and actual noise levels would likely be lower, especially given the development would commence with a reduced throughput of 100,000 tpa.

6.2.16 To ensure noise emissions on nearby receivers are adequately managed, the Department recommends monitoring of actual sound power levels and overall noise levels once operations commence at Stage 1 (100,000 tpa), Stage 2 (150,000 tpa) and Stage 3 (200,000 tpa) throughput levels. If actual noise impacts exceed the PNTLs, additional mitigation measures would be required to be developed and tested until actual noise levels meet the PNTLs criteria at all receivers.

6.2.17 As previously discussed, the Applicant's proposal involves limiting the initial waste throughput to 100,000 tpa, with further increases contingent on environmental performance criteria being met once operation commences. The Department recommends verification of the predicted noise impacts, using noise monitoring data obtained when the development commences operation at 100,000 tpa prior to increasing the processing capacity from 100,000 tpa to 150,000 tpa (Stage 2). This process would be

repeated using Stage 2 monitoring data before increase of throughput from 150,000 tpa to 200,000 tpa (Stage 3). This approach also provides the opportunity for additional contingency measures to be implemented or alterations to onsite operational practices to ensure noise levels are consistent with the predictions and comply with the relevant criteria.

6.2.18 The Department considers the modelling in the NVIA to be conservative given it is unlikely all machinery and plant would operate simultaneously, however, notes the predicted level of noise impacts at one residence is equal to the PNTL criteria. To ensure actual noise emissions are acceptable at all nearby receivers and noise levels are robustly documented and managed, the Department has recommended a stringent set of conditions requiring the Applicant to:

- install the noise wall and barriers
- operate the development in compliance with operational noise limits
- undertake noise monitoring following commissioning of each stage of the development in a Post Commissioning Noise Monitoring (PCNM) report that analyses the noise compliance of each stage and outlines actions to address any noise limit exceedances
- verify predictions of operational noise impact in a Noise Modelling Report (NMR) using noise monitoring data of the development operating prior to increasing processing capacity from Stage 1 to Stage 2 and Stage 2 to Stage 3. Progression to stages 2 and 3 would be contingent on satisfactory environmental performance criteria being met once operation commences
- prepare and implement an Operational Noise and Vibration Management Plan (ONVMP) detailing the measures and strategies to be implemented to manage noise impacts in consultation with the community.

6.2.19 With the amendments to the development and the recommended conditions in place, the Department concludes potential noise impacts would be adequately minimised and managed to ensure no detrimental noise impact on nearby residents.

6.3 Operational Traffic and Access

6.3.1 The development would generate a total of 164 vehicle trips (82 in and 82 out) per day, when operating at its full capacity of 200,000 tpa. This has the potential to impact the capacity and safety of the local and regional road networks. The Applicant submitted an amended Traffic Impact Assessment (TIA) assessing the potential traffic impacts of the development. The Applicant also submitted a Traffic Technical Design Note (TTDN) in the Supplementary RtS responding to issues raised during the exhibition of the amended EIS.

Site Access, Queuing, and Internal Manoeuvrability

Site Access

6.3.2 The proposed site access is on Gindurra Road, 14 m west of the existing access. The site driveway includes inbound and outbound lanes separated by a concrete median. The driveway is designed to provide vehicles with good sight distance in each direction while exiting the site (see **Figure 13**). The Applicant has applied for a site-specific permit from the National Heavy Vehicle Regulator (NHVR) to allow B-Doubles to use Gindurra Road.

6.3.3 To address concerns raised by the public about heavy vehicles using Debenham Road South, the Applicant proposes to erect a ‘No Right Turn’ sign to prevent vehicles leaving the site turning right onto Gindurra Road. This would ensure vehicles exiting the site head west towards Wisemans Ferry Road

to access the regional road network. The Applicant also proposes to install an eastbound right-turn lane on Gindurra Road to facilitate access to the site for vehicles travelling from Wisemans Ferry Road. Swept path diagrams demonstrated the site access could accommodate the largest vehicles associated with the operation of the development.

6.3.4 Council noted the proposed concrete median at the site access would obstruct the Gindurra Road footpath and requested the entry gate be located at least 26 m from the site boundary, with further design amendments to the site access to minimise hazards to pedestrians. One public submission raised concerns that inbound trucks could use Debenham Road South and Gindurra Road to turn left into the site. Nearby residents submitted an independent review of the amended TIA (prepared by Intersect) which raised a number of concerns, including the potential queuing on Gindurra Road and the potential failure of the No Right Turn sign to prohibit heavy vehicles using Debenham Road South. TfNSW commented on the site access and requested preparation of a detailed design Road Safety Audit prior to issue of a construction certificate.

6.3.5 In the TTDN, the Applicant responded to the issues raised by Council regarding the median at the site access and advised it would be raised to direct vehicles exiting the site to turn left onto Gindurra Road, with the option for a gap to allow for crossing pedestrians. Council had no further comments in this regard.

6.3.6 The Department notes the raised median at the site access would separate inbound and outbound vehicle movements to minimise conflicts and the exit 'No Right Turn' sign is intended to prevent heavy vehicles using Debenham Road South to leave the site. To further address the Council and public concerns about the use of Debenham Road South, the Department has recommended conditions requiring the installation of a 'No Left Turn' sign on Gindurra Road prohibiting westbound traffic on Gindurra Road turning left into the site and the formalisation of heavy vehicle haulage routes in a Driver Code of Conduct (DCC) within an Operational Traffic Management Plan (OTMP). To ensure satisfactory site access design, the Department has also recommended conditions requiring the Applicant to finalise the design of the site access to the satisfaction of Council prior to construction. A condition is also recommended allowing the use of B-Doubles on Gindurra Road (between Wisemans Ferry Road and Debenham Road South) only with a valid permit from the NHVR.

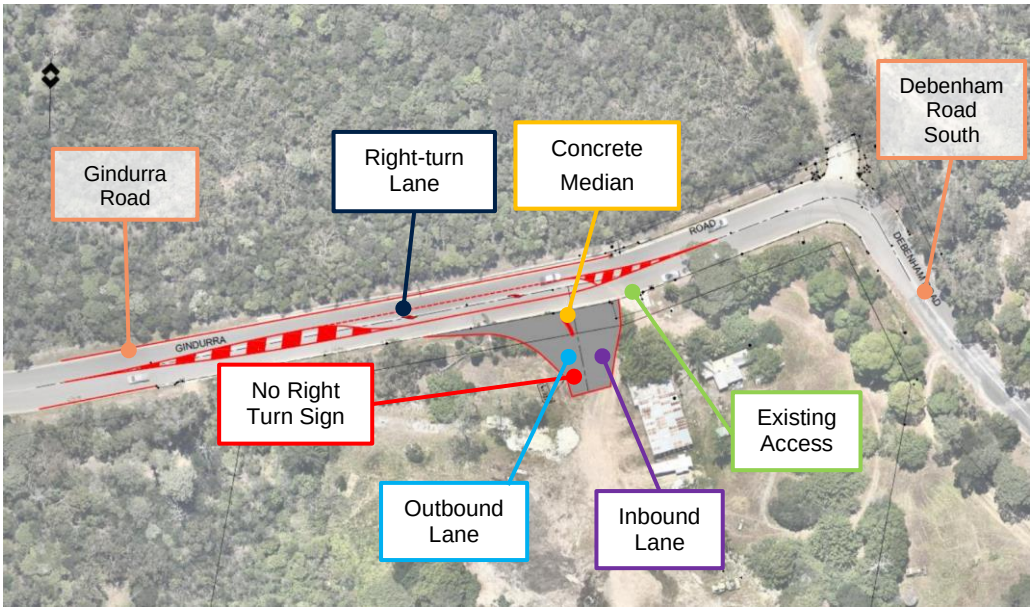

Figure 13 | Proposed Site Access and Right Turn Treatment on Gindurra Road

Queuing at Site Access

6.3.7 The development includes two weighbridges (one inbound, one outbound) near the site access, traffic lights, and boom gates to control traffic flows within site. The Department had concerns there would be potential for incoming heavy vehicles to queue on Gindurra Road while waiting for other vehicles to be weighed and recorded at the inbound weighbridge.

6.3.8 The amended TIA and the TTDN included a truck queuing analysis which noted the site access gate is 26 m from the site boundary and the boom gate would be 60 m from the site access (see **Figure 14**). Together these areas could accommodate up to three 26 m B-Doubles or four 19 m semi-trailers entirely within the site's boundary before the inbound weighbridge.

6.3.9 The amended TIA predicted that at 200,000 tpa processing capacity, the maximum number of hourly trips (staff movements, waste delivery vehicles, and vehicles collecting processed materials) would be 23 (being 12 in and 11 out), equating to up to one vehicle arriving every five minutes. The TTDN concluded that, as the processing time at the inbound weighbridge would be approximately 2 minutes, it would be unlikely queuing of trucks would occur. In the event that queuing did occur, there is sufficient capacity to queue 3-4 trucks in front of the weighbridge within the site, to ensure there would not be queuing on Gindurra Road.

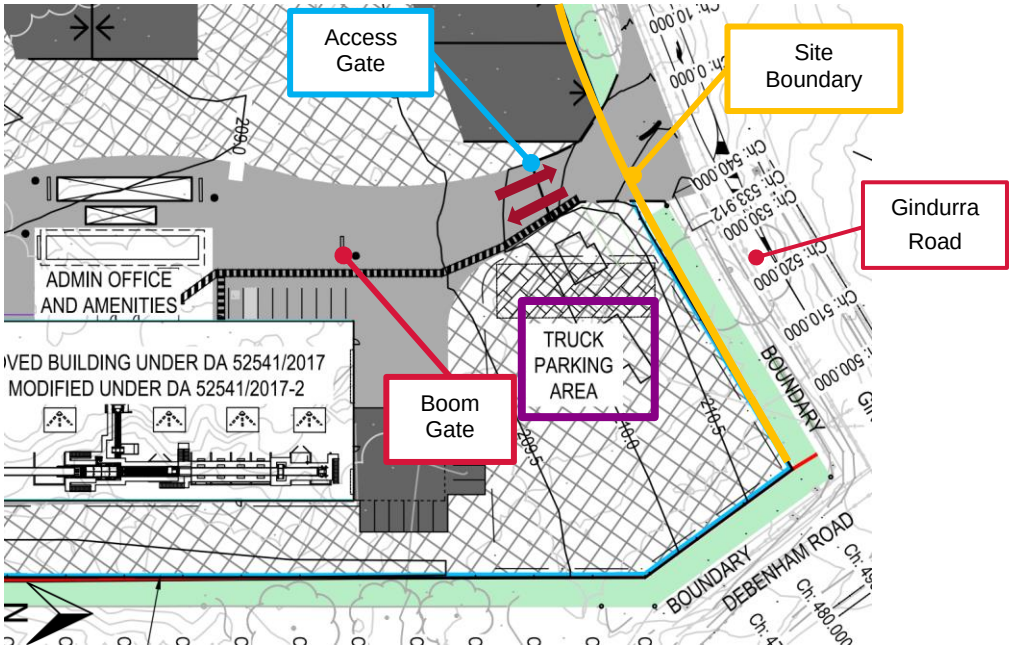

Figure 14 | Proposed Site Access Arrangements

Manoeuvring and Parking

6.3.10 Loaded trucks entering the site proceed to the T&S Area to unload waste, while empty trucks proceed to either the BPLS facility or the blending area for loading. The amended TIA included swept path diagrams that demonstrated trucks and plant can move unhindered throughout the site. The development includes two vehicle waiting areas for trucks waiting to load landscape supplies and aggregates and the amended TIA demonstrated this could accommodate one 19 m semi-trailer and one 26 m B-Double simultaneously.

6.3.11 Parking for 18 staff cars is already approved under the 2018 Council consent. The Applicant has not proposed further parking as part of the development as fewer than 18 staff members would work at the site at any one time.

Conclusion

6.3.12 The Department notes the development would provide queuing space for up to three of the largest trucks used by the RRF which is sufficient to ensure no queuing onto Gindurra Road. The development also includes designated truck parking areas as well as waiting areas adjacent to the secondary processing building (see **Figure 14**) to provide additional space to hold trucks within the site boundary. The internal layout would ensure the largest trucks can travel in a forward direction and plant can move freely. The Department notes the design of the site access and approaches on Gindurra Road would facilitate enforcement of the requirement not to use Debenham Road South.

6.3.13 To formalise traffic controls and mitigation measures, the Department has recommended preparation of an OTMP to specify haul routes, access, and parking arrangements. The OTMP would include a Traffic Control Plan detailing onsite manoeuvring and traffic treatments and a DCC specifying how truck drivers would be informed of the haul route and site access requirements.

Operational Traffic Impact

Applicant's Assessment

6.3.14 The amended TIA predicted operational traffic impacts at the full processing capacity of 200,000 tpa with vehicle trips per day (164 total, being 82 in and 82 out) as follows:

- employee vehicles: 20 trips
- 12 tonne tippers (10 m in length): 77 trips
- 32 tonne truck and dog/semi-trailers (up to 19 m in length): 41 trips
- 40 tonnes B-Doubles (up to 26 m in length): 14 trips
- delivery of building and landscaping products from third-party suppliers (19 m semi-trailers): 12 trips.

6.3.15 The development would generate 17 vehicle trips (9 in and 8 out) and 9 vehicle trips (4 in and 5 out) during the AM and PM peak hours respectively. The site benefits from good access to the regional road network. Operational vehicles would travel to and from the site using Gindurra Road, Wisemans Ferry Road, Central Coast Highway, and/or M1 Pacific Motorway (see **Figure 15**). The key intersections for the development are the Central Coast Highway/Wisemans Ferry Road intersection and the Wisemans Ferry Road/ Gindurra Road intersection.

6.3.16 The amended TIA included a SIDRA modelling assessment of the development's impacts on the performance of the signalised Central Coast Highway/Wisemans Ferry Road intersection in a future 2025 scenario, factoring in background traffic growth. Two of the turning lanes at the Central Coast Highway/Wisemans Ferry Road intersection currently perform at Level of Service (LoS) E (at capacity) or F (unsatisfactory) during the AM and PM peaks. Two of the through lanes currently perform at LoS A (good) or LoS B (good with acceptable delays), giving an overall current performance of LoS B during the AM peak and LoS C (satisfactory) during the PM peak. The average delay increases attributed to the development for the lowest-performing turning lanes range from 0.2 seconds to 1.4 seconds and can be considered negligible when compared to the existing delays of around 60-70 seconds. The overall predicted future performance for the Central Coast Highway/Wisemans Ferry Road intersection would remain as existing (LoS B at the AM peak and LoS C at the PM peak).

6.3.17 No SIDRA modelling was provided for the key Wisemans Ferry Road/Gindurra Road intersection, which currently performs at LoS A. The amended TIA concluded the development would not impact the efficient operation of the key intersections or the local and regional road network.

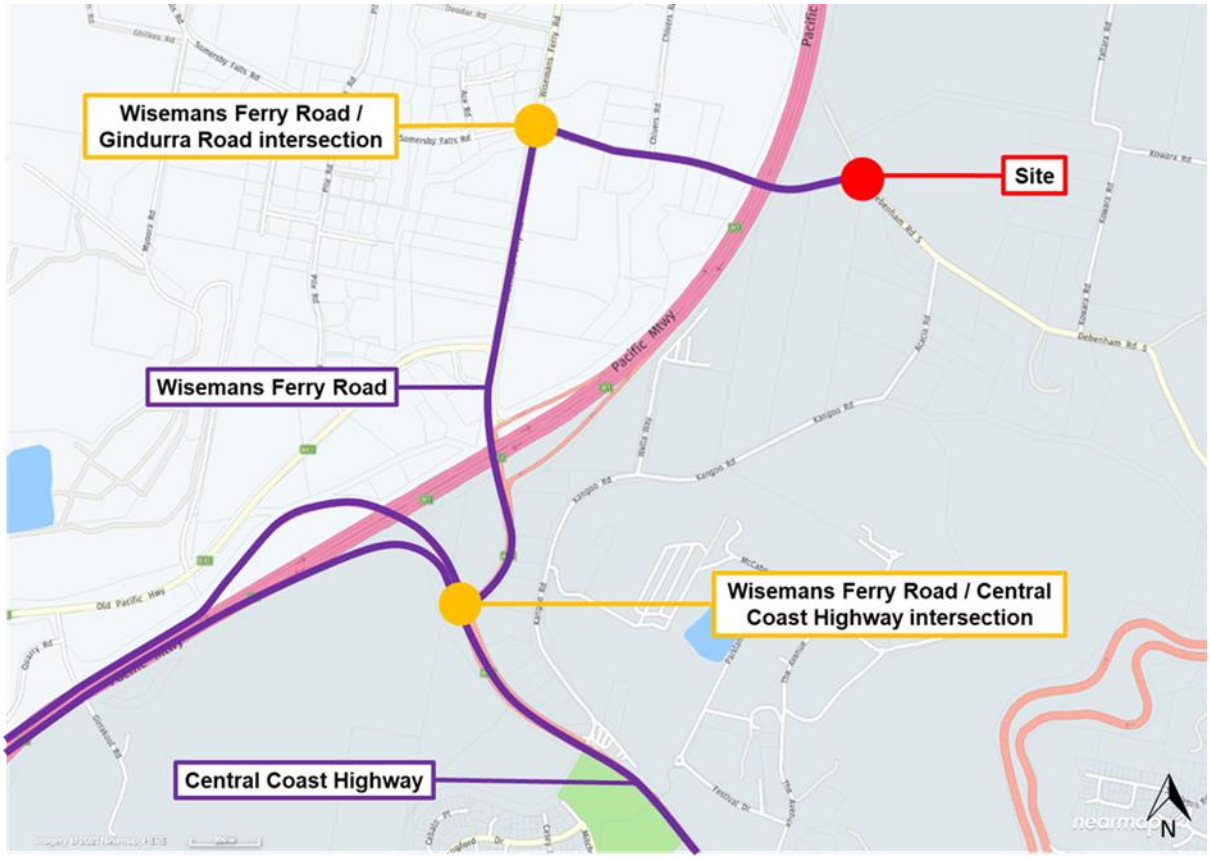

Figure 15 | Proposed Operational Vehicle Route and Key Intersections Map

6.3.18 Members of the public raised concerns about traffic, including additional heavy vehicle movements and impacts on the local road network's safety and efficiency. The Intersect review of the amended TIA questioned the validity of background traffic data and the potential traffic impacts on the Central Coast Highway/Wisemans Ferry Road in 2030. The Department also had concerns about the information presented and requested the Applicant to provide intersection modelling for the Wisemans Ferry Road/ Gindurra Road intersection.

6.3.19 As part of the TTDN, on 11 November 2020, the Applicant undertook traffic surveys at the Wisemans Ferry Road/Gindurra Road intersection. Updated SIDRA modelling considered the incremental traffic added by the development and the proposed warehouse at 83 Gindurra Road opposite the site. The updated SIDRA modelling found the overall performance of the Wisemans Ferry Road/Gindurra Road intersection would remain at LoS A (good) for the AM and PM peaks, concluding the development would not impact the efficient operation of Wisemans Ferry Road/Gindurra Road intersection.

6.3.20 The Department reviewed the TTND and noted the Applicant did not provide updated SIDRA modelling for the Central Coast Highway/Wisemans Ferry Road intersection using the 2020 traffic survey results as baseline data. The Department requested the Applicant to confirm if the SIDRA modelling outputs based on the 2017 traffic survey detailed in the amended TIA remain applicable. The Applicant justified that further SIDRA modelling using 2020 traffic survey results was not required as the development

makes a negligible contribution to overall the number of vehicles using the intersection. The Department accepted this response and TfNSW raised no concerns.

Department's Assessment and Conclusion

6.3.21 The Department notes that despite the current poor performance of some turning lanes at the Central Coast Highway/Wisemans Ferry Road intersection, the average delay increases caused by the development are negligible. Both key intersections would continue to perform at the current LoS at both the AM and PM peak. Noting both TfNSW and Council were satisfied and traffic was predicted at maximum operating capacity, the Department considers the existing road network could handle the traffic generated by the development and the increase in vehicle movements would not impact the efficiency and safety of nearby road network.

6.3.22 The Department considers the operational traffic impacts of the development would be low, however, as a further safeguard a range of traffic conditions are recommended. These conditions include preparation of an OTMP which would detail the measures the Applicant would implement to ensure road safety and network efficiency during operation. A DCC and TCP are also required to manage operational traffic, which include details of heavy vehicle routes, access, parking, and onsite manoeuvring.

6.3.23 Due to the level of concern from nearby residents about traffic impacts, the Applicant has committed to undertake operational traffic impact verification prior to increasing processing capacity from Stage 1 to Stage 2 and Stage 2 to Stage 3. The Department has formalised this in a requirement for a Traffic Modelling Report (TMR) and progression to stages 2 and 3 would be contingent on satisfactory verification of predicted traffic impacts once operation commences.

Conclusion

6.3.24 The Department acknowledges the community concerns about potential traffic impacts, especially regarding the use of Debenham Road South by heavy vehicles. The Department notes the measures proposed at the site access, such as the median, signs and the 'No Left Turn' sign on Gindurra Road, should eliminate heavy vehicles using Debenham Road South and Acacia Road. Also, the Department, Council and TfNSW are satisfied with the site access arrangements, subject to detailed design, and that the road network would not be adversely affected by operation at the development.

6.3.25 Although the traffic impacts of the development are anticipated to be low, to ensure these are in line with predicted, the Department has recommended a range of conditions regarding site access and traffic. These conditions require the Applicant to:

- finalise the design of the right-turn treatment on Gindurra Road
- install road upgrades and site access infrastructure, including signage
- prepare an OTMP, including specifying haul routes, access, onsite manoeuvring, and parking arrangements
- verify predictions of traffic numbers and impacts in a Traffic Modelling Report (TMR) using traffic monitoring data of the development operating prior to increasing processing capacity from Stage 1 to Stage 2 and Stage 2 to Stage 3. Progression to stages 2 and 3 would be contingent on satisfactory environmental performance criteria being met once operation commences. A TMR would include identification of any additional mitigation measures required to manage additional impacts and be in addition to the requirements of the OTMP.

6.3.26 The Department's assessment concludes that, with the above conditions in place, the development would have minimal impact on road performance and the safety of the surrounding road network.

6.4 Water Management

6.4.1 The development has the potential to increase surface water flows and impact surface water quality due to an increase in impervious areas and the introduction of additional contaminants from the processing and storage of waste on site. This has the potential to impact downstream catchments through the discharge of contaminated water to bushland on the site if it is not adequately treated and discharge is not controlled.

6.4.2 The Applicant submitted a Water Cycle Impact Assessment (WCIA) report and a draft Soil and Water Management Plan (SWMP) in the amended EIS assessing potential impacts on surface water and detailing the proposed water management system. A Supplementary WCIA report was subsequently submitted responding to issues raised during the exhibition of the amended development.

6.4.3 The WCIA identified key contaminants generated by onsite activities as total suspended solids (TSS), phosphorous, nitrogen and heavy metals (zinc, copper and lead).

Water Management System

6.4.4 The development includes a comprehensive water management system (WMS) designed to collect, treat, recycle, and reuse water within the site. Key elements of the proposed WMS are shown in **Figure 16**. The proposed WMS divides the site into six sub-catchments based on the proposed activities in each area, with each sub-catchment given a water contamination risk rating (low, medium or high). Based on the level of water contamination risk, treatment methods are proposed for each sub-catchment to ensure effective separation of clean and contaminated water, maximise water recycling and reuse onsite, minimise discharge to the retained bushland, and meet the irrigation requirements for the retained *Melaleuca biconvexa* community.

6.4.5 The proposed treatment train for each risk category has been designed specifically for its expected contaminants and utilises a range of water treatment devices such as filter sausages, gross pollutant traps (GPTs), holding ponds (Water Quality Pond and Emergency Spill Pond), filtration devices and a bioswale. The whole site would either be sealed with concrete hardstand or comprise crushed concrete lined with geomembrane with subsoil drainage to direct water to the WMS. Rainwater tanks would collect water from building roofs for use in truck washing or dust suppression within operational buildings.

6.4.6 During normal operation, surface water from all catchments would pass through GPTs and then drain to the 5,000 m^3 Water Quality (WQ) pond. Water for re-use on site would subsequently be treated via ultrafiltration, UV and chlorination in the Stormwater Treatment Plant to remove TSS, phosphorous, nitrogen, and heavy metals. Water in the WQ pond would be available for firefighting water in an emergency and be treated prior to use in dust suppression and to irrigate landscaped areas. Excess water from the WQ pond would be released to the undeveloped southern part of the site via a 50 m wide level spreader designed as a shallow infiltration system to reduce water velocity, prevent erosion and act as a final treatment step.

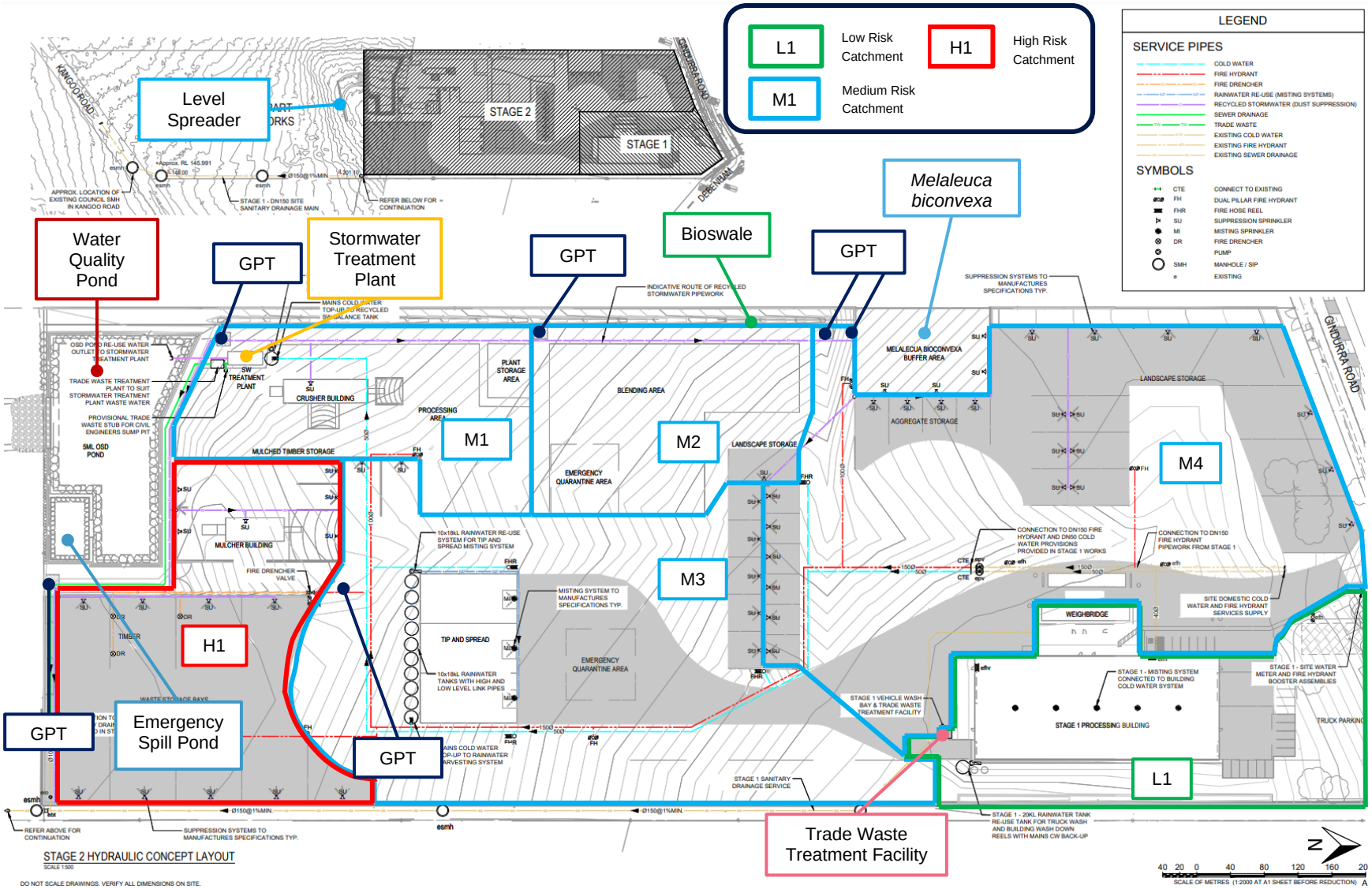

Figure 16 | Proposed Water Management System and Sub-Catchment

6.4.7 A water quality probe would be installed to continuously monitor the quality of water discharged from the high-risk catchment (waste storage bays and timber shredding area). If this is found to be of very poor quality, such as during a fire or spill event, a penstock (a gate for controlling flow) at the inlet of the WQ pond would be closed, and water collected from the high-risk sub-catchment would be diverted to the Emergency Spill (ES) pond. Water in the ES pond would be tested to meet Council's trade wastewater criteria before being discharged to sewer or removed offsite if Council's criteria is not met.

6.4.8 Leachate produced internally in the secondary processing building would be captured in four internal sumps and drained to an oil/water separator before discharge to sewer.

6.4.9 A separate onsite stormwater detention basin is not proposed, however the WQ pond has been designed with extra freeboard to cater for storage of a 1 in 100-year storm event. While the regular operating level of the WQ pond is 5,000 m^3, an additional 2,500 m^3 could be accommodated, with a weir to allow release of water even beyond the 1 in 100-year storm.

Applicant's Assessment

6.4.10 The WCIA report included MUSIC modelling for both the pre- and post-development scenarios to assess the effectiveness of the WMS to treat collected water. The MUSIC modelling found that when compared with the existing site conditions, the WMS would effectively reduce annual loads of TSS, Total Phosphorus (TP), and Total Nitrogen (TN) by 92.1%, 84.4%, and 77.9% respectively. This exceeds the best practice target reduction levels from Council's DCP and the Growth Centres Commission for TSS, TP and TN, being 80%, 45%, 45% and 85%, 65%, 45%, respectively. The assessment concluded the WMS would result in a beneficial effect on discharge water quality from the site.

6.4.11 Predicted Stormwater Treatment Plant performance was assessed in accordance with combined criteria representing human health water quality targets from the *Australian Guideline for Water Recycling: Stormwater Harvesting and Reuse* (AGWR) and *Managing Urban Stormwater: Harvesting and Reuse* (NSW DEC). The Applicant's assessment predicted compliance with all relevant human health criteria and concluded the proposed treatment plant would ensure all human health risks can be managed.

6.4.12 The WCIA estimated that every year approximately 0.95 mega litres (ML) of treated water from the WQ pond would be used to irrigate the *Melaleuca biconvexa*. The WCIA report did not include a prediction of the irrigation water quality, however, proposed that during operation of the development, the Applicant would test and validate metal loads in the treated water against criteria set out in the ANZECC Guideline.

6.4.13 In the event of very heavy rain, should the water level in the WQ pond rise above design capacity, the overflow would be discharged to the bushland in the southern part of the site via a 50 m wide level spreader. The Supplementary WCIA identified that discharge to bushland would occur three times per year. DRAIN modelling undertaken in the WCIA indicated that during extreme rain events, the maximum velocity of discharged water would be 0.55 cubic metres per second (m3/s) which is lower than the pre-development peak flow of 1.88 m3/s (i.e. what currently occurs on the site). As such, the WCIA concluded that the level spreader would be sufficient to reduce the discharged water velocity and minimise downstream erosion of the preserved bushland.

6.4.14 In the Supplementary RtS, the Applicant clarified several queries from the EPA and the Department regarding the effectiveness of some of the components of the WMS. Following review of the information,

the EPA raised no further concerns and recommended a range of conditions, including development of water quality criteria for discharged water based on the ANZECC Guidelines and minimisation of the quantity of polluted runoff.

6.4.15 In response to BCD's comments, the Applicant provided the MUSIC modelling and MUSIC file for the WQ pond, and after reviewing these, BCD raised no further issues. Council noted the changes to the WMS and recommended conditions requiring the Applicant to finalise its detailed design.

The Department's Assessment

6.4.16 The Department notes the Applicant has proposed a comprehensive WMS based on water contamination risks with a suite of best practice measures. During a fire or spill event, the proposed ES pond would segregate highly polluted water collected from the high-risk sub-catchment from the other catchment areas. Water collected in the ES pond would not be reused onsite to prevent recontamination further.

6.4.17 The Applicant's WCIA represents a robust assessment of the potential water quality and quantity impacts associated with the proposed development. Notably, the MUSIC modelling sufficiently demonstrates the WMS would achieve the relevant best practice pollution reduction targets for TSS, TP and TN in discharge water. The WCIA also demonstrates all practical measures would be employed to reduce, as much as practicably possible, the volume of runoff from the site.

6.4.18 The crushing and mulching buildings would be fully enclosed, and the waste receival building would be three-sided and roofed. These design changes were not included in the MUSIC modelling provided, however the Department notes this would further improve environmental performance through minimising stormwater directly contacting materials and generating contaminated water.

6.4.19 Noting the EPA and other government agencies were satisfied, the Department considers the proposed WMS would efficiently minimise water pollution risks during operation. The system effectively separates clean and dirty water, maximises harvesting and reuse of water onsite, protects the *Melaleuca biconvexa*, and ensures the project would achieve all relevant health and discharge criteria. The Department is satisfied the WMS would achieve a beneficial effect on water quality discharged from the site and harvesting and reuse of water would reduce both the frequency and volume of runoff. Diversion of highly contaminated surface water from the high-risk catchment to the ES pond is considered an appropriate contingency to effectively prevent polluted discharges from the site.

6.4.20 However, to ensure the WMS operates effectively and potential water quality impacts are mitigated, the Department has recommended a number of conditions. These conditions incorporate the EPA's recommendations and require the Applicant to:

- install and operate the WMS in accordance with the conceptual design outlined in the WCIA and Supplementary WCIA Report
- enter into a trade waste agreement with Council to discharge to Council's sewer
- prepare a Post-Commissioning Water Monitoring (PCWM) report that analyses compliance of treated water with ANZECC Guideline criteria for each stage of the development and outlines actions to address any exceedances.
- validate the effectiveness of the proposed WMS in the context of increasing the waste processing capacity by verifying the predictions of the WCIA in a Water Quality Modelling Report (WQMR) using water monitoring data from the PCWM report before increasing processing capacity from Stage 1 to Stage 2 and Stage 2 to Stage 3.

- prepare and implement an Operational Soil and Water Management Plan (OSWMP) detailing the development's water quality monitoring strategy and control, maintenance, and contingency measures.

6.4.21 With the implementation of the recommended conditions, the Department's assessment concludes that the Applicant's WMS represents best practice in water quality and quantity management and potential impacts can be effectively mitigated.

6.5 Other Issues

6.5.1 The Department's assessment of other issues is provided in **Table 10**.

Table 10 | Assessment of Other Issues

Findings	Recommendations
Biodiversity Impact	
• The majority of the site is currently vegetated, except for the northeastern part where the Council approved warehouse has been constructed. • A BDAR for the development was prepared by a Biobanking accredited assessor in accordance with relevant guidelines. • The BDAR noted the development would remove 3.11 ha of native vegetation from the northern part of the site and retain 4.1 ha of native vegetation in the southern part of the site. • An area of 0.06 ha in the northern part of the site contains 15 *Melaleuca biconvexa*, which are listed as vulnerable under the *Biodiversity Conservation Act 2016* (BC Act). These are to be retained and protected by a 10 m buffer area. • The BDAR identified the presence of the Eastern Pygmy Possum on site (listed as vulnerable under the BC Act), with 1.41 ha of its habitat impacted by the development. • The BDAR concluded the development would have minimal biodiversity impacts and recommended the impacts be offset by retiring 103 ecosystem credits (covering 3 native plant community types) and 28 species credits (for the Eastern Pygmy-Possum) in accordance with the Framework for Biodiversity Assessment. • BCD recommended the Applicant implement a vegetation monitoring program for the *Melaleuca biconvexa* for a minimum of 10 years. Council recommended ongoing management of the retained vegetation to the south in accordance with Council's Plan of Management for Somersby Industrial Park which has specific requirements for vegetation, soil, and water management. • Public submissions raised concerns about habitat loss for the Eastern Pygmy-Possum. • DPI Agriculture noted the *Biosecurity Act 2015* prohibits the movement of soils from the Phylloxera Infested Zone in the Sydney	Require the Applicant to: • purchase and retire 103 ecosystem credits and 28 species credits, prior to the commencement of any clearing (or make an equivalent contribution to the Biodiversity Conservation Fund) • prepare a Biodiversity Management Plan, including a vegetation monitoring program for retained vegetation, in consultation with BCD and in accordance with Council's Plan of Management for Somersby Industrial Park • prepare a Biosecurity Management Plan in consultation with DPI Agriculture.

Findings	Recommendations
basin and recommended the Applicant prepare a Biosecurity Management Plan to ensure materials are not received from the infested zone. • The Department notes the Applicant would avoid impacts to 4.1 ha of native vegetation in the southern part of the site and 0.06 ha containing the *Melaleuca biconvexa*. The Applicant proposes to engage an ecologist prior to vegetation clearing to capture and relocate any Eastern Pygmy-Possum individuals, to ensure they are not impacted during clearing. These measures would be described in a biodiversity management plan prepared in accordance with Council's Plan of Management for Somersby Industrial Park, in consultation with BCD and to the satisfaction of the Planning Secretary, prior to clearing for construction. • The Department's assessment concludes the biodiversity impacts of the development would be minor and adequately offset by the purchase and retirement of ecosystem and species credits.	
Construction Impacts	
• Construction works would take 3 months and would be undertaken during standard construction hours. Construction may result in dust, noise, and traffic impacts on the nearest residences, the nearest of which is located 20 m northeast of the site. <u>*Construction Air Quality Impact*</u> • The amended AQIA included a risk assessment of the construction phase noting vegetation clearing, earthworks, and construction traffic as the key sources of dust. The amended AQIA concluded dust impacts would be low with the implementation of mitigation measures. These include installing screens around dusty construction activities, use of water sprays, regularly sweeping paved surfaces, speed limits on site and regular inspections. • CCLHD recommended the Applicant prepare and implement a management plan for air quality during construction. EPA did not recommend any specific measures for construction air quality. • The Department considers fugitive dust emissions during construction could be appropriately managed through implementation of the proposed mitigation measures. The Department has recommended a condition requiring the Applicant to implement a Construction Air Quality Management Plan (CAQMP) and take all reasonable steps to minimise dust. <u>*Construction Noise Impact*</u> • Key noise sources include heavy vehicle movements and construction plant and equipment.	Require the Applicant to: • prepare and implement a CAQMP, CNVMP and CTMP, prior to commencement of construction. • carry out construction to achieve the construction noise management levels in the EPAs *Interim Construction Noise Guideline* • complete the right-turn treatment on Gindurra Road, prior to the commencement of construction.

Findings	Recommendations
• The amended NVIA predicted worst-case noise levels (with all plant and equipment working simultaneously at full power) would exceed construction noise management levels (CNMLs) at residences on Acacia Road and Debenham Road South by up to 12 dB(A). • The amended NVIA noted this prediction was conservative and in practice, noise levels would be lower as all plant and equipment would not operate simultaneously for the entire construction period. • The Applicant proposed a range of management measures to reduce noise levels including avoiding the use of noisy plant and equipment simultaneously and orienting equipment away from sensitive receivers. • Public submissions raised concerns about construction noise. • EPA and Council did not comment on construction noise. • The Department acknowledges that the noise assessment was conservative and agrees that actual construction noise levels are likely to be lower. The construction period would be short (3 months) and all works would be undertaken during day-time hours. • Construction noise was a concern for residents and given the potential for exceedance of the CNMLs, the Department considers the Applicant should implement all reasonable and feasible measures to minimise noise. • The Department has recommended the Applicant prepare and implement a Construction Noise and Vibration Management Plan (CNVMP) detailing the measures to be implemented to achieve the CNMLs. • The Department's assessment concludes the construction noise impacts would be of short duration and would be minimised through the implementation of mitigation measures. *Road Traffic Noise Impact* • The amended NVIA included a Road Traffic Noise Impact Assessment (RTNIA) in accordance with the *Road Noise Policy* (RNP). • The RTNIA adopted the vehicle movements described in the TIA for operation, being 164 daily vehicle trips, and found these would increase road traffic noise by up to 0.6 dB. Construction vehicle movements would be lower than operation, therefore the increase in road traffic noise from construction is expected to be lower than 0.6 dB. • Construction vehicles would be restricted from using Debenham Road South and Acacia Road so they would not pass by residential properties.	

Findings	Recommendations
• The RTNIA concluded the development would only marginally increase traffic noise, with an incremental increase less than 2 dB, meeting the criteria in the RNP. • The Department concludes that construction road traffic noise would be negligible, noting the Applicant has undertaken a conservative assessment that over estimates vehicle trips while still demonstrating the development meets the criteria in the RNP and vehicle access routes would be restricted to ensure vehicles do not pass by residential properties. *Construction Traffic Impact* • The amended TIA noted construction vehicles would use Gindurra Road, Wisemans Ferry Road, and the Central Coast Highway. Traffic during the construction phase would be less than the operational phase, therefore a detailed construction traffic impact assessment was not provided. • Public submissions raised concerns about the increase in truck movements and associated impacts on the safety and efficiency of local roads. Council requested the Applicant implement a Construction Traffic Management Plan (CTMP). • TfNSW did not raise concerns about construction traffic. • The Department notes that construction traffic would not use Debenham Road South and Acacia Road, limiting amenity and safety impacts on private residences to the east of the site. Construction traffic would be safely accommodated on the surrounding road network. • As construction would only last for 3 months and traffic would be less than during operation, the Department considers construction traffic impacts could be adequately managed by prohibiting trucks from using Debenham Road South and Acacia Road. • The Department has recommended a condition requiring the right-turn treatment on Gindurra Road be completed prior to construction commencing. The Department also recommends the Applicant prepare a CTMP and Driver Code of Conduct detailing the measures to be implemented to ensure road safety during construction, including specifying heavy vehicle access routes. • With these conditions in place, the Department's assessment concludes the construction phase would have minimal impacts on the surrounding road network.	
Groundwater	
• The site was previously used as a metal recycling facility, and without adequate measures in place, the development could further impact groundwater quality.	Require the Applicant to: • prepare and implement a

Findings	Recommendations
• The amended EIS included a Baseline Groundwater Investigation (BGI) report describing the nature and extent of groundwater flows in the locality, which was prepared under the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2018) (ANZECC Guideline). • The BGI found zinc and lead concentrations in groundwater on the site exceeding groundwater investigation levels, noting these relate to previous land uses. • There would be minimal further impacts on groundwater as all waste processing activities would be undertaken inside buildings and waste would be stored in concrete bunkers. Parts of the site would include hardstand and other areas would have a geomembrane installed to prevent infiltration and divert stormwater to water quality treatment devices. • The Applicant also proposes to undertake ongoing groundwater monitoring to ensure the development does not further impact groundwater or the existing identified contamination. • DPIE Water, NRAR and Council recommended the Applicant prepare and implement a Groundwater Monitoring and Management Plan for operation. • Recommended conditions require the Applicant prepare and implement a Groundwater Monitoring and Management Program to manage any potential groundwater impacts from the development. • The Department's assessment concludes the potential risks of contaminating groundwater would be low given the construction of hardstand and a geomembrane and given waste processing would occur inside buildings.	groundwater monitoring and management program in consultation with DPIE Water and NRAR.
Aboriginal Cultural Heritage	
• The development has the potential to impact Aboriginal cultural heritage during bulk earthworks and construction. • The Applicant submitted an amended Aboriginal Cultural Heritage Assessment Report (ACHAR), Historical Heritage Assessment (HHA), and Archaeological Report (AR) prepared in accordance with the relevant guidelines and policies. • The ACHAR noted the northern part of the site was highly disturbed with low potential to contain Aboriginal sites given its past industrial use. No registered Aboriginal sites were identified. • The ACHAR did not survey areas covered in dense vegetation where several structures would be built. • HNSW recommended a detailed survey of these areas following vegetation removal. HNSW also recommended the preparation of an Aboriginal Cultural Heritage Management Plan (ACHMP) and an	Require the Applicant to: • survey vegetated areas of the site following clearing, to identify any potential Aboriginal cultural sites • prepare and implement an ACHMP including an Unexpected Finds Protocol.

Findings	Recommendations
Unexpected Finds Protocol (UFP) detailing measures to be undertaken in the event Aboriginal sites are discovered. • The Department considers there is low potential for Aboriginal heritage sites given the historical industrial use of the site but notes further survey is required in vegetated areas. • The Department agrees with the recommendations of HNSW for further survey and implementation of an ACHMP and UFP, prepared in consultation with the Registered Aboriginal Parties and HNSW. • With these measures in place, the Department's assessment concludes any potential impacts on Aboriginal heritage would be appropriately managed.	
Contamination	
• As the site was previously used as a recycling facility, there is potential for contamination from heavy metals and asbestos. • The amended Preliminary Site Investigation (PSI) documented the presence of non-friable asbestos on the ground surface and within stockpiles of remnant waste. The PSI identified three potential Areas of Environmental Concern (AEC) including, unknown fill materials, asbestos-containing material (ACM), and potentially hazardous building materials, such as lead paint. • The PSI recommended management measures including removal and disposal of the identified contaminants and preparation of an Unexpected Finds Protocol (UFP). • The EPA and Council reviewed the PSI and did not comment on contamination. • The Department notes the potential for contamination on site and the recommendations of the PSI. The Department recommends the Applicant prepare an Asbestos Management Plan, remove identified asbestos prior to earthworks and implement an UFP to manage any contamination that is encountered during earthworks. • The Department's assessment concludes the site would be made suitable for industrial use following removal of the identified contamination and has recommended conditions to ensure any unexpected finds would be identified and appropriately managed.	Require the Applicant: • prepare and implement an Unexpected Finds Protocol and an Asbestos Management Plan as part of the CEMP • remove asbestos in accordance with relevant guidelines and obtain an Asbestos Clearance Certificate.
Hazards and Fire Safety	
Hazards and Risk • The development includes the storage of oils, fluids, and gases within the processing building. • The Applicant submitted a preliminary hazard analysis (PHA) confirming the development would not store dangerous goods	Require the Applicant to: • implement all safeguard measures outlined in the PHA

Findings	Recommendations
above the threshold quantities in the Department's *Applying SEPP 33* Guideline. • The PHA recommended safeguards for hazardous scenarios, including vehicle collision, leaks and spills, malicious damage to equipment and plant, fire and bushfire and hazardous waste receival. • The Department's hazards specialist reviewed the PHA and concluded the development would not be potentially hazardous given the dangerous goods quantities are below the thresholds in Applying SEPP 33. • The Department has recommended the Applicant implement the safeguards detailed in the PHA and store dangerous goods in accordance with Australian Standards. <u>*Fire Safety*</u> • The Applicant submitted an amended Fire Safety Study (FSS) that identified fire hazards and their consequences and recommended fire prevention strategies. • The Department's hazard specialist reviewed the amended FSS and noted it aligns with the Department's *Fire Safety Study Guidelines* (HIPAP 2). The Department noted the FSS should be included in FRNSW's fire engineering brief questionnaire (FEBQ) process as part of the detailed design of the development. • FRNSW reviewed the FSS and made recommendations, including a requirement to update the FSS with reference to FRNSWs *Fire Safety in Waste Facilities 2020* and prepare an Emergency Plan for the development. These recommendations have been included in the recommended conditions. • The Department's assessment concludes the fire safety requirements for the development will be adequately managed.	• ensure storage and handling of dangerous goods are below the SEPP 33 thresholds and in accordance with Australian Standards • prepare a Fire Engineering Brief Questionnaire in consultation with FRNSW prior to issuing a construction certificate • update the FSS and prepare an Emergency Plan.
Bushfire Management	
• The site is identified as bushfire prone land in accordance with the Gosford Bushfire Prone Map (2008). The amended EIS included an amended Bushfire Hazard Assessment (BHA) prepared in accordance with RFS *Planning for Bushfire Protection* (PBP 2019). • The amended BHA concluded the development would comply with bushfire protection measures for asset protection zones (APZ), internal roads, services, utilities, and emergency planning. • RFS reviewed the amended BHA and recommended conditions regarding APZ management, firefighting water supply, design of utilities, site access, and emergency and evacuation planning.	Require the Applicant to: • implement all recommended bushfire management measures detailed in the amended BHA.

Findings	Recommendations
• The Department reviewed the BHA and comments from RFS and concluded the bushfire risks would be appropriately managed, with the facility designed to meet the requirements of PBP 2019. • The Department has recommended conditions requiring the Applicant to implement the bushfire protection measures detailed in the amended BHA. • The Department's assessment concludes bushfire management will be appropriately managed.	
Visual Impact	
• The site is on the eastern edge of the SIP at the interface of industrial and rural residential land. The development would be visible from roads surrounding the site. The nearest rural residential property, 20 m to the northeast would have views of the facility, through existing mature vegetation. • The Applicant submitted an amended Visual Impact Assessment (VIA), concluding the visual impacts would range from negligible to moderate when viewed from public roads and industrial properties. Visual impacts were assessed as high when viewed from the closest rural-residential property at the corner of Gindurra Road and Debenham Road South. This is due to the removal of existing mature vegetation on the northern boundary and construction of the noise wall. Mature vegetation on the neighbouring properties would partially screen the development. • The VIA recommended measures to reduce the visual impacts, including retaining existing mature vegetation as much as possible to screen views, and implementing boundary landscaping. • The Department notes the noise wall reduces from 5 m to 2 m on the northeastern boundary, reducing its visual prominence. Waste recycling activities would be undertaken inside buildings, with the landscape supplies component fronting the northern boundary. • The Department considers the proposed landscaping along the northern boundary would reduce the visual impacts of the development over time and would provide screening for neighbouring properties. The development is located in an industrial area and has historically been used for recycling activities. The development would use an existing industrial building that is consistent with the character of other industrial premises in the SIP. • The Department has recommended conditions requiring the implementation and maintenance of landscaping and the control of lighting. • The Department's assessment concludes the visual impacts would be minor for the majority of viewpoints from public roads and	Require the Applicant to: • prepare a LMP and implement the proposed landscaping at Gindurra Road and Debenham Road South frontages • install lighting to minimise light spill and in accordance with Australian Standards.

Findings	Recommendations
neighbouring industrial properties. For the closest rural-residential property, the visual impacts would be adequately mitigated over time, once the landscaping matures.	

7 Evaluation

7.1.1 The Department has assessed the development on its merits and has fully considered all relevant matters under section 4.15 of the EP&A Act, the objects of the EP&A Act, and the principles of ESD. The Department also consulted key government agencies and engaged independent experts to assist with its assessment of the application.

7.1.2 The Department acknowledges the public's concerns about the potential impacts of the development and notes that due to continued issues raised by the Department, Council, government agencies and the general public, the Applicant amended and refined its proposal. The Applicant now proposes to incrementally increase waste processing capacity at the RRF in three stages, which would provide two opportunities to monitor, evaluate and verify the development's environmental performance prior to further expansion of operations. Progression to the next stage of processing capacity would be contingent on satisfactory environmental performance being achieved.

7.1.3 The key issues for assessment include operational air quality, noise, traffic and access, and water management. A range of other issues including biodiversity, Aboriginal heritage, contamination, and visual impact were also assessed.

7.1.4 The development includes full enclosure of crushing and mulching buildings and installation of dust misting systems across the site to mitigate potential dust and RCS generation during operation. The amended AQIA demonstrated that concentration levels at surrounding sensitive receivers would meet the relevant criteria for all key pollutants, including TSP, PM_{10}, $PM_{2.5}$, and dust and both the incremental and cumulative RCS levels at all receivers would be below the 3 $\mu g/m^3$ criterion. The Department's independent expert, EMM, independently confirmed that, the Applicant had undertaken a robust air quality impact assessment.

7.1.5 In response to community concern about noise impacts, the Applicant reduced the operating hours and enclosed the waste receival, storage and processing areas. The Department considers the NVIA is conservative. With noise barriers in place and implementation of mitigation measures, the development could comply with the PNTLs at receivers. The Department has recommended a stringent set of conditions to ensure noise emissions from construction and operation of the development would not adversely impact nearby receivers. Taking into account the amendments made to the development to address noise impacts and with the recommended conditions in place, the Department concludes that potential noise impacts are likely to be adequately minimised and managed to within acceptable levels without having a detrimental impact on the amenity of local residents.

7.1.6 While the Department acknowledges the community concerns regarding traffic impacts, it considers the site is well located in close proximity to major traffic routes and the existing road network and key intersections are able to handle the volume of traffic generated by the development. The upgrade of Gindurra Road and the site access are considered appropriate to ensure minimal amenity impacts on nearby residents.

7.1.7 The water management system was also subject to review and changes throughout the assessment process to ensure maximum water recycling and reuse and improve the quality of discharged water and irrigation water. Enclosure and roofing of operational buildings would minimise stormwater directly contacting waste material, while hardstand with geomembranes would eliminate surface water directly contacting groundwater during operation. The Department and the relevant government agencies were ultimately satisfied with the proposed water system design.

7.1.8 The development has been designed to minimise its impacts by enclosing a number of processing operations within buildings and increasing the waste throughput rate progressively over time. Overall, the Department considers the development's impacts can be mitigated and/ or managed to ensure an acceptable level of environmental performance, subject to recommended conditions of consent, including but not limited to:

- implementation of management and mitigation measures identified by the Applicant
- construction of the site entrance and Gindurra Road approaches to safely accommodate inbound and outbound heavy vehicles
- preparation and implementation of management plans detailing the effective management of air, noise, traffic, water and biodiversity impacts during construction and operation. The management plans would also provide mechanisms for monitoring environmental performance and protocols for managing incidents, non-compliances, and complaints
- offsetting the loss of biodiversity values
- further performance verification prior to commencement of subsequent operational stages.

7.1.9 As described earlier, the Applicant sought to amend the development application under Clause 55 of the EP&A Regulation. The Department considered the application to be consistent with requirements of Clause 55 of the EP&A Regulation and recommends the Commission, as the consent authority, accept the amended application.

7.1.10 The Department concludes the impacts of the development are acceptable and can be appropriately managed through implementation of the recommended conditions of consent. Consequently, the Department concludes the development is in the public interest and is approvable and recommends the Commission accepts the amended application. This assessment report is hereby presented to the Commission for determination.

28 September 2021

William Hodgkinson
A/Director
Industry Assessments

Chris Ritchie
A/Executive Director
Energy, Resources & Industry Assessments

Appendices

Appendix A – List of referenced documents

The Department has considered the following documents in its assessment of the development:

Environmental Impact Statement and Amended Environmental Impact Statement

- Environmental Impact Statement, Kariong Sand and Soil Supplies, Sand, Soil and Building Materials Recycling Facility SSD 8660, prepared by Jackson Environment and Planning Pty Ltd, dated 15 January 2019 and all attachments
- Environmental Impact Statement, Kariong Sand and Soil Supplies, Sand, Soil and Building Materials Recycling Facility – SSD 8660, prepared by Jackson Environment and Planning Pty Ltd, dated 5 August 2020 and all attachments

Submissions

All submissions received from government agencies, community groups, private businesses, and the public during exhibitions of the original and the amended DA and EIS.

Response to Submissions

- Response to Submissions Report, Kariong Sand and Soil Supplies, Sand, Soil and Building Materials Recycling Facility – SSD 8660, prepared by Jackson Environment and Planning Pty Ltd, dated 30 July 2020 and all attachments.
- Response to Submissions Report, Kariong Sand and Soil Supplies, Sand, Soil and Building Materials Recycling Facility – SSD 8660, prepared by Jackson Environment and Planning Pty Ltd, dated 5 January 2021 and all attachments.

Independent Peer Review of Air Quality Impact Assessment

- Independent Technical Review, Kariong Sand and Soil Supplies Facility – Air Quality Impact Assessment, prepared by EMM, dated 17 May 2021.
- Independent Peer Review – Kariong Sand and Soil Supplies Air Quality Assessment, prepared by ERM, dated 1 April 2021.

Additional Information

- Request for Additional Information – Air Quality and Noise & Vibration Impact Assessments – Kariong Sand and Soil Supplies – SSD 8660, prepared by Jackson Environment and Planning Pty Ltd, dated 30 September 2021 and all attachments.

All the above documents may accessed on the Department's Major Projects website at: https://www.planningportal.nsw.gov.au/major-projects/project/24101

Legislation, Policies and Guidelines

- relevant environmental planning instruments, policies, and guidelines
- objects and relevant provisions of the EP&A Act.

Appendix B – Considerations under Section 4.15 of the EP&A Act

Section 4.15 of the EP&A Act requires that the consent authority, when determining a development application, must take into consideration the following matters:

Table 11 | Consideration under section 4.15 of the EP&A Act

Provision	Comment
(a) the provisions of: **(i) any environmental planning instrument, and** **(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**	Detailed consideration of the provisions of all environmental planning instruments (including draft instruments subject to public consultation under the EP&A Act) that apply to the development is provided in **Appendix C** of this report.
(iii) any development control plan, and	Despite Development Control Plans not applying to SSD under clause 11 of the SRD SEPP, the Department has considered the relevant provisions of the Gosford DCP 2013 in its assessment of the development in Section 6.
(iia) 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, and	There are no planning agreements applicable to the development.
(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph),	The Department has undertaken its assessment of the development in accordance with all relevant matters as prescribed by the regulations, the findings of which are contained within this report.
(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,	The Department has considered the likely impacts of the development in detail in Section 6 of this report. The Department concludes that all environmental impacts can be appropriately managed and mitigated through the recommended conditions of consent.
(c) The suitability of the site for the development,	The development is a resource recovery facility located on IN1 General Industrial zoned land which is permissible with development consent.
(d) any submissions made in accordance with this Act or the regulations,	All matters raised in submissions have been summarised in Section 5 of this report and given due consideration as part of the assessment of the proposed development in Section 6 of this report.
(e) the public interest.	The development would generate up to 5 jobs during construction and 11 jobs during operation. The development is a considerable capital investment in the Central Coast area that would contribute to the provision of local jobs. The environmental impacts of the development would be appropriately managed via the recommended conditions. On balance, the Department considers the development is in the public interest.

Appendix C – Considerations of Environmental Planning Instruments

State Environmental Planning Policy (State and Regional Development) 2011

The SRD SEPP identifies certain classes of development as SSD. In particular, the construction and operation of a resource recovery facility that meets the criteria in clause 23(3) of Schedule 1 of the SRD SEPP is classified as State significant development. The development satisfies the criteria in clause 23(3) of Schedule 1 as it involves a resource recovery or recovery facility that processes more than 100,000 tonnes per year of waste (up to 200,000 tpa).

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)

The ISEPP aims to facilitate the effective delivery of infrastructure across the State and lists the type of development defined as Traffic Generating Development. The development constitutes traffic generating development in accordance with the ISEPP as it includes a waste recycling facility with access to a road. Consequently, it requires referral to RMS for comment and consideration of accessibility and traffic impacts.

The development was referred to RMS for consideration. RMS did not object to the development but advised the Applicant to obtain a NHVR permit for Gindurra Road before it can be used by B-Doubles. The Applicant obtained the permit during the course of the assessment. The development is therefore considered consistent with the ISEPP.

State Environmental Planning Policy 33 – Hazardous and Offensive Development (SEPP 33)

SEPP 33 aims to identify proposed developments with the potential for significant off-site impacts, in terms of risk and/or offence (odour, noise). A development is defined as potentially hazardous and/or potentially offensive if, without mitigating measures in place, the development would have a significant risk and/or offence impact on off-site receptors.

The Applicant provided an amended Preliminary Hazard Analysis (PHA) as part of the amended EIS. The amended PHA confirmed the development would not be identified as potentially offensive under SEPP 33 and recommended a number of safeguarding measures during various hazard scenarios including vehicle collision, leak and spill, and malicious damage to equipment and plant, fire and bushfire, and hazardous waste receival.

The Department's hazard specialist has reviewed the PHA and considers the development would not be potentially hazardous and recommended conditions to ensure the hazard risk could be minimised.

State Environmental Planning Policy 55 – Remediation of Land (SEPP 55)

SEPP 55 aims to ensure that potential contamination issues are considered in the determination of a development application. The EIS included a contamination assessment for the site which confirmed that a remedial action plan is not required. The Department has included specific conditions for managing any unexpected finds.

Draft State Environmental Planning Policy (Remediation of Land) (Draft Remediation SEPP)

The draft Remediation SEPP seeks to retain the key operational framework of the current SEPP 55, while also adding new provisions relating to changes in categorisation and introducing modern approaches to the management of contaminated land. The development has been assessed against

SEPP 55, and the Department is satisfied the development would be consistent with the draft Remediation SEPP.

Sydney Regional Environmental Plan No 20 – Hawkesbury-Nepean River (SREP 20)

SREP 20 aims to protect the environment of the Hawkesbury-Nepean River system by ensuring that the impacts of future land uses are considered in a regional context. The plan includes provisions to address water quality and quantity, environmentally sensitive areas, riverine scenic quality, agriculture, and urban and rural residential development. The Department has assessed the proposed water management system, the development's impacts on water quality and quantity including the retained bushland in the southern portion of the site (see **Section 6.4**). The Department has concluded the development would not compromise the aims and objectives of SREP 20.

Draft State Environmental Planning Policy (Environment) (Draft Environment SEPP)

The Draft Environment SEPP proposes to consolidate seven existing SEPPs, including SREP 20. There is some duplication between SREP 20 and the Standard Instrument local environmental plans, Ministerial Directions, and other SEPPs. The Draft Environment SEPP proposes to repeal provisions in SREP 20 that are satisfactorily addressed in other legislation or planning instruments. In considering SREP 20, the Department has also considered the relevant matters under the Draft Environment SEPP.

Gosford Local Environmental Plan (GLEP) 2014

The GLEP 2014 aims to encourage a range of housing, employment, recreation and services to meet the needs of existing and future residents of Gosford and to foster economic, environmental and social wellbeing so that Gosford continues to development as a sustainable and prosperous place to live, work and visit.

The Department has consulted with Central Coast Council throughout the course of assessment and has considered all relevant provisions of the GLEP 2014 and those matters raised by Council in its assessment of the development (refer to **Section 6** of this report). The Department concludes the development is consistent with the relevant provisions of the GLEP 2014.

Somersby Industrial Park Plan of Management

The site is located within the Somersby Industrial Park. Clause 7.4(a) of the GLEP requires that development consent must not be granted to development on land within the SIP unless the consent authority considers that the development is consistent with any applicable plan of management adopted by the consent authority.

The Department has reviewed the Somersby Industrial Park Plan of Management (SIP PoM). The Department considers the development is consistent with the key values of the SIP PoM. The development would provide 20 full-time jobs which supports the economic values of the SIP PoM. A comprehensive water management system has been proposed to mitigate any potential impacts on discharged water quality to ensure the health and survival of the retained bushland. The development would use recycled water to irrigate the preserved *Melaleuca biconvexa*. As such, the development is consistent with the ecological and environmental value of the SIP PoM. The northern portion of the site has been highly disturbed and low Aboriginal cultural heritage value. The Applicant would undertake surveys before commencing construction and implement an unexpected finds protocol during construction, thereby Department considers the development would maintain the Aboriginal heritage value of the SIP PoM.

Appendix D – Key Issues – Community Views

The Department publicly exhibited the original EIS from 1 February 2019 to 21 March 2019, and the amended EIS and the RtS were on public exhibition from 28 August 2020 to 25 September 2020.

During the exhibition period for the original EIS, the Department received 432 submissions from the public (nine special interest groups, 423 individuals) and advice from 11 government agencies, including Council. Of the public submissions, three submissions were in support of the proposal, 425 submissions objected to the proposal and four submissions provided comments only. One objecting submission was a petition with 891 signatures and three were submitted as form letters.

During the exhibition period for the amended EIS, the Department received 165 submissions from the public (13 special interest groups, 152 individuals) and advice from 12 government agencies, including Council. Of the 152 submissions from individuals, 114 were in support, 36 objected, and two provided comments. The 114 supporting submissions included one form letter with 454 signatures and one form email with 319 signatures.

The issues raised by these public submissions and how each issue has been addressed is summarised in **Table 12**.

Table 12 | Considerations of Key Issues raised by the Community

Issue Raised	Consideration
Site Suitability • the site's proximity to nearby sensitive receivers	• as stated in Section 4.2, the site is zoned IN1 General Industrial and development of a resource recovery facility is permitted with consent • in addition, the site is located within the Somersby Industrial Park, a strategically designated employment area where various industrial uses can be accommodated.
Air Quality • reduced air quality • emission of silica dust during crushing activities	• the Department has assessed the air quality impact of the development, including the potential silica dust emission in detail in Section 6.1 • the Department's assessment concludes that with appropriate measures in place, including the misting and dust suppression systems, the development would have minimal air quality impacts on surrounding receivers.
Human Health Risk • the impact of pollutants on human health • predicted unacceptable risk to human health for vulnerable residents' health	• the Department has assessed the development's key impacts including air quality, noise and vibration, and water management and concludes these impacts could be adequately mitigated and managed to minimise human health risks subject to a set of stringent conditions.
Noise and Vibration • noise and vibration impacts during construction, operation, and traffic noise	• as detailed in Section 6.2, the Applicant has improved and refined the development on various occasions as requested by the Department and government agencies • the Department's assessment concludes the development could effectively mitigate noise generated by construction and operation of the development subject to a number of conditions • the Department has recommended conditions requiring the Applicant to implement a CEMP and an OEMP, verify the effectiveness of the

Issue Raised	Consideration
	proposed mitigation measures, and implement any additional mitigation measures, where necessary, before increasing the processing capacity from 100,000 tpa to 150,000 tpa and from 150,000 tpa to 200,000 tpa.
Heavy Vehicle Movements • additional heavy vehicle movements • impacts on local road network's safety and efficiency	• recycled stormwater would be discharged from the STP for dust suppression in the waste storage area, primary processing area, and landscaping supplies and aggregate storage bays
Biodiversity and Habitat Loss • biodiversity and habitat loss due to clearing of 1.5 ha of endangered Pygmy-Possum's habitats	• section 6.5 details the Department's assessment of the development's impacts on biodiversity. The Department concludes that the development's biodiversity impact could be adequately minimised, managed, and offset through retiring biodiversity credits and implementing the recommend management plans • the Department has recommended a condition requiring the Applicant to prepare a Bushland Management Plan in consultation with Council and BCD • the Department concurs with DPI Agriculture and has recommended a condition requiring the preparation and implementation of a Biosecurity Management Plan to protect the biosecurity of the area.
Land Value Loss	• land value is not a matter within the regime of planning merit assessment.
Visual Impact	• as discussed in Section 6.5, the Department's assessment concludes that with screening planting in place, potential visual impacts on nearby residences would be appropriately minimised and the development would not have significant visual impacts on nearby receivers • the Department has recommended a condition requiring the Applicant to implement the proposed landscaping at the Gindurra Road and Debenham Road South frontages.
Air-borne Asbestos • asbestos may become airborne during removal of legacy stockpiles and earthworks	• as discussed in Sections 6.1 and 6.5, the Department has concluded the development could adequately mitigate the dust emissions including air-borne asbestos during construction and operation • the Department has recommended conditions requiring the Applicant to prepare and implement an Unexpected Finds Protocol and an Asbestos Management Plan and obtain an Asbestos Clearance Certificate issued by a SafeWork NSW licensed assessor.
Aboriginal Heritage • Aboriginal heritage loss due to land clearing and levelling	• the Department assessed the development's potential impacts on Aboriginal heritage in Section 6.5 and has concluded the impacts of the development on Aboriginal cultural heritage would be minimal • the Department has recommended conditions requiring the Applicant to prepare an ACHMP including an Unexpected Finds Protocol in consultation with the Registered Aboriginal Parties and Heritage NSW.

Appendix E – Recommended Instrument of Consent

The recommended consent may be viewed on the Department's website https://www.planningportal.nsw.gov.au/major-projects/project/24101