

**ENVIRONMENTAL IMPACT STATEMENT
FOR A PROPOSED RESOURCE RECOVERY FACILITY
30 LOFTUS ROAD, YENNORA**

Prepared for: Cobra Waste Solutions Pty Ltd
Department of Planning, Industry and Environment
NSW Environment Protection Authority
Cumberland City Council

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Benbow
ENVIRONMENTAL

Engineering a Sustainable Future for Our Environment

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**Submission of
environmental impact statement (EIS)**
prepared under the Environmental Planning and Assessment Act 1979 Section
78(A)

EIS prepared by

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in respect of

development application

applicant name Cobra Waste Solutions
 applicant address PO Box 53, Casula Mall
Casula 2760

land to be developed: 30 Loftus Road, Yennora
 address _____

lot no, DP/MPS, vol/foI etc Lot 8 in DP1233715
 proposed development Construction and operation of a resource recovery facility for mixed C&D
And mixed C&I waste

or
 map(s) attached

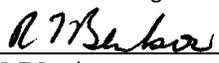
**environmental impact
statement**

an environmental impact statement (EIS) is attached

certificate

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

- it is in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2000,
- contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates, and
- the information contained in the statement is neither false nor misleading.

Signature 
 name R T Benbow
 date 03 February 2022

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Carlo Ranieri	Carlo Ranieri and Associates Pty Ltd	Project Manager Site and Process Design Site Plans
Giulio Ranieri	Style Developments	Architectural and Equipment Plans Cost Summary Report
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	Intrax Projects	Civil Services - Stormwater and Drainage Plans
Penny McCardle	McCardle Cultural Heritage	ACHAR Exemption
	Mainbrace Constructions	Fire Services Drawing & Design Statement, Hydraulic Certification & Drawings

ABBREVIATIONS

ABL	Assessment background level
ABS	Australian Bureau of Statistics
ACHAR	Aboriginal Cultural Heritage Impact Assessment Report
ADG code	Australian code for the Transport of Dangerous Goods by Road and Rail
AEP	Annual Exceedance Probability
AHD	Australian Height Datum
AMMAAP	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW
ARI	Average Recurrence Interval – the average or expected value of the period between exceedances of a given rainfall event or discharge
BCA	Building Code of Australia
BOM	Bureau of Meteorology
DA	Development Application
DCP	Development Control Plan
DECC	Department of Environment and Climate Change (now NSW EPA)
DEWHA	Department of the Environment, Water, Heritage and the Arts
DPI	Department of Primary Industry
DNR	Department of Natural Resources
DoP	Department of Planning
DPIE	Department of Planning Industry and Environment
DWE	Department of Water and Energy
EEC	Endangered Ecological Community
EES	Environment, Energy and Science Group
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EPA	Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Cmth)
EPL	Environment Protection Licence
ESD	Ecological Sustainable Development
FRL	Fire Resistance Level
GDE	Groundwater Dependent Ecosystem
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
GSW	General Solid Waste
JRPP	Joint Regional Planning Panel
LALC	Local Aboriginal Land Council
LEP	Local Environment Plan
LPG	Liquefied petroleum gas
Mbgl	Metres below ground level
NES	National Environmental Significance
NPI	National Pollutant Inventory
NPfi	Noise Policy for Industry (NSW EPA)
NRC	Natural Resources Commission
NOW	New South Wales Office of Water
NSW	New South Wales
NSW EPA	New South Wales Environment Protection Authority
NSW RNP	New South Wales Road Noise Policy
OSD	On-site detention
PM _{2.5}	Particulate matter of size 2.5 µm or less
PM ₁₀	Particulate matter of size 10 µm or less

RBL	Rating background level
RFS	Rural Fire Services
RNP	NSW EPA Road Noise Policy
ROW	Right of Way
RRF	Resource Recovery Facility
RRTF	Resource Recovery and Transfer Facility
RSD	Roller Shutter Door
RTA	Roads and Traffic Authority
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
TMP	Traffic Management Plan
TfNSW	Transport for NSW
Tpa	Tonnes per annum
TSC Act	Threatened Species Conservation Act 1995
TSP	Total suspended particulates
VENM	Virgin Excavated Natural Material
WSP	Water Sharing Plan

UNITS OF MEASUREMENT

°C	degree centigrade	(unit of temperature)
dB(A)	A-weighted decibels	(unit of noise)
dB(lin)	Linear-weighted decibels	(unit of noise)
ha	hectares	(unit of area)
g	gram	(unit of mass)
kg	kilogram	(unit of mass)
kL	kilolitre	(unit of volume)
KPa	kilopascal	(unit of pressure)
km	kilometre	(unit of length)
KT	kilo Tonnes	(unit of mass)
Mt	million tonnes	(unit of mass)
m	metre	(unit of length)
m ²	squared metre	(unit of area)
m ³	cubic meter	(unit of volume)
MVA	Mega Volt Amp	(unit of power)
ODU	odour detection unit	(unit of odour)
OU	odour unit	(unit of odour)
T	Tonne (1000 kg)	(unit of mass)
µg	microgram	(10 ⁻⁶ gm – unit of mass)
µg/m ³	microgram/cubic meter	(concentration)



EXECUTIVE SUMMARY

This Environmental Impact Statement (EIS) has been prepared to support the establishment and operation of a new proposed resource recovery facility to be located at an existing industrial premises at 30 Loftus Road, Yennora NSW. The facility would be operated by Cobra Waste Solutions Pty Ltd within the western warehouse on the site.

The proposed development seeks approval to:

- Install and operate a resource recycling facility that accepts and processes construction and demolition (C&D) and commercial and industrial (C&I) waste;
- Process a maximum of 150,000 tonnes of waste and store at any time up to 2,600 m³ of waste at the facility; and
- Operate the facility 24 hours, 7 days per week.

The existing site only requires minor modifications and there is ample room to undertake all processing activities and to store all waste within the building.

The proposed development involves the fit out of the existing building with a purpose-built resource recovery system to process C&D and C&I waste and recover a range of materials for reuse in the construction industry and civil works. The waste accepted at the site would be solid inert material such as wood, concrete, brick, aggregates, asphalt, steel, plastic, cardboard & paper and other metals. The material would be inspected at various points to ensure no contaminants are present then separated along a process line which would include equipment such as infeed hopper and shredder, conveyors, electrical magnets, waste and flip flow screens, air separators, a picking station and a crusher. Recovered materials would be stored within bunkers and bins inside the building. The process would require no water and no wastewater would be generated. Dust would be controlled using a water misting system which provides microscopic droplets that evaporate within seconds.

The application requests 24/7 operation, however, the operations would typically be undertaken over two 8-hour shifts, 6 days a week within night shift and Sundays for maintenance only. Truck movements would be restricted to between the hours of 6:00am to 6:00pm Monday to Saturday.

This EIS provides an assessment of all potential impacts of the proposed development on the existing environment and provides for appropriate measures to avoid, minimise, mitigate and/or manage these potential impacts.

A summary of the detailed assessments is included below:

STRATEGIC CONTEXT

The site is situated within an industrial zone (IN1 - General Industrial) under the Holroyd Local Environmental Plan 2013. The surrounding land use on all sides of the site is industrial with the nearest residential zone being R2 – Low Density Residential approximately 430 m south east of the site. The proposal is for a waste or resource management facility which falls under the definition of “general industry” and is permissible with consent in the IN1 zone.



The proposal constitutes State significant development under the State Environmental Planning Policy (State and Regional Development) 2011 as a “Waste and resource management facility” as it is for the purpose of resource recovery or recycling facilities and would handle more than 100,000 tonnes per year of waste.

The proposed development requires an environment protection licence (EPL) under Clauses 34 and 42 of the *Protection of the Environment Operations Act 1997* for resource recovery and waste storage at the site. Hence this proposal is an integrated development.

JUSTIFICATION

The proposed development would establish a resource recovery facility able to process C&D and C&I waste into reusable products. The proposed new plant would establish a technologically advanced resource recovery system enabling an increased rate of recovery and higher quality reusable products. The facility would also provide a means to increase recycling, and indirectly divert waste from landfill and reduce illegal dumping. In this way, the proposal supports and is consistent with a number of statutory policies including the “Waste Avoidance and Resource Recovery Act, 2001” (WARR Act), the “NSW Waste Avoidance and Resource Recovery Strategy 2014-21” and the “National Waste Policy 2018”.

The facility has been designed such that all waste processing and storage is within the enclosed building. Although not a legal requirement, the EPA are now requiring waste facilities to be enclosed. Enclosing the facility in addition to the proposed technologically advanced processing equipment and high recovery rates is testament to the implementation of best practice environmental management.

With the growing number of NSW Government Infrastructure projects located in Western Sydney and the Metropolitan area the demand for recycling facilities to deal with waste generated by the construction industry is continuing to increase. Waste generated from construction and demolition (C&D) activities historically ends up in landfill.

Cobra Waste Solutions wishes to capitalise on this need by expanding their recycling business to include a new resource recovery facility that incorporates technologically advanced systems for the processing and separation of waste into recovered materials.

SITE SUITABILITY

The justifications for selecting the subject site and for implementing the proposed development are listed as follows:

- The proposed site is available now and the lease has been signed;
- The proposed site is within industrial zoned land and is already developed for industrial use with a large building and sealed surfaces;
- Minimal site changes are required prior to commencement of activities;
- There are no existing site constraints such as bushfire, flooding, contamination, ecology or heritage;
- Surrounding land uses are existing industries with residential receptors being located at significant separation distances;



- The proposed site has ample room available to undertake all resource recovery operations and storage of waste within the existing building and for on-site car parking spaces and truck manoeuvring externally;
- The site is centrally located to accept wastes from prominent Sydney locations;
- The development is a permitted use under the Holroyd LEP and under the SEPP (infrastructure) 2007;
- The development is a beneficial use which would fulfil the principles of ecologically sustainable development and is to be encouraged;
- Transport routes are readily available; and
- The proposed development will have extensive environmental safeguards to provide assurance in regards to the expected degree of environmental impacts.

AIR QUALITY

An Air Quality Impact Assessment (AQIA) has been undertaken for the proposed development. A full copy of the AQIA is provided as Appendix 1.

The assessment determined the predicted dust and particulate matter contribution from the existing and proposed site operations for particle sizes PM_{2.5}, PM₁₀ and total suspended particulates (TSP).

The assessment does not include an assessment of odour impacts, as no odour is expected to be generated from the proposed development.

The AQIA was prepared in accordance with:

- NSW EPA “*Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*” (2016); and

A brief summary of the findings is presented below:

Dust Impact Assessment

The proposed development is expected to generate negligible dust impacts as the facility is to be enclosed and there would be no external waste storage.

The air dispersion model AERMOD was used for the prediction of off-site dust impacts associated with the air emissions from the proposed operations. One worst case scenario was included in the air dispersion modelling.

The maximum predicted impacts for annual TSP and PM₁₀ emissions comply with the *Approved Methods* criteria at all sensitive receptors.



The maximum predicted impacts for PM₁₀ and PM_{2.5} for the 24-hour period and PM_{2.5} for the annual period are predicted to exceed the *Approved Methods* for the criteria due to elevated background concentrations.

In cases of elevated background concentrations, the NSW EPA requires a demonstration that no additional exceedances of the impact assessment criteria will occur as a result of the proposed site activities. Contemporaneous addition of the predicted daily increments of PM₁₀ and PM_{2.5} with daily measured background levels for 2017 showed no additional days of exceedance.

The proposed site operations, with dust controls in place, are unlikely to cause harm to human health or the environment.

NOISE AND VIBRATION

A full Noise Impact Assessment (NIA) has been undertaken for the proposed development and is provided in Appendix 2. The noise impact assessment was undertaken in accordance with the following guidelines:

- NSW Environment Protection Authority, Noise Policy for Industry (EPA, 2017);
- Department of Environment, Climate Change and Water NSW, Road Noise Policy (DECCW, 2011);

The nearest receivers were identified and project specific noise criteria were established. The site operations were modelled using the predictive noise software, Sound Plan V7.3.

Operational noise levels are predicted to comply with the project specific criteria at all residential receivers during all time periods.

Sleep disturbance was assessed during the night time period and compliance with the criteria is achieved at all residential receivers. Compliance with the guidelines set out in the NSW Road Noise Policy was predicted at all considered receptors.

The following noise control measures are recommended:

- Restrict external vehicle movements to: 6am-6pm;
- Roller shutter doors to be closed 6pm-6am; and
- Fast acting roller shutter doors to be installed and programmed to be closed when not in use.

With the above controls in place the site is expected to comply with the project noise trigger levels at all receivers for all operational scenarios.

WATER

The proposed development would require mains water for use in the office and amenities, and for dust suppression through a water misting system. There would be no processes that require water use and no wastewater would be generated. Therefore, a Tradewaste Agreement with Sydney Water is not required.

The site is developed with existing stormwater infrastructure in place and contains a drainage (flood mitigation works) easement along the southern boundary. Existing roof water and stormwater on the northern and western hardstand areas is captured in downpipes and pits that



drain via an existing stormwater pipe to an existing swale on the adjacent property to the south. Stormwater from the southern hardstand area would be managed by establishing a new 4.6 metre wide swale along the southern boundary to be connected to the existing swale on the adjoining property which discharges to Prospect Creek. The proposed changes have been designed to Council requirements. No onsite stormwater would discharge to the Council system.

The proposed development is expected to generate negligible additional stormwater impacts. All processing operations and storage would take place within the existing building. The water misting system would provide a fine mist that evaporates within seconds and would not generate leachate or wastewater. There would be minor chemical storage on site. A risk assessment of the potential for the development to pollute stormwater was undertaken and found the risk to be low.

FLOODING

The site is subject to flood related development controls. The site is not located on flood prone land (as per flood maps reviewed in NSW Planning Portal), however portions located in the southern area of the site are within the 1% AEP and flood fringe zone.

A flood mitigation works easement exists along the southern boundary of the site. This area is to remain clear of any works, activities or storage. A stormwater management plan has been prepared that proposes treatment of this area to manage stormwater and flooding at the site.

SOIL

The proposal would involve minor soil disturbance during construction for the establishment of a swale along the southern boundary. Implementation of erosion and sediment controls would adequately manage any onsite soil excavation.

TRAFFIC AND PARKING

The proposed development would generate 168 truck movements (84 in and 84 out) per day Monday to Saturday. Truck movements would be restricted to between the hours of 6:00am to 6:00pm over 6 days a week. Skip bins would be picked up and delivered in company owned trucks that include Skip Loaders and Hooklift trucks. Waste material destined for landfill would be picked up from site by a private licensed waste contractor. The largest truck expected to access the site is a 20 metre semi trailer associated with waste to landfill. Site layout plans demonstrate there is ample room on site for trucks to manoeuvre, weigh their loads upon entry and exit, unload and/or load, wait, and enter and exit the site in a forward direction.

A total of thirty four (34) car parking spaces (including one disabled space) would be provided. This is compliant with the Cumberland Council requirements and provides sufficient parking for expected staff numbers including at shift changes.

A traffic impact assessment was undertaken by Stanbury Traffic Planning (Appendix 3) concluded that there are no traffic or parking related issues that should prevent approval of the proposed use of the site. A brief summary of findings is provided below.



- *The existing site access arrangements are sufficiently capable of accommodating the largest vehicles expected to service the site in a safe and efficient manner;*
- *Loftus Road has consistent horizontal and vertical geometry and can provide sufficient sight distance from the site driveway for exiting vehicles in accordance with AS2890.1 and AS2890.2;*
- *The proposed off-street passenger vehicle parking provision complies with the specific operational requirements of the proposed site use and the relevant requirements of CDCP 2021;*
- *One visitor bicycle parking space is recommended which will be documented once the specific product is selected at the detailed design stage of this project. It is considered that this could reasonably be managed via a condition of consent;*
- *The proposed off street heavy vehicle servicing and parking provision is capable of accommodating the specific operational requirements of the proposed site use;*
- *The internal passenger and heavy vehicle circulation arrangements are capable of providing for safe and efficient internal manoeuvring, with respect to the specific operational requirements of the use;*
- *To manage the reversing of heavy vehicles safely, it is recommended that a staff member on-site ensure that pedestrians are kept clear of reversing vehicles. Procedures for managing the safe reversing of vehicles on-site should be included in a site operational management plan;*
- *The immediately adjoining road network currently operates with a satisfactory level of service during peak periods;*
- *The proposed site has been projected to generate up to 21 peak hour vehicle trips on a weekday AM with 16 during the weekday PM peak hour to and from the subject site;*
- *The abovementioned traffic generating ability of the proposed use is consistent with a standard industrial use of the existing site infrastructure; and*
- *The adjoining road network is capable of accommodating the traffic projected to be generated by the subject development.*

WASTE MANAGEMENT

The proposed development is for a resource recovery facility that will process C&D and C&I waste. The waste accepted at the site would be solid inert material such as wood, concrete, brick, aggregates, asphalt, steel, plastic, cardboard & paper and other metals. All proposed waste processing activities would be undertaken within the existing enclosed building. Up to 90% of waste is expected to be recovered from the process and turned into reusable materials such as aggregate, paper and cardboard, plasterboard, steel, wood and copper. The remaining non-recyclable waste would be sent to landfill.

The proposed development would result in processing of 150,000 tonnes per year of waste and require on-site storage of an estimated 2,600 m³ of waste at the site. All waste storage would be within the enclosed building in storage bunkers or bins.

There would be minor waste generated by the office and amenities. All waste requiring removal from site would be managed by a private waste contractor.

Waste would be managed in accordance with relevant waste legislation and guidelines under an Environmental Management Plan which includes an Incoming Waste Procedure, as demonstrated in the Waste Management Report accompanying this EIS.



HAZARDS AND RISK

The site will store 13,000 L of diesel in a self-bunded diesel tank. A bunded refuelling area would be provided adjacent to the tank. Additionally, the site will also hold other various chemicals that are used for trucks and machinery, including degreaser, oils and lubricants. Small quantities of domestic chemicals would be stored in the office and workshop areas. All of these chemicals will be stored securely.

A preliminary risk screening of the proposed development in accordance with *State Environment Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33)* found the quantities of dangerous goods onsite are well below the threshold quantities for applying SEPP 33 and therefore a Preliminary Hazard Analysis (PHA) is not required.

In order to identify and characterise the nature of potential fire events, a series of Hazard Identification Charts have been compiled to assess any potential fire events for the proposed development. Fire risk is relatively low at this facility. The site also complies with the FR NSW 'Fire safety guideline – Fire safety in waste facilities'.

BIODIVERSITY

The site is a fully developed industrial facility that does not contain areas of biodiversity. Existing landscaping areas would remain and no vegetation removal is required as part of the development application. There are no anticipated impacts to flora and fauna as a result of the proposed operations.

A biodiversity assessment waiver was completed and demonstrates that the site will cause negligible disruption to the surrounding environment.

HERITAGE

The subject land was found not to be affected by an Interim Heritage Order under the provisions of the *Heritage Act 1977*. No Aboriginal Places or European heritage locations have been identified or uncovered on the subject site or in its vicinity. The site is also not listed as being a heritage item or containing items under the Holroyd LEP 2013.

The site is fully concreted with no vegetation removal required and does not require excavation work that will disturb the ground surface. Therefore a full Aboriginal and Cultural Heritage Assessment is not considered required.

An Aboriginal Heritage Exemption is sought.

CONSULTATION

The EIS addresses issues raised through the consultation process with local government, statutory authorities, the proponent, adjoining properties and nearest sensitive receptors. Extensive consultation was undertaken with regulatory authorities including a number of meetings and follow up emails. Topics of discussion and outcomes of these meetings are provided in detail in this EIS.



A community consultation leaflet was prepared and sent to surrounding industrial premises and residential areas was sent via post or email on 4 May 2021. These locations were based on the nearest affected industrial receivers and the nearest residential areas. No objections or issues of concern were raised.

CONCLUSIONS

The environmental assessment process has enabled the potential impacts of the proposed development to be evaluated, and control strategies to be devised in order to ensure compliance with regulatory standards.

To ensure the impacts of the proposed development are adequately managed, Cobra Waste Solutions would implement an Environmental Management Plan (EMP).

A Statement of Commitments is provided as Section 13 The Statement of Commitments summarises the commitment made by Cobra Waste Solutions to implement the environmental controls designed into the development. The size and nature of the proposed development are considered to be suited to this site and the request is made that approval be granted.

Approval is requested.

Contents

Page

EXECUTIVE SUMMARY	I
1. INTRODUCTION	1-1
1.1 Proposal Overview	1-1
1.1.1 Objectives of the Proposal	1-2
1.1.2 Staging of the Proposal	1-3
1.2 The Proponent	1-3
1.2.1 Relationship with other Industries or Facilities	1-3
1.3 Need for Development	1-3
1.4 Development Alternatives	1-3
1.4.1 Alternative Locations	1-4
1.4.2 Site Selection	1-4
1.4.3 Site Layout, Access Modes and Routes	1-4
1.4.4 Alternative Processes and Design	1-5
1.4.4.1 Materials Handling and Production Processes	1-5
1.4.5 “No project” Option	1-6
1.5 EIS Function and Structure	1-6
1.5.1 EIS Function	1-6
1.5.2 EIS Structure	1-7
2. LOCATION AND SETTINGS	2-1
2.1 Site Location	2-1
2.2 Existing Facilities	2-3
2.3 Surrounding Land Use	2-4
2.4 Local Community	2-6
2.4.1 Yennora and the Surrounding Area	2-6
2.4.2 Population Demographics	2-6
2.5 Sensitive Receivers	2-6
2.6 Site History	2-8
2.6.1 DA History	2-11
3. PLANNING FRAMEWORK	3-1
3.1 Commonwealth Controls	3-1
3.2 State Controls	3-1
3.2.1 Environmental Planning and Assessment Act and Regulation	3-1
3.2.1.1 State Significant Development	3-2
3.2.1.2 Designated Development	3-3
3.2.1.3 Integrated development	3-4
3.2.1.4 Section 4.15 (1) – Matters for Consideration	3-5
3.2.2 Protection of the Environment Operations Act, 1997	3-8
3.2.3 Biodiversity Conservation Act 2016	3-10
3.2.4 NSW Heritage Act 1977	3-10
3.2.5 State and Regional Environmental Planning Policies	3-11
3.2.5.1 Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment	3-11

3.2.5.2	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development	3-14
3.2.5.3	State Environmental Planning Policy No. 55 – Remediation of Land	3-14
3.2.5.4	State Environmental Planning Policy No. 64 – Advertising and Signage	3-14
3.2.5.5	State Environmental Planning Policy (State Significant Precincts) 2005	3-14
3.2.5.6	State Environmental Planning Policy (Infrastructure) 2007	3-14
3.2.5.7	State Environmental Planning Policy (State and Regional Development) 2011	3-15
3.3	Local Controls	3-16
3.3.1	Holroyd Local Environmental Plan 2013	3-16
3.3.1.1	Permissibility	3-17
3.3.1.2	General LEP Requirements	3-18
3.3.2	Holroyd Development Control Plan 2013	3-21
3.3.3	Draft Cumberland Local Environmental Plan	3-22
3.3.4	Draft Cumberland Development Control Plan	3-23
3.4	Regional Plans and Strategies	3-25
3.4.1	Greater Sydney Region Plan: A Metropolis of Three Cities	3-25
3.4.2	Towards Our Greater Sydney 2056: Central City District Plan	3-25
3.4.3	Future Transport Strategy 2056	3-26
4.	CONSULTATION	4-1
4.1	Stakeholder Engagement	4-1
4.1.1	Department of Planning, Industry and Environment	4-1
4.1.2	NSW Environment Protection Authority (EPA)	4-2
4.1.3	Environment, Energy and Science Group (EES)	4-2
4.1.4	Fire and Rescue NSW	4-2
4.1.5	Transport for NSW	4-3
4.1.6	Cumberland City Council	4-3
4.1.7	Heritage NSW	4-4
4.1.8	Sydney Water	4-4
4.1.9	Jemena	4-5
4.2	Community Consultation	4-5
4.3	Assessment Requirements	4-9
5.	DESCRIPTION OF PROPOSED DEVELOPMENT	5-1
5.1	Proposed Activities and Site Use	5-1
5.2	Site Layout Plans	5-1
5.3	Construction Works	5-5
5.3.1	Infrastructure Upgrades	5-5
5.4	Process Description	5-6
5.4.1	Annual Tonnage	5-9
5.4.2	Storage	5-9
5.4.3	Incoming Waste Materials	5-9
5.4.4	Equipment	5-11
5.4.4.1	Infeed Hopper with Shredder	5-11
5.4.4.2	Flip Flow Screens	5-12
5.4.4.3	Air Separators	5-12
5.4.4.4	Ferrous Magnets	5-12
5.4.4.5	Waste Screen	5-12
5.4.4.6	Water Misting System	5-12

5.4.5	Standards for Managing Construction Waste in NSW	5-13
5.5	Operational Details	5-17
5.5.1	Utility Connections	5-17
5.5.1.1	Water	5-17
5.5.1.2	Sewage and Wastewater	5-17
5.5.1.3	Electricity	5-17
5.5.1.4	Telecommunications	5-17
5.5.1.5	Gas, Petrol and Diesel	5-17
5.5.2	Hours of Operations	5-17
5.5.3	Employment	5-18
5.5.4	Traffic	5-18
5.5.5	Parking	5-19
5.6	Emissions and Waste	5-19
5.6.1	Air and Odour	5-19
5.6.1.1	Dust	5-19
5.6.1.2	Odour	5-19
5.6.1.3	Water Misting System	5-19
5.6.2	Noise and Vibration	5-20
5.6.3	Water and Wastewater	5-20
5.6.3.1	Wheel Wash Facility	5-20
5.6.3.2	Dust Suppression	5-21
5.6.3.3	Leachate	5-21
5.6.4	Land	5-21
5.6.5	Waste	5-21
5.7	Cleaner Production Actions	5-22
5.7.1	Measures to Minimise Waste	5-22
5.7.2	Proposals for Use or Recycling of By-Products	5-22
5.7.3	Air management systems	5-22
5.8	Crime Prevention Through Environmental Design (CPTED)	5-23
5.9	Site Rehabilitation	5-24
5.10	Capital Investment Value	5-24
6.	EXISTING ENVIRONMENT	6-25
6.1	Geology and Soils	6-25
6.1.1	Geological and Soil Landscapes	6-25
6.1.2	Acid Sulfate Soils	6-25
6.2	Topography	6-26
6.3	Hydrology	6-27
6.3.1	Waterways and Catchment	6-27
6.3.1.1	Water Quality and River Flow Objectives	6-30
6.3.1.2	Catchment Management Plan	6-30
6.3.2	Groundwater	6-31
6.3.3	Flooding	6-32
6.4	Heritage	6-34
6.5	Flora and Fauna	6-36
6.5.1	Environmentally Sensitive Land	6-37
6.5.2	Bushfire Prone Land	6-38
6.6	Noise Amenity	6-39
6.6.1	Nearest Sensitive Receivers	6-39

6.6.2	Existing Acoustic Environment	6-40
6.6.2.1	Measurement Locations	6-41
6.6.2.2	Measured Noise Levels	6-43
6.6.2.2.1	Long-Term Unattended Noise Monitoring Results	6-43
6.6.2.2.2	Short Term Operator Attended Noise Monitoring Results	6-45
6.6.3	Meteorological Conditions	6-45
6.6.4	Wind Effects	6-45
6.6.5	Wind Rose Plots	6-45
6.6.6	Local Wind Trends	6-46
6.7	Air Quality	6-50
6.7.1	Background Air Quality	6-50
6.8	Climate	6-51
6.8.1	Temperature	6-51
6.8.2	Rainfall	6-52
6.8.3	Wind	6-52
7.	IDENTIFICATION AND PRIORITISATION OF ISSUES	7-1
7.1	Key Issue Risk Assessment	7-2
7.1.1	Risk Criteria	7-2
7.1.1.1	Consequence Estimation	7-2
7.1.1.2	Likelihood Estimation	7-2
7.1.2	Level of Risk	7-3
7.1.3	Key Issue Risk Table	7-4
7.2	Summary of Key Issues	7-9
8.	ENVIRONMENTAL IMPACTS AND SAFEGUARDS	8-1
8.1	Air Quality	8-1
8.1.1	Odour	8-1
8.1.2	Dust Assessment Criteria	8-2
8.1.3	Dust Control Measures	8-2
8.1.4	Dispersion Model and Emission Data	8-2
8.1.5	Predicted Impacts	8-2
8.2	Noise	8-2
8.2.1	Operational Noise Impact Assessment	8-3
8.2.1.1	Project Specific Noise Levels	8-3
8.2.1.2	Predicted Impacts	8-3
8.2.1.3	Noise Control Measures	8-6
8.2.2	Road Traffic Noise Impact Assessment	8-6
8.2.3	Statement of Potential Noise Impacts	8-7
8.3	Soil and Water	8-7
8.3.1	Soil	8-7
8.3.1.1	Potential Pollutants	8-7
8.3.1.2	Potential Impacts to Soil and Land	8-8
8.3.1.2.1	Construction Works	8-8
8.3.1.2.2	Operational Works	8-8
8.3.2	Water	8-9
8.3.2.1	Water Supply and Use	8-9
8.3.2.1.1	Water Misting System	8-10
8.3.2.1.2	Wheel Wash Facility	8-11

8.3.2.2	Wastewater	8-11
8.3.2.3	Stormwater	8-11
8.3.2.3.1	Leachate	8-12
8.3.2.3.2	Flooding	8-12
8.3.2.3.3	Potential Pollutants	8-12
8.3.2.3.4	Potential Impacts to Waters	8-13
8.3.2.3.4.1	Construction Works	8-13
8.3.2.3.4.2	Operational Works	8-13
8.4	Flora and Fauna (Biodiversity)	8-16
8.5	Waste Generation and Management	8-16
8.5.1	Proposed Facility	8-16
8.5.1.1	Incoming Waste	8-17
8.5.1.2	Recovered Material	8-18
8.5.2	Maximum Processing Quantities	8-20
8.5.3	Waste Storage	8-20
8.5.3.1	Maximum Storage Capacity	8-20
8.5.3.2	On-site Waste Storage	8-20
8.5.4	Legal Requirements	8-22
8.5.4.1	EPL Application	8-22
8.5.4.2	Waste Tracking Requirements	8-22
8.5.4.3	Resource Recovery Orders and Exemptions	8-22
8.5.4.4	Standards for Managing Construction Waste in NSW	8-22
8.5.5	Waste Management	8-24
8.5.5.1	Incoming Waste Procedure	8-25
8.6	Hazards and Risks	8-25
8.6.1	Chemicals and Dangerous Goods Storage	8-25
8.6.2	Preliminary Risk Screening	8-26
8.6.3	Fire	8-28
8.6.3.1	Consultation with Fire and Rescue NSW	8-29
8.6.3.2	Fire Risk Assessment	8-29
8.6.3.2.1	Hazard Identification Charts	8-29
8.6.3.2.2	Fire Safety in Waste Facilities	8-33
8.6.3.2.3	Fire prevention and protection strategy	8-34
8.6.3.2.3.1	Ventilation	8-34
8.6.3.2.3.2	Ignition Sources	8-34
8.6.3.2.3.3	Security and Signage	8-34
8.6.3.2.3.4	Provision for Escape	8-34
8.6.3.2.3.5	Fire Detection	8-35
8.6.3.2.3.6	Fire Protection Equipment	8-35
8.6.3.2.3.7	Management Practices	8-36
8.6.3.2.4	Fire Water Run-off Containment	8-36
8.6.3.3	Assessment of Fire Threat	8-36
8.6.3.4	Bushfire Hazard	8-37
9.	SOCIAL IMPACTS AND SAFEGUARDS	9-1
9.1	Human Health	9-1
9.1.1	Generation of Dust	9-1
9.1.2	Asbestos Waste	9-1
9.1.3	Generation of Noise	9-2
9.1.4	Fire and Chemical Spill Risk	9-2

9.1.5	Employee Health and Safety	9-2
9.2	Visual Impacts	9-3
9.3	Heritage	9-3
9.4	Road, Traffic and Transport	9-4
9.4.1	Traffic and Parking Impact Assessment	9-4
9.4.1.1	Existing Transport Conditions	9-4
9.4.1.2	Truck Fleet	9-5
9.4.1.3	Truck Movements	9-5
9.4.1.3.1	Truck Scheduling and Weighbridge Operation	9-6
9.4.1.4	Operational Traffic Impacts	9-7
9.4.1.5	On-Site Parking	9-7
9.4.1.6	Site Access	9-8
9.4.1.7	Conclusions	9-8
10.	CUMULATIVE IMPACTS AND SAFEGUARDS	10-1
10.1	Air Quality	10-1
10.2	Noise and Vibration	10-1
10.3	Surface Waters	10-1
10.4	Waste Management	10-2
10.5	Hazards and Risk	10-2
10.6	Traffic and Transport	10-2
11.	ECOLOGICALLY SUSTAINABLE DEVELOPMENT	11-1
11.1	Principle of Sustainable Use	11-1
11.2	Principle of Integration	11-1
11.3	Precautionary Principle	11-1
11.4	Inter-generational and Intra-generational Equity	11-2
11.5	Conservation of Biological Diversity and Ecological Integrity	11-2
11.6	Internalisation of External Environmental Costs	11-2
11.7	ESD within the Project	11-2
12.	MITIGATION MEASURES AND MANAGEMENT	12-1
12.1	Summary of Controls and Mitigation Measures	12-1
12.2	Site Management Plans	12-4
12.2.1	Operational Plan of Management	12-4
12.2.2	Emergency Plan	12-4
12.2.3	Pollution Incident Response Management Plan	12-5
12.2.4	Environmental Management Plan	12-6
13.	STATEMENT OF COMMITMENTS	13-1
14.	LIST OF APPROVALS AND LICENCES	14-1
15.	JUSTIFICATION AND CONCLUDING REMARKS	15-1
15.1	Project Justification	15-1
15.1.1	Market Demand	15-2
15.1.2	Suitability of the Site	15-2
15.1.3	Permissibility	15-3
15.2	Concluding Remarks	15-5

Tables	Page
Table 2-1: Nearest Sensitive Receivers	2-6
Table 2-2: Site History Description	2-9
Table 2-3: Summary of Council's Development and Building Application/Consent Records	2-12
Table 3-1: Licence/Approval Requirements as Integrated Development	3-5
Table 3-2: Extract from Clause 34 of POEO Act	3-9
Table 3-3: State and Regional Environmental Planning Policies	3-11
Table 3-4: Holroyd Local Environmental Plan 2013 – Parts 4 and 5	3-18
Table 3-5: Holroyd Local Environmental Plan 2013 - Part 6	3-20
Table 3-6: Holroyd DCP Requirements	3-21
Table 3-7: Draft Cumberland DCP Requirements	3-23
Table 4-1: Distribution of Community Leaflet	4-5
Table 4-2: Planning Secretary's Environmental Assessment Requirements	4-10
Table 4-3: DPI&E & NRAR Assessment Requirements and EIS Reference	4-17
Table 4-4: EPA Assessment Requirements and EIS Reference	4-18
Table 4-5: Cumberland City Council Assessment Requirements and EIS Reference	4-38
Table 4-6: DPIE ESS Assessment Requirements and EIS Reference	4-40
Table 4-7: Sydney Water Assessment Requirements and EIS Reference	4-41
Table 4-8: Transport for NSW Assessment Requirements and EIS Reference	4-42
Table 5-1: Recovered Waste Types, Quantities and Management	5-10
Table 5-2: Compliance with Standards for managing construction waste in NSW	5-13
Table 5-3: Proposed Hours of Operations	5-18
Table 5-4: Typical Staff Numbers	5-18
Table 5-5: Compliance of the proposal with the principles of Crime Prevention Through Environmental Design	5-23
Table 6-1: Relevant Water Quality Objectives (WQOs)	6-30
Table 6-2: Relevant River Flow Objectives (RFOs)	6-30
Table 6-3: Available Data for Groundwater Bores within 500 m of the subject site.	6-31
Table 6-4: Nearest Sensitive Receivers	6-39
Table 6-5: Noise Monitoring Location	6-41
Table 6-6: Unattended Noise Monitoring Results at 95 Railway Street, Yennora dB(A)	6-44
Table 6-7: Operator Attended Noise Measurements, dB(A)	6-45
Table 6-8: Summary of 2020 Data for PM _{2.5} and PM ₁₀ from Chullora Air Quality Monitoring Station	6-50
Table 6-9: Temperature Statistics at Bankstown Airport AWS	6-51
Table 6-10: Rainfall Statistics – Bankstown Airport AWS	6-52
Table 7-1: Consequence Table	7-2
Table 7-2: Likelihood Table	7-3
Table 7-3: Level of Risk Table	7-3
Table 7-4: Key Issues Risk Assessment	7-4
Table 8-1: Project Noise Trigger Levels (PNTL) for Operational Activities, dB(A)	8-3
Table 8-2: Predicted Noise Levels – Operational Activities dB(A)	8-5
Table 8-3: Predicted Levels for Road Traffic Noise	8-6
Table 8-4: Potential pollutants and pathways	8-8
Table 8-5: Potential Risks to Soil and Mitigation Measures	8-9

Table 8-6: Potential pollutants and pathways	8-13
Table 8-7: Potential Risks to Water and Mitigation Measures	8-15
Table 8-8: Incoming Waste Types, Quantities and Management	8-18
Table 8-9: Recovered Waste Types, Quantities and Management	8-19
Table 8-10: Waste Storage Details	8-21
Table 8-11: Chemical Storage	8-25
Table 8-12: SEPP 33 Preliminary Risk Screening	8-27
Table 8-13: Event/Consequence Analysis Table	8-31
Table 8-14: Fire Safety in Waste Facilities - Requirements	8-33
Table 9-1: Summary of Projected Traffic Generation (Source: Stanbury Traffic Planning)	9-6
Table 9-2: Car Parking Requirements	9-7
Table 11-1: Sustainability Indicators	11-4
Table 12-1: Summary of Potential Impacts and Mitigation Measures	12-1
Table 14-1: Required licences, approvals and permits	14-1

Figures

Page

Figure 2-1: Site Location (Regional Context)	2-1
Figure 2-2: Site Location (Local Context)	2-2
Figure 2-3: Site Location (Aerial View)	2-3
Figure 2-4: Surrounding Land Use Zoning	2-5
Figure 2-5: Nearest Sensitive Receivers	2-8
Figure 4-1: Map showing approximate distribution of community leaflet	4-9
Figure 5-1: Proposed Site Plan and Floor Plan	5-3
Figure 5-2: Proposed Floor Plan and Equipment Layout	5-4
Figure 5-3: Process flow diagram	5-8
Figure 5-4: Visual Representation of on-site management of waste	5-16
Figure 6-1: ASS Map	6-26
Figure 6-2: Local Topography of Site with a Factor of 10 Vertical Exaggeration	6-27
Figure 6-3: Nearest Waterways Map	6-28
Figure 6-4: Georges River Catchment	6-29
Figure 6-5: Groundwater Bores Within 500 m of the Proposed Development	6-31
Figure 6-6: Cumberland City Council Issued Flood Map for Loftus Road	6-33
Figure 6-7: Heritage Map	6-35
Figure 6-8: Terrestrial Biodiversity Map	6-36
Figure 6-9: Environmentally Sensitive Land Map	6-37
Figure 6-10: Bushfire Prone Land Map	6-38
Figure 6-11: Nearest Sensitive Receivers	6-40
Figure 6-12: Logger Location	6-42
Figure 6-13: Wind Rose Plots – BoM Bankstown Airport AWS – 2019 – Day time	6-47
Figure 6-14: Wind Rose Plots – BoM Bankstown Airport AWS – 2019 – Evening time	6-48
Figure 6-15: Wind Rose Plots – BoM Bankstown Airport AWS – 2019 – Night time	6-49
Figure 6-16: Wind Rose Plots for the Referenced Meteorological Station – Bureau of Meteorology Bankstown Airport AWS (2019)	6-54
Figure 8-1: Site Water Balance	8-10
Figure 8-2: Example of unobstructed access around internal stockpiles	8-34
Figure 9-1: Existing view of site from Loftus Road	9-3

Appendices

- EIS Appendix 1: Air Quality Impact Assessment
- EIS Appendix 2: Noise Impact Assessment
- EIS Appendix 3: Traffic Impact Assessment
- EIS Appendix 4: Architectural Plans
- EIS Appendix 5: Operational Management Plan
- EIS Appendix 6: Stormwater Assessment Report
- EIS Appendix 7: Waste Management Report
- EIS Appendix 8: Stormwater Management Drawings
- EIS Appendix 9: ACHAR Exemption Letter
- EIS Appendix 10: BDAR Waiver
- EIS Appendix 11: Quantity Surveyor's Report

Attachments

- EIS Attachment 1: SEARs
- EIS Attachment 2: Consultation Written Responses
- EIS Attachment 3: Community Consultation Leaflet
- EIS Attachment 4: Fire Services Upgrade Documentation
- EIS Attachment 5: Cumberland City Council Flood Advice





1. INTRODUCTION

Benbow Environmental has been engaged by Cobra Waste Solutions Pty Ltd ('the proponent') for the preparation of an Environmental Impact Statement (EIS) for the proposed resource recovery facility to be located at 30 Loftus Road, Yennora.

Cobra Waste Solutions Pty Ltd proposes to establish a resource recovery facility in the western warehouse at 30 Loftus Road, Yennora. The facility would receive, handle and process Construction and Demolition (C&D) and Commercial and Industrial (C&I) waste. The amount of waste to be received and processed is estimated to be up to 150,000 tonnes per year. Based on preliminary plans, the proposed maximum storage capacity for waste at the site at any one time is expected to be 2,600 m³.

The proposed facility would be installed within an existing industrial building on land within the established industrial area of Yennora. Ample room is available to process and store all waste within the building.

The environmental assessment process for State Significant Development requires that an EIS be prepared that satisfies the requirements in Schedule 2 of the Environmental Planning and Assessment Regulation 2000.

The EIS addresses the requirements of the Department of Planning, Industry and Environment (DPIE), Cumberland City Council (Council), the NSW Environment Protection Authority (EPA), Fire and Rescue NSW (FRNSW), Transport for NSW (TfNSW) and NSW Environment, Energy and Science (EES).

1.1 PROPOSAL OVERVIEW

The proposal involves the fit out of an existing 4,500 m² building to house the resource recovery facility and use of the existing access driveways and concrete hardstand areas on the site for car parking, truck manoeuvring and empty bin storage. The existing offices would be used and two weighbridges would be installed on the access driveway from Loftus Road. Existing landscaped areas would be maintained and no tree removal is required.

The facility would operate 24 hours 7 days a week and accept up to 150,000 tonnes per year of C&D and C&I waste mainly from the local and Sydney metropolitan area. This waste would be separated to generate a range of materials mainly for use in the construction industry and civil works. Due to the quantity of waste to be processed and stored, the facility will require an Environment Protection Licence.

The proposed facility is ideally located, being central to Sydney CBD as well as western suburbs based infrastructure and construction projects that generate general C&D and C&I wastes. The proposal would generate 50 new full time employment positions.

The waste accepted would consist of C&D and C&I waste, classified as "General Solid Waste (Non-putrescible)" under the *NSW Waste Classification Guidelines*. The recyclable material accepted at the facility would be made up of:



Construction & Demolition (C&D)	Commercial & Industrial (C&I)
<ul style="list-style-type: none"> ■ Wood ■ Gyprock – plaster board ■ Concrete ■ Brick ■ Aggregates ■ Asphalt ■ Steel ■ Copper electrical wire & cable 	<ul style="list-style-type: none"> ■ Cardboard ■ Paper ■ Plastic ■ Steel ■ Aluminium ■ Wood

The plant will be designed to process 150,000 tonnes of C&D and C&I waste materials within the existing enclosed building that has been collected from various businesses across the local and metropolitan Sydney areas. Resource recovery activities would include the following:

1. The incoming material area will allow for initial inspection and separation of the material using 15 to 20 tonnes excavators.
2. Infeed hoppers at the start of the system that allows C&D and C&I waste to be processed separately.
3. Conveyor system with electrical magnets at strategic locations for the removal of steel.
4. Waste “finger” screens and Vibrating “flip-flow” screens to separate small heavy fraction from large light fractions at various points along the process.
5. An enclosed hand picking station to sort various recyclable materials such as cardboard, wood, plastic and similar materials.
6. Two air separators known as density separators
7. Structural steel walled storage bunkers and bins along the processing system that collects recovered materials at various points.
8. Transfer of certain resource recovered materials to larger structural steel walled storage bunkers within the building using rubber wheeled front-end loaders.
9. Designated areas within the building for loading and unloading of waste and recovered materials into trucks.

1.1.1 Objectives of the Proposal

Specifically, the objectives of the proposal include:

- Assist the NSW Government to meet its future targets to divert waste from landfill and increase recycling under the NSW Waste Avoidance and Resource Recovery Strategy 2014-21;
- To increase the amount and rate of recycling and resource recovery which is not currently being applied to the material collected by others;
- To continue to grow and improve the recovery and recycling efforts in the Cumberland City Council areas;
- Service the local community with solid waste recycling activities;
- Provide a long-term sustainable recycling service and facility;
- Provide local employment opportunities within a safe working environment;
- Develop a process to increase recycling rates and create a resource recovery facility that the community can be proud of; and
- Enable the ongoing economic sustainability of the resource recovery and recycling industry in NSW.



1.1.2 Staging of the Proposal

The project will be undertaken in one stage.

1.2 THE PROPONENT

Cobra Waste Solutions is a family owned waste management business recently established in 2020, with parent company “The Cobra Group” operating a waste transfer station located in St Marys, Western Sydney. The company offers recycling and waste services across the Sydney region including; collection, processing, separation, recycling and disposal, with the St Marys facility having served the community since 2018.

Cobra Waste Solutions has a dedicated team that manage, operate and facilitate services across their Skip Bin and Recycling Centre divisions and proudly service thousands of projects every year. With a customer-centric approach, the customer first philosophy enables Cobra Waste Solutions to deliver efficient, safe and reliable service, along with competitive pricing and environmentally conscious waste solutions.

1.2.1 Relationship with other Industries or Facilities

Cobra Waste Solutions have established relationships with industry members and various companies within the construction industry across Sydney and aim to provide an additional facility in a more central location for these businesses to take their wastes. This is the underlying reason for establishing the business due to a large percentage of construction and demolition waste still going to landfill that can potentially be recovered at a greater percentage. A highly experienced management team would be engaged to operate the facility.

The proponent is committed to a “ZERO HARM” approach in their business. This approach employs safety and sustainability practices to create awareness and build strong relationships with their various stakeholders.

1.3 NEED FOR DEVELOPMENT

Yennora is a suburb centrally located in Sydney. This suburb provides a centralised location for construction and infrastructure projects within the city and surrounds to send various waste types generated to be processed into reusable products. Development of this facility would also provide much needed unskilled labour jobs for the local community during and following the COVID-19 pandemic.

1.4 DEVELOPMENT ALTERNATIVES

Alternatives to the proposed development and design were continually considered during the initial concept stages of the project. This resulted in the development of a final design for the resource recovery facility that has been put forward in this development application.



1.4.1 Alternative Locations

A number of alternative sites were considered within several suburbs of Sydney over a number of years. The final decision on site selection was made as described in the following section.

1.4.2 Site Selection

The site has been selected for the resource recovery facility for the following reasons:

- The proposed site is available for lease now;
- The proposed site is within industrial zoned land and is already developed for industrial use and contains a large building and sealed surfaces;
- Surrounding land uses are existing industries with residential receptors being located at significant separation distances;
- The proposed site has ample room available to undertake all resource recovery operations and storage of waste within the existing building and to provide on-site car parking spaces and truck manoeuvring;
- The site is centrally located to accept wastes from prominent Sydney locations;
- The development is a permitted use under the Holroyd LEP;
- The development is a beneficial use which would fulfil the principles of ecologically sustainable development and is to be encouraged; and
- Transport routes are readily available.

1.4.3 Site Layout, Access Modes and Routes

The existing site is an established industrial development. The existing warehouse building has ample room for installation of the process line and storage bunkers for the storage of incoming and processed waste. Existing offices at the front of the building have sufficient space for the potential 50 employees to be engaged at the facility. The building is shared and has a common wall. Two new roller doors will be needed in the back (southern) wall of the building to provide access for vehicles dropping off and picking up materials. Vehicles would access the development directly from Loftus Road via sealed driveways. Two weighbridges would be installed along the western driveway to allow for vehicles to be weighed upon receipt and dispatch of waste loads. The trucks would then drive to the back area of the site where they can enter the building to unload or pick up waste. There will be separate entrances for the drop off and pick up of waste. The storage bunkers for processed materials are proposed to be located along the western side of the building where the roof is lower and a roller access door can be provided for trucks to enter to pick up waste. An area for the feed stockpile would be established on the eastern side of the building where a roller door will provide access for trucks delivering waste materials. The feeder and start point of the process will be located in this area.

The rear hardstand area has space for on-site car parking, empty skip bin storage and room for trucks to manoeuvre into and out of the building. This rear area has been designed such that the



flood easement is not impeded. A gate will be provided between this hardstand area and the neighbouring property (on the same lot) to the east. This will allow adequate space for emergency vehicles to drive into and around the site.

1.4.4 Alternative Processes and Design

A concept plan for the design of the process line was submitted with the Scoping Report. Alternative designs and methods were considered and the system and site layout were modified to incorporate good environmental design based on outcomes of environmental assessments undertaken as part of the EIS and provisions of planning instruments. The proponent worked with suppliers of resource recovery processing equipment in order to select components to achieve the highest possible recovery rate with particular consideration given to noise, air emissions and energy use.

1.4.4.1 Materials Handling and Production Processes

Choosing to undertake the processing and material storage within a building significantly reduces the potential for dust and noise impacts. From the outset, based on experience of similar sites, it had been decided that all material storage and process equipment were to be housed within an enclosed facility. This was a requirement during the site selection process and limited chosen sites to those with existing buildings of sufficient size to house a process line and material storage bunkers.

Alternatives to the simple methods of materials handling and production processes using mobile plant and equipment were considered necessary and investigations into a permanent waste sorting plant were undertaken. This type of plant would also allow for a significant improvement in resource recovery rates. Although various options are available, the preferred method chosen is a Resource Recovery and Transfer Facility (RRTF) with the following components:

- Infeed hopper (feeder)
- Conveyor system with an electrical magnets at various points for the removal of steel.
- Waste screen to separate small heavy fraction from large light fractions.
- Picking station to sorting various recyclable materials, cardboard, wood, plastic, etc.
- Three flip flow screens for further separation
- Air Separation
- Crusher for larger materials

Operational Management

The proposal is designed to allow maximum recovery of recyclables from the C&D and C&I materials received. The materials will be sorted through the plant in separate runs, the C&I and C&D will not be mixed, which will ensure maximum recovery of recyclables.

Waste management is assessed in Section 8.5. Alternatives to the waste management process are considered in the previous section. Storage of waste was determined from the project inception to be within the building in designated material storage bays, with incoming mixed waste being within a designated stockpile inside the building adjacent to the infeed hopper to minimise transfer activities.



The development has also been designed so that no wastewater is generated. As water is not required in the primary processes, dust suppression via water sprays that provide a fine mist and for office use. A wheel wash is not required. A water supply is also required for firefighting purposes should the need arise. Water sourced from the mains would be used as the site is currently connected to mains supply.

Impact Mitigation Measures

As part of the design of the development, impact mitigation measures were taken into consideration and best practice techniques were applied. This included the decision to select an enclosed facility within an established industrial building and install a misting spray system to suppress dust. Sprayers would be focussed on dust emission points along the process line and overhead on the material storage bays. Front end loaders would also have misting sprays attached. No external stockpiling or storage of waste or materials would significantly reduce dust generation from the facility. These mitigation measures are considered best practice for a waste processing facility in terms of dust management.

The following noise control measures were recommended:

- Restrict external vehicle movements to: 6am-6pm;
- Roller shutter doors to be closed 6pm-6am; and
- Fast acting roller shutter doors to be installed and programmed to be closed when not in use.

With the above controls in place the site is expected to comply with the project noise trigger levels at all receivers for all operational scenarios.

Energy Sources

The site is connected to the electricity network. A self-bunded 13,000 Litre diesel tank would be provided on site for refuelling of on-site vehicles.

1.4.5 “No project” Option

Existing resource recovery and waste facilities in the area do not currently have the capacity to provide for the additional waste load that has been created by the ban of the export of waste. If this proposed development does not go ahead, then waste from the projects may end up collected by unauthorised illegal waste collectors, while some may end up in landfill. The “No Project” option is therefore not relevant for clear reasons and further discussion is not warranted.

1.5 EIS FUNCTION AND STRUCTURE

1.5.1 EIS Function

The EIS report has two main functions. Firstly, the EIS is required to document the existing built and natural environment and assess all potential impacts that the proposal may have on various environmental and social aspects. Based on the impacts’ assessment, the EIS discusses the management and control measures required by the proposed development to mitigate negative impacts and to achieve compliance with any criteria that applies to the proposal or site.



Secondly, the other function of the EIS is to provide all necessary information needed by the consent authority, the community, the various government authorities and the applicant to make informed decisions in relation to the proposed development, including its approval.

1.5.2 EIS Structure

The EIS is organised into the following three main sections:

- **Executive Summary**
This summarises the proposed development, justification and the environmental assessment of the proposal.
- **Main Contents of the EIS**
The main contents of the EIS describe the proposed development in detail, including the location and settings, the planning framework, the process description and other operational details. Then, the existing environment and the identification of issues are presented, followed by assessments of the potential environmental and social impacts. For each issue, safeguards and mitigation measures are addressed. The need and justification for the project are also included, together with a statement of commitments prepared for the proponent.
- **Appendices and Attachments**
The Appendices contain the site plans and technical support documents, the Attachments include the requirements of the Secretary's Environmental Assessment Requirements (SEARs) and other supporting documentation.

2. LOCATION AND SETTINGS

2.1 SITE LOCATION

The proposed development is to be located at 30 Loftus Road, Yennora NSW 2161 (legally described as Lot 8 DP 1233715).

Figure 2-1 displays the location of the site in a regional context and Figure 2-2 shows the site location in a local context. Additionally, Figure 2-3 displays an aerial view of the site and development area.

Figure 2-1: Site Location (Regional Context)



Figure 2-2: Site Location (Local Context)



Figure 2-3: Site Location (Aerial View)



2.2 EXISTING FACILITIES

The subject site is located within a developed industrial area of Yennora and is surrounded in all directions by existing industrial and commercial facilities. The site contains two warehouse buildings separated by a common wall. The proposed facility will occupy the western warehouse. The eastern warehouse is currently leased by a separate company and is not included in the proposed development.

The development includes the western warehouse and the surrounding outdoor area and will occupy approximately 12,112 m². The warehouse is a COLORBOND® metal clad building containing two (2) storey offices and two (2) roller door entrances at the front of the building facing Loftus Road. The building has a floor area of 4,142 m² and an office area of 419 m². There are two (2) roller door access points at the back of the building and the top section of the back wall is polycarb wall cladding, and with sections of polycarb panelling on the roof. This provides natural lighting inside the warehouse. Two roller access doors are located on the western side of the building.



The building has a large open space inside with a workshop area. There is direct access to the office and amenities.

The site fronts Loftus Road and has an existing sealed driveway access into the site. The remainder of the site is sealed concrete hardstand, with landscaped areas along the frontage to Loftus Road and along the western boundary.

2.3 SURROUNDING LAND USE

Adjacent to the subject site in the eastern warehouse is currently leased by Porter Equipment Sydney, an industrial equipment supplier, east of that is XL Precast, a precast concrete and building materials supplier. West of the site is DB Schenker and to the north is Trak Logistics, both logistics services.

Schools in the surrounding area of the site include Yennora Public School, 505 m south west and Fairfield High School, 750 m west-south-west, as well as Fairfield Public School and Guildford Public School slightly further away. Sporting fields are associated with the schools but the closest park to the site is Fairfield Road Park, 880 m west. The nearest childcare centre is just over 1 km east located on Junction Street – Mini Masterminds Guildford, also in the vicinity is Bright Beginning Learning Centre – Old Guildford. The nearest aged care facility is St Vincent’s Care Services Yennora – Rosary Village, located at Tara Close 730 m south of the site.

The closest residential suburbs to Yennora are Old Guildford to the east, Fairfield East to the south, Fairfield Heights to the west and Guildford West to the north.

As per Holroyd LEP 2013, the current land zoning for the site is IN1 – General Industrial.

Surrounding land zoning on all sides of the site is IN1 – General Industrial. The nearest residential zone (R2 – Low Density Residential) is approximately 430 m south-east of the site perimeter.

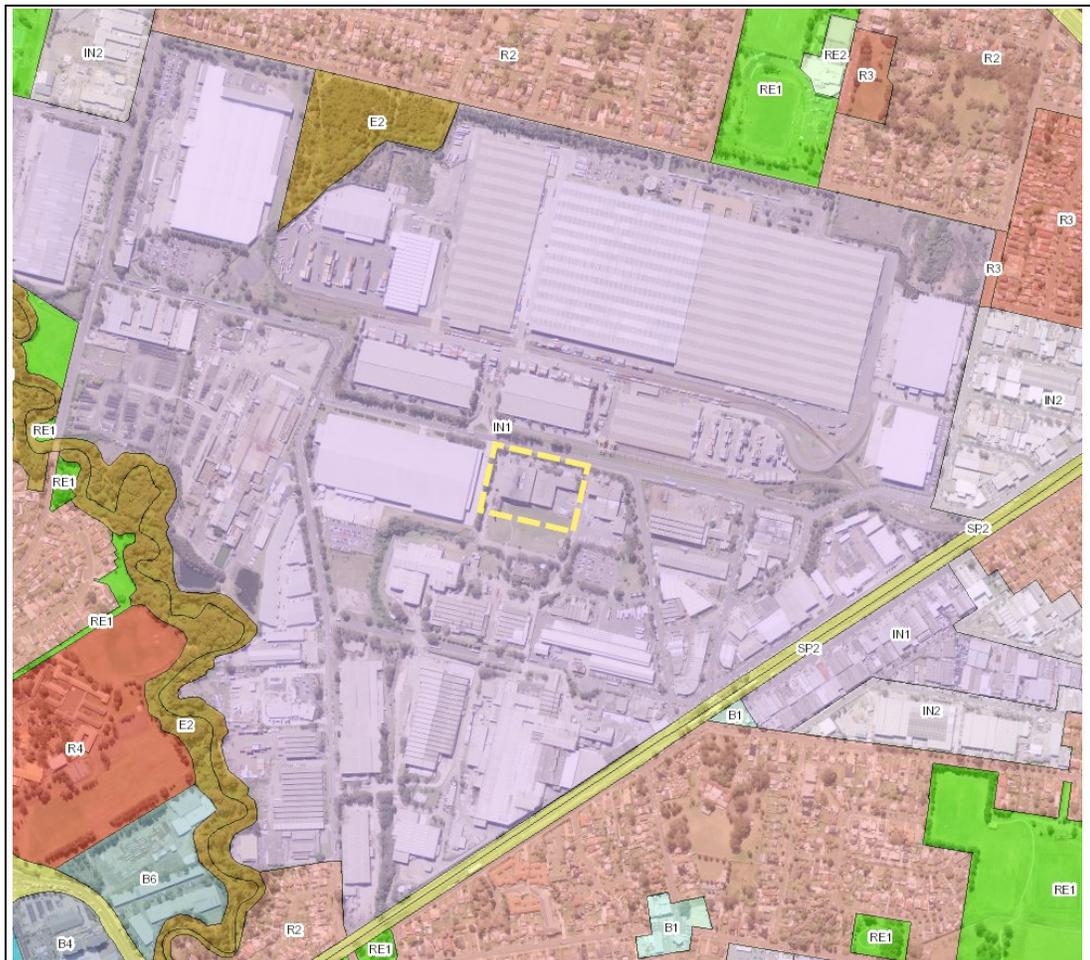
Approximately 660 m east are areas of IN2 – Light Industrial and beyond the IN1 zones to the north are R2 – Low Density Residential (615 m), RE1 – Public Recreation (620 m) and E2 – Environmental Conservation zones (1.6 km). 570 m west of the IN1 zone is Prospect Creek (E2 – Environmental Conservation) and beyond that is an area of R2 – Low Density Residential, RE1 – Public Recreation and R4 – High Density Residential zones.

Special Infrastructure SP2 (T5 – Leppington railway line, Yennora train station) is located 390 m south-east of the site and The Horsley Drive is approximately 1 km south-west of the site. Other notable roads include Military Road, 640 m east of the site and the A28 2.5 km WNW. The closest Motorway is the M4, 4.9 km north.

There are no waterbodies onsite and the nearest watercourse, Prospect Creek, part of the George’s River Catchment, is situated approximately 660 m west.

Surrounding land use zoning is displayed in Figure 2-4.

Figure 2-4: Surrounding Land Use Zoning



Source: NSW Planning Portal 2020

LEGEND:

- | | |
|---|---|
|  Subject Site |  RE1 - Public Recreation |
|  B1 - Neighbourhood Centre |  RE2 - Private Recreation |
|  B2 - Local Centre |  RU1 - Primary Production |
|  B3 - Commercial Core |  RU2 - Rural Landscape |
|  B4 - Mixed Use |  RU3 - Forestry |
|  B5 - Business Development |  RU4 - Primary Production Small Lots |
|  B6 - Enterprise Corridor |  RU5 - Village |
|  B7 - Business Park |  RU6 - Transition |
|  B8 - Metropolitan Centre |  SP1 - Special Activities |
|  E1 - National Parks and Nature Reserves |  SP2 - Infrastructure |
|  E2 - Environmental Conservation |  SP3 - Tourist |
|  E3 - Environmental Management |  W1 - Natural Waterways |
|  E4 - Environmental Living |  W2 - Recreational Waterways |
|  IN1 - General Industrial |  W3 - Working Waterways |
|  IN2 - Light Industrial | |
|  IN3 - Heavy Industrial | |
|  IN4 - Working Waterfront | |
|  R1 - General Residential | |
|  R2 - Low Density Residential | |
|  R3 - Medium Density Residential | |
|  R4 - High Density Residential | |
|  R5 - Large Lot Residential | |





2.4 LOCAL COMMUNITY

2.4.1 Yennora and the Surrounding Area

The suburb of Yennora is located approximately 22 km west of Sydney's Central Business District. Surrounding suburbs include Guildford West (north), Guildford (north east), Old Guildford (east), Fairfield East (south), Fairfield (west) and Smithfield (north west). Yennora is mainly made up of industrial areas, with some low density residential, public recreation and Prospect Creek. Prospect Reservoir is located 6.9 km north west. The T5 – Leppington railway line runs through Yennora and has its own train station.

2.4.2 Population Demographics

The Australian Bureau of Statistics (ABS) conducts a national census every 4 years. Data presented below has been sourced from the last census survey conducted in 2016.

At the time of the 2016 census, the population within the suburb of Yennora consisted of 1,615 people, of which 50% were males and 50% female. Of the total persons residing in Yennora, 462 people reported as being employed, of which approximately 51% worked full-time and 30% part-time. The largest occupation representation is technicians and trades 19.1%, followed by machinery operators and drivers 16.3%, labourers 16.1%, clerical and administrative workers 11.6%, professionals 11.1%, community and personal service workers 10.8%, sales workers 7.8% and managers 5.5% (ABS 2016).

2.5 SENSITIVE RECEIVERS

Residential areas are located approximately 750 m to the west in the suburb of Fairfield, 430 m to the south east along Railway Street, Yennora and 590 m north along Dennistoun Avenue in Guildford West.

Yennora Primary School is over 500 metres to the south east. Fairfield High School is over 700 m south west and Fairfield Public School further south west. The nearest receivers are described in Table 2-1 and shown in Figure 2-5.

The closest industrial receivers are XL Group (east), DB Schenker (west) and Cope Sensitive Freight Warehouse (north) of the site.

Table 2-1: Nearest Sensitive Receivers

Receiver ID	Street Address	Lot & DP	Distance from Site (m)	Direction from Site	Type of Receiver
R1	2A Ellis Parade, Yennora	1 DP 553522	520	SE	Residential
R2	45 Railway Street, Yennora	3 DP 574732	775	E	Residential
R3	66 Byron Road, Guildford	2 DP 975284	875	NE	Residential
R4	58 Tamplin Road, Guildford	7 DP 31391	775	NNE	Residential



Table 2-1: Nearest Sensitive Receivers

Receiver ID	Street Address	Lot & DP	Distance from Site (m)	Direction from Site	Type of Receiver
R5	45 Dennistoun Avenue, Guildford West	118 DP 10981	76	NNW	Residential
R6	89 Dennistoun Avenue, Guildford West	50 DP 39199	940	NW	Residential
R7	28 Ace Avenue, Fairfield	30 DP 539236	850	WSW	Residential
R8	17 Pine Road, Fairfield	39 DP 13605	800	SW	Residential
R9	104 Railway Street, Yennora	5 DP 812983	630	S	Residential
R10	1-9 Orchardleigh Street, Yennora	1 DP 447926	505	SW	School
R11	16 Junction Street, Old Guildford	1 DP 509537	1,005	E	Childcare Centre
R12	405 The Horsley Drive, Fairfield	1 DP 1063605	750	WSW	School
R13	198 Fairfield Rd, Yennora NSW 2161 (Fairfield Road Park)	23 DP 610787	880	E	Active Recreation
R14	30 A Loftus Road, Yennora	9 DP 1233715	Adjacent	E	Industrial
R15	38 Pine Road, Yennora	200 DP 105758	Adjacent	W	Industrial
R16	14-54 Dennistoun Avenue, Yennora	21 DP 1171076	Adjacent	N	Industrial
R17	7 Kiora Crescent Yennora	7 DP1233715	Adjacent	S	Industrial

Figure 2-5: Nearest Sensitive Receivers



2.6 SITE HISTORY

The objective of the site history review is to ensure that there are no gaps in the information obtained which is relied upon to document the activities conducted at the site.

A review of the site history was carried out and comprised the following:

- Review of current and historical land title search;
- Review of historical aerial photographs;
- Review of NSW EPA records;
- Review of Cumberland City Council records including DA history; and
- Review of Section 10.7 planning certificate.

Historical aerial photographs indicate the site has been used for industrial purposes since the 1950's. Prior to this, the site was agricultural land. Until subdivision of the land was approved in 2017, the proposed development site formed part of a larger site.



In addition to the above sources, a Site Audit Report undertaken by Enviroview Pty Ltd in 2016 was reviewed. The audit report provided additional information relating to previous contaminating activities, status and any remedial actions performed across the greater Alcoa site (which encompasses the subject site).

Table 2-2 summarises the site history obtained from the above sources and the 2016 site audit report. Emboldened entries involve development and changes to the subject site, as well as contamination/remedial actions that relate to the environmental health of the entire site. Where possible, the subject site is identified and site-specific information described.

Table 2-2: Site History Description

Year	Historical Information
1943	Undeveloped, vegetated land. Small, unsealed tracks are visible on the site. Nearby properties to the south being used for agricultural activities.
1947	No changes to the site or surrounds.
1952	Austral Bronze Company Pty Ltd ownership until 1959. Development of buildings, structures and internal roadways visible within the greater site (confined to the southern portion of the lot). Subject site remains unchanged.
1961	Southwestern portion of the site previously owned by Australian Gas Light Company transferred to Comalco Products Pty Ltd on 31 August 1961.
1965	Vegetation has been removed across the site and a cleared track traverses the site east-west. Nearby lots have been cleared and developed, with a number of warehouse and factory structures now visible.
1975	Site and surrounds have been cleared, no vegetation remains. Warehouse structures have been erected on adjacent lot west of the site. Large developments and warehouses are visible in all directions from the site.
1978	No changes to the subject site. Minor additions and construction taking place on the greater site and surrounding area.
1979	Comalco purchased the land at the corner of Pine and Loftus Street from Nylex Corporation. Humes Plastics held a five year lease with Nylex for part of the building and land. Remelt facilities given approval to convert from oil to natural gas firing. Additional scrap storage building construction started.
1982	Development approval granted to Comalco for the erection of a water tank storage structure and pipe service bridge. Approval to erect and operate an aluminium remelt plant initially incorporating two melting furnaces and one holding furnace.
1983	North remelt operation commenced.
1984	Subject site fully cleared and warehouse structures are now visible. All surrounding areas are fully developed with warehouse structures and internal roadways.



Table 2-2: Site History Description

Year	Historical Information
1985	Development approval granted to Comalco for the installation of a chlorine bulk storage and reticulation system and the erection of a building for storage of chlorine gas. Development approval for the erection of Stage II of the Yennora North remelt facility.
1986	Subject site and greater site area fully developed with numerous warehouse facilities, carparking areas and internal roadways.
1991	Approval for factory extensions comprising building works enclosing a new replacement aluminium ingot milling machine. No changes to the subject site. Minor additions and construction taking place on the greater site and surrounding area.
1995	CH2M HILL undertook Phase I and Phase II site assessments across entire site (including Area 3 – the subject site area). Minor concentrations of hydrocarbons present in soil and groundwater. BTEX and PAHs present in localised hotspots. Recommendations were for further investigation for site characterisation; further investigations were not undertaken by CH2M HILL.
1996	Alcoa Rolled Products Pty Ltd leases the site from Comalco.
1998	No changes to the subject site. Minor additions and construction taking place on the greater site and surrounding area.
2005	Phase II site assessment across entire site (including Area 3 – the subject site area) by URS. Hydrocarbons and some heavy metals above adopted criteria. LNAPL plume identified in Area 3. Recommendations for a RAP were made, however these were not implemented.
2006	Alcoa purchase the property from Comalco.
2006	Phase II ESA of Area 3 (which includes the subject building) undertaken by URS. Soil sampling undertaken within Warehouse B and groundwater monitoring well installed east of the building.
2007	A previously vacant portion of the site in the south-west has processing equipment installed and vehicle turning circles are evident in the lot.
2010	Alcoa notifies Area 3 (which includes the subject building) under S60 (Duty to report contamination) of the Contaminated Land Management Act 1997.
2011	Preparation of updated Groundwater Management Plan subject site undertaken by ERM.
2013	ERM complete an Environmental Due Diligence Assessment of Area 3 (which includes the subject building).
2014	ERM conduct a Phase 2 Environmental Site Assessment of the subject site. Soil sampling and groundwater monitoring event (GME) was undertaken. Soil vapour samples were also collected; BTEX, TPH and VOCs (PCE and TCE) were detected in Area 3 (which includes the subject site). ERM made recommendations for a RAP.
2014	Alcoa ceased operations on site on 18 December 2014. Subject site appears unchanged, adjacent lots appear unchanged.



Table 2-2: Site History Description

Year	Historical Information
2015	Notification to NSW EPA of commencement of Statutory Site Audit number: 0301-1502-1 (Area 3) which includes the subject building.
2015	Draft Health and Environmental Risk Assessment (HERA) undertaken by ERM in portion of the property where the subject building is located.
2015	<p>Revised LNAPL CSM (August), HERAs (September) and preliminary RAP for Area 3. Sample collection for soil (including vapour), sediments, surface water, groundwater was undertaken. It concluded the following:</p> <ul style="list-style-type: none"> • Groundwater: Minor traces of TRH and metals detected. Saline groundwater was noted in Area 3. • Soils: Minor TRH and chlorinated hydrocarbon presence (the result of a minor leak or spill). Minor metals detected, no exceedances of criteria. • Soil vapour: TCE and DCE detected in passive vapour samples across the site. • Surface waters: Minor traces of aluminium. Elevated EC and potential salinity reported on site. • Sediments: TRH and heavy metals in samples from stormwater pits and Stimpsons Creek. Potential salinity in sediments.
2016	External processing equipment in the south-western corner of the site has been removed. Rear yard has been cleared and is unsealed.
2017	New roof has been installed on the warehouse. Rear yard has been graded and is empty.
2021	Rear yard has been sealed with hardstand material. Shipping containers and vehicles are visible in the rear yard.

2.6.1 DA History

Limited information was acquired from Cumberland City Council regarding past approved development applications at the site. Site specific DA history acquired from Cumberland City Council is listed in Table 2-3. The DA history includes developments within the subject site area and the entire greater site area previously occupied by Alcoa.



Table 2-3: Summary of Council's Development and Building Application/Consent Records

Year	DA Number	Description
1967	67/119	Erection of a 12,000 sq. ft. factory with amenities block and sub-station to be used as a rolling mill.
1968	68/42	Erection of a factory and office block for the manufacture of aluminium cans for the beer and beverage trade.
1981	81/254	Construction of an aluminium remelting facility.
1982	82/34	First floor additions to an existing office/amenities block.
2002	2001/684	Use of existing industrial premises for general transport and container storage (REFUSED)
2015	2015/5354/1	Demolition.
2015	15/1824/01	Demolition of industrial buildings on the site.
2016	16/36/01	Demolition of structure within Lot 9.
2016	2015/554/1	Demolition of 16 disused structures on the former Alcoa Site.
2016	2015/582/1	Staged Torrens title subdivision into 9 industrial lots.
2017	2017/12/1 & 27/12/2	Stage A flood mitigation works – creation of new 'road hump' on former Nelson Road.
2017	2016/532/1	Demolition and civil works.
2020	DA2020/0144	Installation of freestanding property identification sign.
2020	DA2020/0488	Fire Services Upgrade including installation of a building occupant warning system, new fire sprinkler system and new fire hydrant system.
2020	CC2020/0182	Construction Certificates - Construction Certificate Council Issued - Install property identification sign x1.
2021	MOD2021/0084	Section 4.55(2) modification to alter fire services, including the addition of a water tank, provision of an associated pump room, reconfiguration of 2 carparking space and accommodation of 4 carparking space upon the West elevation of the site and the removal of a tree.



3. PLANNING FRAMEWORK

This section provides an assessment of the proposed development in accordance with all relevant statutory planning controls.

3.1 COMMONWEALTH CONTROLS

3.1.1 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) would apply to the development of the subject land. The EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places – defined in the EPBC Act as matter of national environmental significance.

The proposed development would not have a significant impact on matters of national environmental significance, and it is not on Commonwealth land. Therefore, the Provisions of the Act do not have application and the approval of the Minister is not required.

3.1.2 National Greenhouse and Energy Reporting Act 2007

The *National Greenhouse and Energy Reporting Act 2007* (NGER Act) would apply to the development. The National Greenhouse and Energy Reporting (NGER) scheme is a single national framework for reporting and disseminating company information about greenhouse gas emissions, energy production, energy consumption and other information specified under NGER legislation.

The NGER Act applies to the entire corporate activities of Controlling Corporations, not individual sites or activities in isolation of the Group.

The requirements for registration are found within *Part 2 – Registration* of the NGER Act as follows:

- (1) *A controlling corporation must apply, in accordance with this section, to be registered under Division 3 if the corporation's group meets one or more of the thresholds under section 13 for a financial year (the **trigger year**) ending on or after 30 June 2009.*

The relevant triggers for registration are found in Clause 13 '*Thresholds*'. It is beyond the scope of this EIS to ascertain whether the holding Corporation of the subject land meets the thresholds as defined in the NGER Act, however if such thresholds are met then the Act applies to the activity to be conducted upon the land.

3.2 STATE CONTROLS

3.2.1 Environmental Planning and Assessment Act and Regulation

The *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) provide the framework for environmental planning in NSW. The EP&A Act and the Regulation include provisions to ensure that proposals, which have the potential to impact on the environment, are subject to detailed



assessment. Under this legislation the proposed development is defined as both designated and integrated development.

3.2.1.1 State Significant Development

Under Clause 8 (1) of the *State Environmental Planning Policy (State and Regional Development) 2011*, development is potentially state significant development if it is specified in Schedule 1 or Schedule 2.

Schedule 1 of the *State Environmental Planning Policy (State and Regional Development) 2011* applies to the development. Clause 23(3) is relevant to the proposed activities:

23 Waste and resource management facilities

(1) Development for the purpose of regional putrescible landfills or an extension to a regional putrescible landfill that:

(a) has a capacity to receive more than 75,000 tonnes per year of putrescible waste, or

(b) has a capacity to receive more than 650,000 tonnes per year of putrescible waste over the life of the site, or

(c) is located in an environmentally sensitive area of State significance.

(2) Development for the purpose of waste or resource transfer stations in metropolitan areas of the Sydney region that handle more than 100,000 tonnes per year of waste.

(3) Development for the purpose of resource recovery or recycling facilities that handle more than 100,000 tonnes per year of waste.

(4) Development for the purpose of waste incineration that handles more than 1,000 tonnes per year of waste.

(5) Development for the purpose of hazardous waste facilities that transfer, store or dispose of solid or liquid waste classified in the Australian Dangerous Goods Code or medical, cytotoxic or quarantine waste that handles more than 1,000 tonnes per year of waste.

(6) Development for the purpose of any other liquid waste depot that treats, stores or disposes of industrial liquid waste and:

(a) handles more than 10,000 tonnes per year of liquid food or grease trap waste, or

(b) handles more than 1,000 tonnes per year of other aqueous or non-aqueous liquid industrial waste.

The proposed development is State Significant as the amount of waste to be processed is to be 150,000 tonnes per year. The waste will consist of Construction and Demolition (C&D) and Commercial and Industrial (C&I) waste. The waste would not be putrescible, hazardous or liquid waste. The proposed activities would not involve incineration.



The subject site is not an identified site under Schedule 2.

3.2.1.2 Designated Development

The proposed development constitutes Designated Development as it is captured by Clauses 32(1)(b)(iii) under Schedule 3, Part 1 of the *Environmental Planning and Assessment Regulation 2000*, reported below.

32 Waste management facilities or works

(1) Waste management facilities or works that store, treat, purify or dispose of waste or sort, process, recycle, recover, use or reuse material from waste and:

(a) that dispose (by landfilling, incinerating, storing, placing or other means) of solid or liquid waste:

(i) that includes any substance classified in the Australian Dangerous Goods Code or medical, cytotoxic or quarantine waste, or

(ii) that comprises more than 100,000 tonnes of “clean fill” (such as soil, sand, gravel, bricks or other excavated or hard material) in a manner that, in the opinion of the consent authority, is likely to cause significant impacts on drainage or flooding, or

(iii) that comprises more than 1,000 tonnes per year of sludge or effluent, or

(iv) that comprises more than 200 tonnes per year of other waste material, or

(b) that sort, consolidate or temporarily store waste at transfer stations or materials recycling facilities for transfer to another site for final disposal, permanent storage, reprocessing, recycling, use or reuse and:

(i) that handle substances classified in the Australian Dangerous Goods Code or medical, cytotoxic or quarantine waste, or

(ii) that have an intended handling capacity of more than 10,000 tonnes per year of waste containing food or livestock, agricultural or food processing industries waste or similar substances, or

(iii) that have an intended handling capacity of more than 30,000 tonnes per year of waste such as glass, plastic, paper, wood, metal, rubber or building demolition material, or

(c) that purify, recover, reprocess or process more than 5,000 tonnes per year of solid or liquid organic materials, or

(d) that are located:

(i) in or within 100 metres of a natural waterbody, wetland, coastal dune field or environmentally sensitive area, or



(ii) in an area of high watertable, highly permeable soils, acid sulphate, sodic or saline soils, or

(iii) within a drinking water catchment, or

(iv) within a catchment of an estuary where the entrance to the sea is intermittently open, or

(v) on a floodplain, or

(vi) within 500 metres of a residential zone or 250 metres of a dwelling not associated with the development and, in the opinion of the consent authority, having regard to topography and local meteorological conditions, are likely to significantly affect the amenity of the neighbourhood by reason of noise, visual impacts, air pollution (including odour, smoke, fumes or dust), vermin or traffic.

(2) This clause does not apply to:

(a) development comprising or involving any use of sludge or effluent if:

(i) the dominant purpose is not waste disposal, and

(ii) the development is carried out in a location other than one listed in subclause (1) (d), above, or

(b) development comprising or involving waste management facilities or works specifically referred to elsewhere in this Schedule, or

(c) development for which State Environmental Planning Policy No 52—Farm Dams and Other Works in Land and Water Management Plan Areas requires consent.

The proposed development would fit the description of designated development for a waste management facility, with an intended handling capacity of more than 30,000 tonnes per year of waste such as glass, plastic, paper, wood, metal, rubber or building demolition material.

However, under the State Environmental Planning Policy (State and Regional Development) 2011, the development is State Significant Development (SSD). Clause 4.10(2) of the EPA Act states that “Designated development does not include State significant development despite any such declaration.” Therefore, an application for SSD is made.

3.2.1.3 Integrated development

Part 4, Division 4.8, Section 4.46 of the EP&A Act defines what constitutes an “Integrated Development”. Integrated development is development (not being State significant development or complying development) that requires development consent and one or more of the following licenses or approvals listed in Table 3-1.



Table 3-1: Licence/Approval Requirements as Integrated Development

Legislation	Require License or Approval
Coal Mine Subsidence Compensation Act 2017	No
Fisheries Management Act 1994	No
Heritage Act 1977	No
Mines Subsidence Compensation Act 1961	No
Mining Act 1992	No
National Parks and Wildlife Act 1974	No
Petroleum (Onshore) Act 1991	No
Protection of the Environment Operations Act 1997	Yes
Roads Act 1993	No
Rural Fires Act 1997	No
Water Management Act 2000	No

The facility requires a licence under the *Protection of the Environment Operations Act 1997* as detailed in Section 3.2.2. Therefore the proposal is integrated development.

3.2.1.4 Section 4.15 (1) – Matters for Consideration

Under Section 4.15 of the EP&A Act, in determining a development application a consent authority is to take into consideration such of the following matters as are relevant to the development, the subject of the development application.

(a) *The provisions of:*

(i) *Any environmental planning instrument*

The *Holroyd Local Environmental Plan (HLEP) 2013* applies to the subject land. The subject land is zoned IN1 General Industrial. Under the provisions of this zone the proposed use is permitted with consent.

(ii) *Any draft environmental planning instruments that have been placed on public exhibition.*

The *Draft Cumberland Local Environmental Plan* to provide a unified set of planning controls for the Cumberland local government area is expected to be gazetted during the 20/21 financial year. The draft LEP is generally consistent with the Holroyd LEP and changes would not impact on the current provisions as discussed in Section 3.3.3.

(iii) *Any Development Control Plans*

The proposed use has been assessed in accordance with the Holroyd DCP 2013 in Section 3.3.2. The *Draft Cumberland Development Control Plan* to provide a unified set of planning controls for the Cumberland local government area is expected to be gazetted during the 20/21 financial year. The Draft DCP is considered in Section 3.3.4.



(iv) *Any matters prescribed by the regulations.*

None at this stage.

(b) The likely impact of the development including environmental impacts in both the natural and built environment and social and economic impacts in the locality.

- *Context and Setting*

The proposed use will complement the surrounding area and strengthen the overall economic development of the area.

- *Potential Impact on Adjoining Properties*

There will be no negative impact on the adjoining or surrounding industrial or other adjoining properties.

- *Access, Transport and Traffic*

A traffic and parking assessment has been undertaken and found that the proposed design of the development is acceptable in all aspects of its traffic design. The nearby intersections perform well to accommodate additional traffic of the development site. The provision of on site car parking spaces will accommodate the expected car requirements for staff.

- *Public Domain*

The proposed use will have a positive contribution to the public domain.

- *Utilities*

The existing utilities are provided to service the proposed development.

- *Heritage*

There are no heritage issues.

- *Other Land Resources*

The proposed development will not require land resources.

- *Critical Habitat*

The land does not include or comprise critical habitat.

- *Air and Microclimate*

There are no microclimate issues. An air quality impact assessment has been conducted and found that there will be no significant impacts.



- *Waste*

Waste has been assessed; the proposed development will be a net benefit as it will recycle waste and manage environmental impacts effectively.

- *Energy*

The proposed operation would not involve energy intensive activities therefore there are no energy issues.

- *Noise*

Detailed noise impact assessments have been conducted in accordance with the NSW Noise Policy for Industry, and the NSW Road Noise Policy. The noise assessments concluded that the proposed development will not generate significant noise impacts.

- *Natural Hazards*

There are no acknowledged natural hazards.

- *Social Impact in the Locality*

There are no negative social impacts.

- *Economic Impact in the Locality*

The proposed use will contribute to the economic development of the area.

- *Site Design and Building Form*

There will be no major changes to the building design and form, the existing building is of a design suitable to the land zoning of the area and be in accordance with relevant DCP requirements and the Building Code of Australia.

- *Construction*

Minimal construction works are required for the proposed development.

- *Cumulative Impacts*

There are no cumulative impact issues given the nature of this locality.

(c) The suitability of the site for the development.

The proposed development is appropriate for this site.

(d) Any submissions made in accordance with the Act.

No submissions at this stage.

(e) The public interest

There are no aspects of the proposed use that would be contrary to the public interest.

3.2.2 Protection of the Environment Operations Act, 1997

Part 1 in Schedule 1 of the *Protection of the Environment Operations Act 1997* (POEO Act) lists premise-based activities that are scheduled activities and, as such, that require a licence under the Act. The proposed development includes a number of scheduled activities as may be defined by clauses 34, 41 and 42 (shown below):

34 Resource recovery

(1) *This clause applies to the following activities:*

"recovery of general waste", meaning the receiving of waste (other than hazardous waste, restricted solid waste, liquid waste or special waste) from off site and its processing, otherwise than for the recovery of energy.

"recovery of hazardous and other waste", meaning the receiving of hazardous waste, restricted solid waste or special waste (other than asbestos waste or waste tyres) from off site and its processing, otherwise than for the recovery of energy.

"recovery of waste oil", meaning the receiving of waste oil from off site and its processing, otherwise than for the recovery of energy.

"recovery of waste tyres", meaning the receiving of waste tyres from off site and their processing, otherwise than for the recovery of energy.

(3) *Each activity referred to in Column 1 of the Table to this clause is declared to be a scheduled activity if—*

(a) it meets the criteria set out in Column 2 of that Table, and

(b) either—

(i) less than 50% by weight of the waste received in any year requires disposal after processing, or

(ii) an exemption granted under Part 9 of the Protection of the Environment Operations (Waste) Regulation 2014 exempts the person carrying out the activity from the requirements of section 48 (2) as they apply to waste disposal (application to land), waste disposal (thermal treatment), waste processing (non-thermal treatment) and waste storage.



Table 3-2: Extract from Clause 34 of POEO Act

Activity	Criteria
Recovery of general waste	<p>if the premises are in the regulated area—</p> <p>(a) involves having on site at any time more than 1,000 tonnes or 1,000 cubic metres of waste, or</p> <p>(b) involves processing more than 6,000 tonnes of waste per year</p> <p>if the premises are outside the regulated area—</p> <p>(a) involves having on site at any time more than 2,500 tonnes or 2,500 cubic metres of waste, or</p> <p>(b) involves processing more than 12,000 tonnes of waste per year</p>
Recovery of hazardous and other waste	involves having on site at any time more than 200 kilograms of waste
Recovery of waste tyres	<p>involves having on site at any time (other than in or on a vehicle used to transport the tyres to or from the premises) more than 5 tonnes of waste tyres or 500 waste tyres, or</p> <p>involves processing more than 5,000 tonnes of waste tyres per year</p>

Comment:

The proposed development will have >1,000 tonnes of waste stored on site, processes >6,000 tonnes of waste per annum and less than 50% by weight requires disposal after processing thus cl. 34 applies.

41 Waste processing (non-thermal treatment)

(1) *This clause applies to the following activities:*

"non-thermal treatment of general waste", meaning the receiving of waste (other than hazardous waste, restricted solid waste, liquid waste or special waste) from off site and its processing otherwise than by thermal treatment.

"non-thermal treatment of hazardous and other waste", meaning the receiving of hazardous waste, restricted solid waste or special waste (other than asbestos waste or waste tyres) from off site and its processing otherwise than by thermal treatment.

"non-thermal treatment of liquid waste", meaning the receiving of liquid waste (other than waste oil) from off site and its processing otherwise than by thermal treatment.

"non-thermal treatment of waste oil", meaning the receiving of waste oil from off site and its processing otherwise than by thermal treatment.

"non-thermal treatment of waste tyres", meaning the receiving of waste tyres from off site and their processing otherwise than by thermal treatment.

(2) *However, this clause does not apply to the processing of any of the following:*

- a) stormwater,
- b) contaminated soil,
- c) contaminated groundwater,



- d) *sewage within a sewage treatment system (whether or not that system is licensed).*
- (3) *Each other activity referred to in Column 1 of the Table to this clause is declared to be a scheduled activity if—*
- (a) it meets the criteria set out in Column 2 of that Table, and*
 - (b) 50% or more by weight of the total amount of waste received per year requires disposal after processing.*

Comment:

Less than 50% (approx 11%) by weight of the total amount of waste received per year would require disposal after processing and therefore cl.41 does not apply.

42 Waste storage

- (1) *This clause applies to **waste storage**, meaning the receiving from off site and storing (including storage for transfer) of waste.*

Comment:

The proposed development will receive waste from off site and will store this material for processing and/or transfer off-site thus clause 42 applies.

In summary, the proposed development requires an EPL for the following scheduled activities:

- 34 – Resource recovery; and
- 42 – Waste storage.

3.2.3 Biodiversity Conservation Act 2016

According to the Planning Certificate issued under s.10.7 of the EP&A Act, the land is not bio-diversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*, nor does the land form part of a biobanking stewardship Agreement under Part 5 of the *Biodiversity Conservation Act 2016*.

There is no element of the Biodiversity Offsets Scheme that applies to the land under Part 8 of the same Act. The subject land does not contain threatened species. A BDAR waiver was received and is provided in Appendix 10.

3.2.4 NSW Heritage Act 1977

The *New South Wales Heritage Act* was introduced in 1977 to protect the important heritage places that form part of our environment and our identity. A review of the NSW Heritage Register (<https://www.environment.nsw.gov.au/heritageapp/heritagesearch.aspx#amapsearch>) indicates that the land does not contain a listed heritage item of State Significance, nor does it adjoin or is within a reasonable vicinity of such an item.

Aboriginal cultural heritage must be considered for SSD. An exemption from preparing an Aboriginal cultural heritage impact assessment report (ACHAR) was prepared and submitted to Heritage NSW. Further discussion is provided in Section 9.



3.2.5 State and Regional Environmental Planning Policies

A number of State Environmental Planning Policies (SEPPs) apply to the subject land as set out in the Section 10.7 Planning Certificate No. PC2020/3699 (08 September 2020) and are listed in Table 3-3. The most relevant SEPPs are then discussed in greater detail.

Table 3-3: State and Regional Environmental Planning Policies

Policy	Comments
SREP: Sydney Regional Environmental Plan No.9 Extractive Industry (No. 2 – 1995)	No application
GMREP No. 2: Georges River Catchment	Applies: Discussed below
SEPP No.19 - Bushland in Urban Areas	No application
SEPP No.21 - Caravan Parks	No application
SEPP No.30 – Intensive Agriculture	No application
SEPP No.33 - Hazardous and Offensive Development	No application: Discussed below
SEPP No.50 - Canal Estates	No application
SEPP No.55 - Remediation of Land	No application: Discussed below
SEPP No. 62 – Sustainable Agriculture	No application
SEPP No.64 - Advertising and Signage	Applies: Discussed below
SEPP No.65 – Design Quality of Residential Apartment Development	No application
SEPP No.70 – Affordable Housing (Revised Schemes)	No application
SEPP (Housing for Seniors or People with a Disability) 2004	No application
SEPP (Building Sustainability Index: BASIX) 2004	No application
SEPP (State Significant Precincts) 2005	No application: Discussed below
SEPP (Mining, Petroleum Production and Extractive Industries) 2007	No application
SEPP (Infrastructure) 2007	Applies: Discussed below
SEPP (Temporary Structures) 2007	No application
SEPP (Exempt and Complying Development Codes) 2008	No application
SEPP (Affordable Rental Housing) 2009	No application
SEPP (Vegetation in Non-Rural Areas) 2017	
SEPP (State and Regional Development) 2011	Applies: Discussed below
SEPP (Education Establishments and Child Care Centre Facilities) 2017	No application
SEPP (Primary Production and Rural Development) 2019	No application
SEPP (Concurrences) 2018	No application

3.2.5.1 Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment

The general aims and objectives of the plan are:

- (a) *to maintain and improve the water quality and river flows of the Georges River and its tributaries and ensure that development is managed in a manner that is in keeping with the national, State, regional and local significance of the Catchment,*



- (b) *to protect and enhance the environmental quality of the Catchment for the benefit of all users through the management and use of the resources in the Catchment in an ecologically sustainable manner,*
- (c) *to ensure consistency with local environmental plans and also in the delivery of the principles of ecologically sustainable development in the assessment of development within the Catchment where there is potential to impact adversely on groundwater and on the water quality and river flows within the Georges River or its tributaries,*
- (d) *to establish a consistent and coordinated approach to environmental planning and assessment for land along the Georges River and its tributaries and to promote integrated catchment management policies and programs in the planning and management of the Catchment,*
- (e) *(Repealed)*
- (f) *to provide a mechanism that assists in achieving the water quality objectives and river flow objectives agreed under the Water Reform Package.*

Comment:

The proposal as designed would support these aims and objectives by undertaking all processes and storage of materials within the enclosed building and implementing stormwater management controls to minimise release of sediments and other pollutants off site.

The specific aims and objectives most relevant to the proposal are *“to identify land uses in the Catchment which has the potential to impact adversely on the water quality and river flows in the Georges River and its tributaries and to provide appropriate planning controls aimed at reducing adverse impacts on the water quality and river flows.”*

Comment:

The proposed land use is for a resource recovery facility. Without appropriate controls, this land use has the potential to impact on water quality. However, the following demonstrates that the proposed development will support the above specific aims and objectives of the plan:

- Incoming waste would be restricted to construction and demolition (C&D) and commercial and industrial (C&I) waste. No hazardous material such as asbestos nor liquid waste would be accepted.
- The facility would be fully enclosed and all processing activities and storage of materials would be within the building. Strictly no external operations.
- Minor quantities of dangerous goods would be stored including oils and greases for the workshop and cleaning chemicals for the office. A 13,000 Litre self-bunded diesel tank would be located on site with spill containment provided.
- All truck loads would be covered when entering and leaving the facility.
- Waste and recovered materials would be stored in designated bunkers or bins within the building.
- No stormwater pits within the building.
- No processes generating wastewater.
- Stormwater management controls would be installed in all stormwater pits and maintained in accordance with an Environmental Management Plan.



The proposed development must adhere to the specific matters for consideration of clause 22 of the plan as follows:

22 WASTE MANAGEMENT FACILITY OR WORKS

Definition

Development for the purpose of waste management facilities or works described in Schedule 3 (Designated Development) to the Environmental Planning and Assessment Regulation 1994.

Planning controls

Development consent required unless on flood liable land, in which case it is prohibited. Advertised.

Specific matters for consideration

A system is to be required to manage leachate surface controls on the land on which the waste management facility or works is or are proposed.

A site management plan is to be required for the land on which the waste management facility or works is or are proposed.

The likelihood of groundwater contamination.

The adequacy of the proposed leachate management system and surface water controls.

The long-term stability of the final landform and the adequacy of the site management plan.

Where the proposed development involves extraction of material, whether an adverse impact on the Georges River or its tributaries will result.

Comment:

The land is noted as being flood liable land in the pre-lodgement notes received from Council on 3 May 2021. Therefore, the development is prohibited under the REP. However, the development is permissible with consent under the *State Environmental Planning Policy (Infrastructure) 2007* (iSEPP) as demonstrated in Section 3.2.5.6. Under Clause 8(1) of the iSEPP, where there is an inconsistency between the iSEPP and another environmental planning instrument, the iSEPP prevails.

The specific matters for consideration listed above are briefly addressed below have been discussed in detail in Section 8.

- Leachate would not be generated by the proposed facility as there would be no waste stored external to the building and therefore no opportunity for water to percolate through the waste. No leachate system is required.
- A site management plan (environmental management plan) would be prepared to manage all potential environmental impacts associated with the proposed development.
- Groundwater is unlikely to become contaminated as all waste processes and storage would be within the existing building and all surfaces at the site are impermeable.
- The adequacy of surface water controls are addressed in Section 8.
- No extraction of material is proposed.



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

The proposed development would only store minor quantities of chemicals and dangerous goods on site and, therefore does not trigger the thresholds listed in *SEPP No. 33 – Hazardous and Offensive Development* and would not fit the definition of ‘potentially hazardous industry’ or ‘hazardous storage establishment’. This is demonstrated in Section 8.6.2

3.2.5.3 State Environmental Planning Policy No. 55 – Remediation of Land

The site is already fully developed and sealed. Construction and installation of the resource recovery facility would require minor excavation works for the establishment of a swale therefore the proposal would be assessable under *SEPP No. 55 – Remediation of Land*.

The site was once part of a larger site operated by Alcoa. The site is not currently listed on the NSW EPA’s notified sites as being potentially contaminated (sighted April 2021). Furthermore, the site is not declared as “significantly contaminated” under the Contaminated Land Management Act, 1997. Numerous contamination investigations have been undertaken over the years and following sub-division, this site was considered suitable for occupation. As the excavation required is shallow and minor in nature, further contamination investigations are not considered warranted.

3.2.5.4 State Environmental Planning Policy No. 64 – Advertising and Signage

This SEPP is not applicable as the Development Application does not include details of signage. Any signage pertaining to building or business identification will be subject to a future application to Council.

3.2.5.5 State Environmental Planning Policy (State Significant Precincts) 2005

The SEPP nominates certain precincts as being of State Significance for the purposes of development. As the subject site is not nominated in the relevant Appendices this SEPP is not applicable.

3.2.5.6 State Environmental Planning Policy (Infrastructure) 2007

The proposal is permitted with consent under Clause 121 of Division 23, Part 3, of the *State Environmental Planning Policy (SEPP) (Infrastructure) 2007* (iSEPP), as reported below.

121 Development permitted with consent

(1) Development for the purpose of waste or resource management facilities, other than development referred to in subclause (2), may be carried out by any person with consent on land in a prescribed zone.

Where:

prescribed zone means any of the following land use zones or a land use zone that is equivalent to any of those zones:



- (a) *RU1 Primary Production,*
- (b) *RU2 Rural Landscape,*
- (c) **IN1 General Industrial,**
- (d) *IN3 Heavy Industrial,*
- (e) *SP1 Special Activities,*
- (f) *SP2 Infrastructure*

waste or resource management facility means a waste or resource transfer station, a resource recovery facility or a waste disposal facility.

resource recovery facility means a facility for the recovery of resources from waste, including such works or activities as separating and sorting, processing or treating the waste, composting, temporary storage, transfer or sale of recovered resources, energy generation from waste gases and water treatment, but not including re-manufacture of material or goods or disposal of the material by landfill or incineration.

waste or resource transfer station means a facility for the collection and transfer of waste material or resources, including the receipt, sorting, compacting, temporary storage and distribution of waste or resources and the loading or unloading of waste or resources onto or from road or rail transport.

The subject land is within a IN1 zone thus is a 'prescribed zone' within the terms of clause 121(1)(c) and the intended use is as a 'Resource Recovery Facility' as defined above, being for the '*...separating and sorting, processing or treating the waste...*'. Therefore, the proposed development is permissible under the iSEPP on the subject land.

3.2.5.7 State Environmental Planning Policy (State and Regional Development) 2011

The aims of *SEPP (State and Regional Development) 2011* is to identify development that is State Significant Development, State Significant Infrastructure or Critical State Significant Infrastructure. Under Clause 8 (1) of the *State Environmental Planning Policy (State and Regional Development) 2011*, development is potentially State Significant Development if it is specified in Schedule 1 or Schedule 2.

Clause 23(3) of Schedule 1 is relevant to the proposed activities:

23 Waste and resource management facilities

(1) *Development for the purpose of regional putrescible landfills or an extension to a regional putrescible landfill that:*

(a) *has a capacity to receive more than 75,000 tonnes per year of putrescible waste, or*

(b) *has a capacity to receive more than 650,000 tonnes per year of putrescible waste over the life of the site, or*

(c) *is located in an environmentally sensitive area of State significance.*

(2) *Development for the purpose of waste or resource transfer stations in metropolitan areas of the Sydney region that handle more than 100,000 tonnes per year of waste.*



3) Development for the purpose of resource recovery or recycling facilities that handle more than 100,000 tonnes per year of waste.

(4) Development for the purpose of waste incineration that handles more than 1,000 tonnes per year of waste.

(5) Development for the purpose of hazardous waste facilities that transfer, store or dispose of solid or liquid waste classified in the Australian Dangerous Goods Code or medical, cytotoxic or quarantine waste that handles more than 1,000 tonnes per year of waste.

(6) Development for the purpose of any other liquid waste depot that treats, stores or disposes of industrial liquid waste and:

(a) handles more than 10,000 tonnes per year of liquid food or grease trap waste, or

(b) handles more than 1,000 tonnes per year of other aqueous or non-aqueous liquid industrial waste.

The proposed development is State Significant as it involves the handling of more than 100,000 tonnes per year of waste.

3.3 LOCAL CONTROLS

3.3.1 Holroyd Local Environmental Plan 2013

The *Holroyd Local Environmental Plan 2013* applies to the subject site.

The proposed development is considered to be consistent with the particular aims of the Plan under Part 1, Clause 1.2 (2), as follows:

- a) to provide a clear framework for sustainable land use and development in Holroyd,
- b) to provide for a range of land uses and development in appropriate locations to meet community needs, including housing, education, employment, recreation, infrastructure and services,
- c) to promote ecologically sustainable development by facilitating economic prosperity, fostering social well-being and ensuring the conservation of the natural environment,
- d) to concentrate intensive land uses, increased housing density and trip-generating activities in close proximity to centres and major public transport nodes in order to retain the low-density character of other areas,
- e) to promote the efficient and equitable provision of public services, infrastructure and amenities,
- f) to protect the environmental and cultural heritage of Holroyd including:
- g) identifying, conserving and promoting cultural heritage as a significant feature of Holroyd's landscape and built form as a key element of its identity, and
- h) effectively managing the natural environment (including remnant bushland and natural watercourses) to ensure its long-term conservation.

3.3.1.1 Permissibility

The land zoning for the subject land is described as IN1 – General Industrial under the provisions of the *Holroyd Local Environmental Plan 2013*, which applies to the subject site.

The proposed development is considered permitted with consent as it falls under the definition of “general industries”. The following definitions are of relevance:

resource recovery facility means a building or place used for the recovery of resources from waste, including works or activities such as separating and sorting, processing or treating the waste, composting, temporary storage, transfer or sale of recovered resources, energy generation from gases and water treatment, but not including re-manufacture or disposal of the material by landfill or incineration.

Note.

Resource recovery facilities are a type of **waste or resource management facility**—see the definition of that term in this Dictionary.

Industry means any of the following-

- a) General industry,
 - b) Heavy industry,
 - c) Light industry,
- But does not include
- d) Rural industry, or
 - e) Extractive industry or
 - f) Mining

General Industry means a building or place (other than a heavy industry or light industry) that is used to carry out an industrial activity. -

Industrial activity means the manufacturing, production, assembling, altering, formulating, repairing, renovating, ornamenting, finishing, cleaning, washing, dismantling, transforming, processing, recycling, adapting or servicing of, or the research and development of, any goods, substances, food, products or articles for commercial purposes, and includes any storage or transportation associated with any such activity. -

In addition Resource recovery facilities are permitted with consent under Clause 121 of Division 23, Part 3, of the *State Environmental Planning Policy (SEPP) (Infrastructure) 2007*, as discussed in Section 3.2.5.6.

The following objectives apply.

Zone IN1 General Industrial

1. Objectives of zone

- To provide a wide range of industrial and warehouse land uses.
- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To support and protect industrial land for industrial uses.



- To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.

2 Permitted without consent

Nil

3 Permitted with consent

*Depots; Freight transport facilities; Garden centres; **General industries**; Hardware and building supplies; Industrial training facilities; Kiosks; Light industries; Liquid fuel depots; Neighbourhood shops; Oyster aquaculture; Places of public worship; Roads; Take away food and drink premises; Tank-based aquaculture; Warehouse or distribution centres; Any other development not specified in item 2 or 4.*

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Boat launching ramps; Boat sheds; Camping grounds; Car parks; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Eco-tourist facilities; Educational establishments; Entertainment facilities; Environmental facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Function centres; Health services facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home businesses; Home industries; Home occupations; Home occupations (sex services); Industries; Information and education facilities; Jetties; Livestock processing industries; Marinas; Mooring pens; Moorings; Pond-based aquaculture Recreation facilities (major); Registered clubs; Research stations; Residential accommodation; Restricted premises; Sawmill or log processing works; Sex services premises; Stock and sale yards; Tourist and visitor accommodation; Veterinary hospitals; Water recreation structures; Wharf or boating facilities

The proposed use is consistent with the definition of “general industry” and is permissible with consent in the zone. Furthermore, the proposed use is not covered by any of the categories in the prohibited development schedule for this Zone. It would readily meet the objectives of the plan as outlined above.

3.3.1.2 General LEP Requirements

The provisions of the Holroyd LEP 2013 are assessed in Table 3-4 and Table 3-5. Part 4 of the LEP are principal development standards and Part 5 include miscellaneous provisions.

Table 3-4: Holroyd Local Environmental Plan 2013 – Parts 4 and 5

Clause	Comments	Compliance
4.1 Minimum subdivision lot size	The proposed development does not involve the subdivision of land.	No application
4.2 Rural subdivision	The proposed development does not involve the subdivision of rural land.	No application
4.3 Height of buildings	The land is not shown on the Height of Buildings map.	No application
4.4 Floor space ratio	The land is not shown on the Floor Space Ratio map.	No application



Table 3-4: Holroyd Local Environmental Plan 2013 – Parts 4 and 5

Clause	Comments	Compliance
4.5 Calculation of floor space ratio and site area	The land is not included on an LEP map with a Floor Space Ratio Control.	No application
4.6 Exceptions to development standards	No variation of development standards is required.	No application
5.1 Relevant acquisition authority	No part of the land is required to be acquired for a public purpose.	No application
5.2 Classification and reclassification of public land	No part of the subject land is public land.	No application
5.3 Development near zone boundaries	The site is not located near zone boundaries.	No application
5.4 Controls relating to miscellaneous permissible uses	The proposed development is not of a type provided for in the sub clause.	No application
5.5 Repealed	Repealed	Repealed
5.6 Architectural roof features	The proposal does not include an architectural roof feature. See elevation plans.	No application
5.7 Development below mean high water mark	Not applicable	Not applicable
5.8 Conversion of fire alarms	Not applicable	Not applicable.
5.9 Repealed	Repealed	Repealed
5.10 Heritage conservation	The subject land does not contain a heritage item nor is the immediate land within the vicinity of land containing such an item.	No application
5.11 Bush fire hazard reduction	There is no intent to clear vegetation for the purposes of bush fire hazard reduction.	No application
5.12 Infrastructure development and use of existing buildings of the Crown	Building is not a building of the Crown.	No application
5.13 Eco-tourist facilities	The application does not involve ecotourist facilities.	No application
5.14 Siding Spring Observatory – maintaining dark sky	Clause not adopted	Clause not adopted
5.15 Defence communications facility	Clause not adopted	Clause not adopted
5.16 Subdivision of, or dwellings on, land in certain rural, residential or environment protection zones	Not applicable	Not applicable
5.17 Artificial waterbodies in environmentally sensitive areas in areas of operation of irrigation corporations	Not applicable	Not applicable
5.18 Intensive livestock agriculture	The application does not involve livestock agriculture	No application



Table 3-4: Holroyd Local Environmental Plan 2013 – Parts 4 and 5

Clause	Comments	Compliance
5.19 Pond-based, tank-based and oyster aquaculture	The application does not involve aquaculture	No application

The following table provides Part 6 ‘Additional local provisions’ that are applicable to the proposed development:

Table 3-5: Holroyd Local Environmental Plan 2013 - Part 6

Clause	Comments	Compliance
6.1 Acid Sulfate Soils	The land is not shown on the acid sulfate soils map as containing acid sulfate soils.	No application
6.2 Earthworks	Minor excavations are required for the establishment of a swale.	No application
6.3 Essential Services	Essential services exist at the already developed site.	No application
6.4 Flood planning	The land is subject to flood planning controls and flooding by the PMF event. The development is compatible with the flood hazard of the land and will not significantly affect flood behaviour.	Complies
6.5 Terrestrial biodiversity	The land is already developed. No changes to the existing landscaping are proposed.	No application
6.6 Riparian land and watercourses	The land is not riparian land as shown on the Riparian Lands and Watercourse Map – Sheet WCL_007.	No application
6.7 Stormwater management	The majority of the site is impermeable. Stormwater controls would be implemented in pits on site to prevent adverse impacts to stormwater.	Complies
6.8 Salinity	The land is identified as being prone to moderate soil salinity. The land is already developed and the proposed use of the site would not impact on this characteristic.	No application
6.9 Buffer area between industrial and residential zones	The development is located with substantial buffer from residential land uses.	No application
6.10 Ground floor development in Zones B2 and B4	The land is not within zones B2 or B4. Not applicable	No application
6.11 Design excellence	No building construction or external alterations are proposed.	No application
6.12 Development on land at 42-44 Dunmore Street, Wentworthville	Not applicable	No application
6.13 Development for certain land in Wentworthville Town Centre	Not applicable	No application



3.3.2 Holroyd Development Control Plan 2013

This section provides the Holroyd DCP requirements and details of compliance specific to this proposal in Table 3-6. Part A – General controls, Part D – Industrial controls apply to the land and are addressed.

Table 3-6: Holroyd DCP Requirements

Requirements	Compliance	Comments
Part A - General Controls		
1-Subdivision	N/A	No subdivision of land is proposed.
2-Roads and Access	Complies	No changes are proposed to the road design or existing access arrangements to the developed site.
3-Car Parking	Complies	Car parking is addressed in Section 5.5.5
4-Tree and Landscape works	Complies	No tree removal and no changes to the existing landscaping are proposed.
5-Biodiversity	Complies	The site is not identified in the Holroyd LEP as being environmental sensitive land or within the E2 Environmental Conservation Zone.
6-Soil Management	Complies	The site is concreted and there are no undeveloped areas on site. No cut and fill or land filling is proposed. An ESCP would be prepared for the minor construction works. The development does not involve any salinity risk activities.
7-Stormwater Management	Complies	Existing stormwater infrastructure will be retained and mitigation measures would be implemented including a swale in the drainage easement designed in accordance with Council requirements.
8-Flood Prone Land	Complies	A flood mitigation works easement exists along the southern boundary of the site. A stormwater management plan has been prepared that proposes treatment of this area to manage stormwater and flooding at the site.
9-Managing External Road Noise and Vibration	Complies	Road noise is assessed as part of the Noise Impact Assessment provided in Appendix 2.
10-Safety and Security	Complies	The site will have adequate safety and security.
11-Waste Management	Complies	Details provided in Section 8.5.
12-Services	Complies	The development meets servicing and utility requirements.
Part D - Industrial Controls		
1-Subdivision	N/A	No subdivision of land is proposed.
2-Design Guidelines		
2.1-Site Area, Frontage and Gross Floor Area	Complies	No changes to the existing site area, frontage and gross floor area are proposed.



Table 3-6: Holroyd DCP Requirements

Requirements	Compliance	Comments
2.2-Site Layout	Complies	The site layout is shown in Appendix 4
2.3-Amenity Impacts on Nearby and Adjoining zones	Complies	The site is in an industrial zone and does not adjoin any residential, public open space or sensitive land uses. No changes to the existing building is proposed and this is similar to those on surrounding properties.
2.4-Building Design and Appearance	Complies	No changes are proposed to the existing building.
2.5-Setbacks	Complies	No changes are proposed to setbacks at the site.
2.6-Parking and Vehicular Access	Complies	This is addressed in Section 5.5.4 and 5.5.5.
2.7-Road Design and Construction within Industrial Zones	Complies	Swept path plans are provided in the Traffic Report in Appendix 3.
2.8-Fences	Complies	All fences comply with the requirements of the DCP.
3-Landscaping of Industrial Sites	Complies	No changes are proposed to the existing landscaping provided at the site.
4-Retail & Commercial use in Industrial Zones	N/A	Retail & Commercial use is not proposed.
5-Pollution Control	Complies	Adequate pollution controls have been designed into the development to alleviate potentially negative environmental impacts. These are detailed throughout this EIS and summarised in Section 12.1
6-Factory Units	N/A	Factory units are not proposed.
7-Prospect Creek	N/A	The site is not within the immediate vicinity of Prospect Creek.
8-Planning Controls for Sex Services Premises	N/A	No sex service premises is proposed.
9-Yennora Distribution Park	N/A	The site is not within Yennora Distribution Park.

The proposed development is consistent with the aims and objectives of the Holroyd DCP and complies with requirements.

3.3.3 Draft Cumberland Local Environmental Plan

The *Draft Cumberland Local Environmental Plan* (Draft LEP) provides a unified set of planning controls for the Cumberland local government area is expected to be gazetted during the 20/21 financial year. The Draft LEP will replace the *Auburn Local Environmental Plan 2010*, *Parramatta Local Environmental Plan 2011* and the *Holroyd Local Environmental Plan 2013*. The current zoning of the subject land would not change under the Draft LEP. The draft LEP is generally consistent with the Holroyd LEP and changes would not impact on the current provisions that related to the subject land.



3.3.4 Draft Cumberland Development Control Plan

The *Draft Cumberland Development Control Plan* (Draft DCP) provides a unified set of planning controls for the Cumberland local government area is expected to be gazetted during the 20/21 financial year. Part A – general controls and Part D – Industrial controls of the Holroyd DCP were assessed in Table 3-6. Review of the Draft DCP notes the following Parts would be of relevance to the proposed development:

Part A – Introduction and General Controls of the Draft DCP provides a detailed explanation of the development application process and provisions for subdivision of land (A2) and site amalgamation and isolated sites (A3). A2 and A3 are not relevant to the proposed development.

Part D – Development in Industrial Zones. This Part generally aligns with Part D of Holroyd LEP however, there are some differences.

Part G – Miscellaneous Development Controls. This Part contains provisions that were included in Part A of the Holroyd LEP.

Due to the differences between the two DCPs, the relevant Parts (Part D and Part G) of the Draft DCP have been reviewed in detail in the following table.

Table 3-7: Draft Cumberland DCP Requirements

Requirements	Compliance	Comments
Part D – Development in Industrial Zones		
1-Introduction	N/A	No controls required.
2-Objectives and Controls		
2.1-Setbacks and streetscape character	Complies	Landscaping of the front setback exists. The front setback areas would not be used for storage, unloading/loading or large areas of car parking. The existing setbacks comply.
2.2-Siting and building design	Complies	No new buildings are proposed. No changes are proposed to the existing building.
2.3-External materials	Complies	No new buildings are proposed. No changes are proposed to the existing building.
2.4-Solar access	Complies	No new buildings are proposed. No changes are proposed to the existing building.
2.5-Road design and construction	Complies	No new roads are proposed.
2.6- Pedestrian and cyclist facilities	Complies	Undercover bicycle parking would be provided.
2.7-Public domain improvements	Complies	The site is already development with established landscaped areas that will be maintained.
2.8-Biodiversity	Complies	The site is already development with established landscaped areas that will be maintained.



Table 3-7: Draft Cumberland DCP Requirements

Requirements	Compliance	Comments
2.9-Storage areas	Complies	All storage of waste and recovered materials would be within the building. The rear external area would be used to store empty skip bins.
2.10-Safety and security	Complies	Crime prevention through environmental design is assessed in section 5.8
2.11-Fencing	Complies	Adequate fencing exists and will remain.
2.12-Operational management	Complies	Aspects of operational management of the site are addressed in an operational management plan provided in Appendix 5.
2.13-Environmental management	Complies	Addressed throughout this EIS and would be implemented through a site-specific Environmental Management Plan.
2.14-Loading requirements	Complies	See Part G3 below.
2.15-Car parking design	Complies	See Part G3 below.
2.16-Traffic and transport management plan	Complies	See Part G3 below.
Part G – Miscellaneous Development Controls		
G1-Advertising and signage	N/A	Application for signage is separate to this DA.
G2-Heritage	N/A	No heritage items are located on or near the site.
G3-Traffic, Parking, Transport and Access (Vehicle)	Complies	This is addressed in the Traffic Report provided as Appendix 3 which is summarised in Section 9 of this EIS.
G4-Stormwater and drainage	Complies	Stormwater and drainage are addressed in the Stormwater Report in Appendix 6 and supported by plans prepared by Intrax Projects.
G5-Sustainability, Biodiversity and Environmental management	Complies	Elements of this control are addressed throughout this EIS.
G6-Telecommunications facilities	N/A	Not relevant
G7-Tree management and landscaping	Complies	No trees will be removed and existing landscaped areas will be maintained.
G8-Waste management	Complies	A Waste Management Report is provided as Appendix 7 and summarised in Section 8.5.5 of the EIS.

The development as proposed will comply with the draft Cumberland DCP.



3.4 REGIONAL PLANS AND STRATEGIES

3.4.1 Greater Sydney Region Plan: A Metropolis of Three Cities

“The Greater Sydney Region Plan- A Metropolis of Three Cities” sets a 40 year vision and establishes a 20 year plan to manage growth and change for Greater Sydney. It is a framework for the integrated planning of infrastructure projects, transport and land use. The site is located within the central city district.

The plan sets out 40 Objectives to improve the planning and provision of infrastructure throughout Greater Sydney. The following objectives are relevant to the proposed development:

Objective 1: Infrastructure supports the three cities

Comment:

The proposed development indirectly supports Objective 1 by providing a facility that accepts and processes waste generated from infrastructure projects and converts this into reusable products. The location of the facility is central to the Greater Sydney area enabling easier access and reduced transport routes to and from the site.

Objective 22: Investment and business activity in centres

Comment:

The proposed development is located centrally within the Greater Sydney area and would support conditions for a stronger economy by offering 40-50 job opportunities, the majority suited to low skilled workers.

Objective 35: More waste is re-used and recycled to support the development of a circular economy

Comment:

The proposed development supports the development of a circular economy by providing a resource recovery facility capable of processing waste from infrastructure and other construction projects and converting up to 90% of this waste into reusable products.

The proposal would support infrastructure projects in this growing area by providing a facility to recycle wastes as the existing waste facilities currently do not have the capacity to accommodate the projects in the area. Furthermore, the development would provide 40-50 jobs and does not conflict with any Objectives outlined in the Plan As the site is located within an established industrial area, centrally located to proposed infrastructure growth areas, the development is considered to support the Plan.

3.4.2 Towards Our Greater Sydney 2056: Central City District Plan

The Central City District includes local government areas of Blacktown, Cumberland, Parramatta and The Hills. The plan provides ten directions and 22 planning priorities. The following planning priorities are of relevance to the proposed development:



Planning Priority C1: Planning for a city supported by infrastructure

Comment:

The proposed development indirectly supports Planning Priority C1 by providing a resource recovery facility that accepts waste generated by infrastructure projects and processing this waste to generate reusable products.

Planning Priority C10: Growing investment, business opportunities and jobs in strategic centres

Comment:

The proposed development supports Planning Priority C10 by creating job opportunities in a central area of Greater Sydney.

Planning Priority C11: Maximising opportunities to attract advanced manufacturing and innovation in industrial and urban services land

Comment:

The proposed development supports Planning Priority C11 through the design of an advanced technological waste processing facility that would enable up to 90% of waste to be recycled.

Planning Priority C19: Reducing carbon emissions and managing energy, water and waste efficiently

Comment:

The proposed development supports Planning Priority C19, in particular the management of waste through the advanced waste processing technologies that would enable a greater percentage of construction and demolition to be diverted from landfill, thereby managing the waste more efficiently.

The proposal is consistent with the Central City District Plan.

3.4.3 Future Transport Strategy 2056

The Future Transport 2056 Strategy is a set of supporting strategies and plans that establish a 40 year vision for creating and maintaining a safe, efficient and reliable transport system in NSW. Greater Sydney services and Infrastructure Plan is a supporting plan and states that “the Greater Sydney Commission (GSC) has established a vision for Sydney as a metropolis of three cities where people have access to jobs and services within 30 minutes by public transport.” It is designed to support the land use vision for Sydney.

Although the proposed development does not directly relate to this Strategy, the following is of relevance:

- Better access to public transport and the creation of walking and cycle path networks enabling employees the option to avoid using private vehicles to travel to work. As the site is centrally located within the Yennora Industrial area, it is expected that this would be a future achievement. Despite this, on site car parking is provided as part of the development.



- The proposed development located in Yennora is not expected to require use of transport routes outside the Greater Sydney area as the majority of work would be from local infrastructure projects.
- The proposed facility would implement a computerised booking program called “Waste Edge” which enables truck trips to be managed with respect to timing and routes taken. Truck routes can be planned to avoid congestion.
- The proposed development would provide a facility to recycle waste generated by transport infrastructure project and in this way would indirectly support the Future Transport Strategy 2056.

The proposed development is therefore consistent with the Future Transport Strategy 2056.



4. CONSULTATION

The consultation process commenced during the early stages of the project planning in line with the SSD process for State Significant Development. Government departments and key stakeholders plays an important role in ensuring that all potential environmental impacts are evaluated and the most important issues are prioritised.

Early in the process, a pre-planning meeting was arranged as a first step. This required the preparation of a Scoping Report and development of concept plans prior to holding the meeting.

The following sections provide details on consultation and stakeholder engagement, such as that with regulators and government bodies. Key aspects and assessment requirements identified through the consultation process are also summarised in the following sections, together with the reference to where these aspects and requirements have been addressed in the report.

4.1 STAKEHOLDER ENGAGEMENT

Liaison with relevant government authorities regarding the proposed development and requirements of the EIS has been ongoing since the inception of the project. Consultation has been undertaken on a formal basis. Detailed below are the regulatory stakeholders identified during the scoping phase that have been consulted as part of this development application. Written responses from Cumberland City Council, Jemena and Sydney Water are provided in Attachment 2.

4.1.1 Department of Planning, Industry and Environment

A teleconference meeting was held on 2 September 2020 with the Department of Planning, Industry and Environment and relevant project personnel including the Cobra Waste Solutions' General Manager, Roy Ykmour, Project Manager, Carlo Ranieri and Environmental Consultant, Linda Zanotto. Prior to the meeting, the Department emailed a meeting agenda which included:

1. Nature and scale of the development
2. Assessment pathway
3. Engagement approach
4. Level of assessment required
5. Forecast date for the Scoping Report.

Feedback from this meeting informed the revision of the Scoping Report to include the following:

- Proposed storage capacity of waste at any one time.
- Consideration to FRNSW Guidelines for waste facilities, to provide more information about fire safety and issues to be addressed in the EIS.
- Consideration given to heavy and light vehicle access, queueing, vehicle stacking, parking and onsite manoeuvrability.
- Biodiversity development assessment report (BDAR) waiver application.
- Consideration of Aboriginal cultural heritage. At this stage we will determine whether an exemption application can be prepared or if an Aboriginal cultural heritage impact assessment will be required. This will be dependent on whether disturbance to soil / excavations are required (possibly for the weighbridge).



- Consideration of flood management, stormwater management and firewater runoff containment.
- Identification of any easements for utilities at the site.
- Consideration of consultation with both Industrial and residential receivers and Council and public agencies.

The Scoping Report was revised and preliminary plans updated and uploaded the Major Project's Website on 14 September 2020 with the application for the Secretary's Environmental Assessment Requirements (SEARs). The SEARs (document reference SSD-9320662) were provided on 9 October 2020 with requirements attached (Attachment 1). The Department included input from NSW Environment Protection Authority (EPA), Cumberland City Council, DPIE Water, Heritage NSW, DPIE Environment, Energy and Science (EES), Sydney Water and Transport for NSW and Fire & rescue NSW (FRNSW).

During the EIS process, the Department has been kept up to date on the progress of the works at regular intervals via email.

4.1.2 NSW Environment Protection Authority (EPA)

An email was sent to the NSW EPA on 21 September 2020 containing the Scoping Report and Preliminary Site Plans requesting a meeting to be held regarding the project. This was followed up on 30 September 2020 and 20 January 2021. The main EPA contact, Trevor Wilson was on leave and this email was followed up again on 5 May 2021 requesting a meeting.

An online meeting was held with the EPA on 8 June 2021. The main issues discussed that EPA raised most concern over included:

- Dust – recently there have been waste facilities emitting fine particles of dust. Measures to reduce dust emissions and keep dust from escaping the building is one of the most important issues. Options to improve dust generation and minimise escape of smaller fractions should be considered.
- Fire – an increase in the number of fires in waste facilities has occurred over the past 5 years. The EIS needs to address the Fire and Rescue NSW Fire Safety in Waste Facilities Guidelines.
- Noise – looking at noise control measures for the small crusher to ensure noise is not an issue.

4.1.3 Environment, Energy and Science Group (EES)

The Environment, Energy and Science Group (EES), the former Office of Environment and Heritage (OEH) were contacted via email on 21 September 2020 requesting a meeting regarding the project. The revised Scoping Report and preliminary site plans were provided. An email response was received on 23 September 2020 declining a meeting due to the number of major projects currently being assessed and indicated input will be provided on the SEARs when requested by the Planning and Assessment Group.

4.1.4 Fire and Rescue NSW

Fire and Rescue NSW (FRNSW) were contacted via email initially on 21 September 2020 to request a meeting. The revised Scoping report and preliminary plans were provided. The appropriate application form to request a meeting was completed and provided to FRNSW on 22



September 2020 and agreement to pay FRNSW the charge for the provision of services performed in connection with statutory fire safety was emailed by Cobra Waste Solutions on 24 September 2020.

A meeting was held over the phone with Brendon Hurley at 10:00am on Thursday 1 October 2020. The following was discussed:

- The site will comply with the Fire and Rescue NSW – fire safety in waste facilities guideline, with the focus on:
 - ▶ Installation of a sprinkler system;
 - ▶ Upgrade of the hydrant system;
 - ▶ Fire brigade access around the building;
 - ▶ Separation of stored materials; and
 - ▶ Storage water during a fire.
- Provide documents for sprinklers, hydrants, hose reels, brigade access.
- A copy of the BCA assessment and fire consultant certification will be provided with the development application.

4.1.5 Transport for NSW

Transport for NSW (TfNSW) were contacted via email on 28 September 2020 and again on 21 January 2020 to request a meeting. The revised Scoping report and preliminary plans were provided.

No response was received.

4.1.6 Cumberland City Council

Cumberland City Council was contacted via email on 21 September 2020 requesting a meeting regarding the project. The revised Scoping Report and preliminary site plans were provided. Council responded on 28 September 2020 indicating that given the limited time afforded by the request, Council will not have an opportunity to meet to discuss the proposal as requested. Further, it was advised that Council were completing the SEARs request and offered to clarify any SEARs comments once these had been prepared and issued.

In response to the Council SEARs advice, the car parking area and bin storage arrangements were amended on the preliminary site plans.

A pre-lodgement meeting was formally requested on 21 January 2021. The meeting took place online on 1 April 2021, with meeting notes provided by Council on 3 May 2021. These notes are provided in Attachment 2.

Council advised their general requirements for assessments and information to be provided in the EIS as are detailed in the meeting notes. However, the main issues of concern raised discussed:

- Detailed plans showing stormwater outlets and pits on site with details of protection measures on drainage diagrams. Stormwater runoff must be appropriately treated to achieve the pollution removal target prior to release into existing stormwater systems.



- Flooding – flood information obtained from Council must be no more than 6 months old. The development must comply with requirements outlined in the flood advice letter and designed in accordance with the Holroyd DCP. Council will not support storing of material within the flood affected area. The proposed location of the bin storage area on the south-eastern corner is not supported. Car parking on the southern side encroaches the drainage easement and is not supported. Any alteration to approved land conditions within the easement is not supported.
- Car parking spaces must comply with Holroyd DCP. Based on the car parking rate for factory use, 1 space per 300 m² and 1 space will be required per 40 m² for office use. Reconfiguration of car parking spaces based on car parking rates will allow for spaces to be located outside the drainage easement encroachment area.

Site Plans were updated based on this advice.

4.1.7 Heritage NSW

Advice received from Heritage NSW as part of the SEARs process indicated that following review of the Scoping Report, Heritage NSW had no recommendations for the proposed development in relation to Aboriginal Cultural heritage matters.

4.1.8 Sydney Water

Letter sent 12/5/2021 and followed up by email on 3/6/2021. A response was received on 20/7/2021 and is provided in Attachment 2. Sydney Water comments are addressed as follows:

Comment:

As mentioned, this proposed development will utilise water for dust suppression and fire-water purposes on-site. Although the proposed source of water for this use is rainwater tanks, this is not a reliable water supply source and will likely require top-ups from our mains.

Response:

There are no proposed rainwater tanks. Water use for dust suppression would be sourced from mains water only.

Comment:

It is worth mentioning there is a private recycled water main fronting your site which may be utilised for these industrial purposes and will hence not require any potential water amplifications from us as a result of industrial usage. However, permission to connect to this main is subject to approval by the private provider.

Response:

Mains water is required for dust suppression to avoid potential contamination issues. The private recycled water main will not be utilised for the proposed development.

Comment:

As wastewater will be generated as the result of dust suppression, firewater run-off, and as there is a potential EPA requirement to dispose of the first stormwater runoff from the premises because of potential contamination, it is more than likely Sydney Water will require a Trade



Waste Agreement with the proponent for this development. This is unless sufficient information is provided to ascertain that no trade-wastewater will enter our sewer system.

Response:

No tradewaste agreement is required. Any contaminated firefighting water contained on site would be pumped into tankers to be removed off site by a licensed waste contractor.

Comment:

Sydney Water does not have enough information regarding this proposal's detailed water demand and wastewater flows for both domestic and industrial uses to determine whether this development will require upgrades to our local system.

Response:

Water use for the proposed facility is limited to office and amenities and dust suppression. A coolfog system or similar would be installed which uses fine droplets of water that evaporate within seconds. This would require a low volume of water. No wastewater would be generated.

4.1.9 Jemena

Letter sent 12 May 2021 and followed up by email on 3 June 2021. Luke Duncan phoned the Benbow office on 3 June 2021 to advise that a review has been undertaken with regard to the proposed development and the adjacent primary high pressure gas main and that Jemena does not have any issues with the development proceeding. An email confirming this was provided on 6 July 2021 that stated, "Jemena does not have any objection to the development as it does not pose any additional risk that does not already existing from other industrial uses in proximity to the Sydney Primary Main – see correspondence attached for clarity."

Written response is provided as Attachment 2.

4.2 COMMUNITY CONSULTATION

A community consultation leaflet (Attachment 3) was prepared and sent to the following surrounding landowners and occupiers shown in Table 4-1 on Tuesday 4 May 2021.

Table 4-1: Distribution of Community Leaflet

Address	Receiver Type	Direction from Subject Site	Method of Distribution
PINE ROAD RESIDENCES (SOUTH-WEST)			
1 Pine Rd, Yennora NSW 2161	Residential	SW	Posted
1A Pine Rd, Yennora NSW 2161	Residential	SW	Posted
3 Pine Rd, Yennora NSW 2161	Residential	SW	Posted
5 Pine Rd, Yennora NSW 2161	Residential	SW	Posted
7 Pine Rd, Yennora NSW 2161	Residential	SW	Posted
9 Pine Rd, Yennora NSW 2161	Residential	SW	Posted
11 Pine Rd, Yennora NSW 2161	Residential	SW	Posted



Table 4-1: Distribution of Community Leaflet

Address	Receiver Type	Direction from Subject Site	Method of Distribution
13 Pine Rd, Yennora NSW 2161	Residential	SW	Posted
15 Pine Rd, Yennora NSW 2161	Residential	SW	Posted
17 Pine Rd, Yennora NSW 2161	Residential (R8)	SW	Posted
RAILWAY STREET RESIDENCES			
45 Railway St, Yennora NSW 2161	Residential (R2)	E	Posted
88 Railway St, Yennora NSW 2161	Residential	S	Posted
90 Railway St, Yennora NSW 2161	Residential	S	Posted
91 Railway St, Yennora NSW 2161	Residential	S	Posted
91A Railway St, Yennora NSW 2161	Residential	S	Posted
91B Railway St, Yennora NSW 2161	Residential	S	Posted
92 Railway St, Yennora NSW 2161	Residential	S	Posted
94 Railway St, Yennora NSW 2161	Residential	S	Posted
96 Railway St, Yennora NSW 2161	Residential	S	Posted
98 Railway St, Yennora NSW 2161	Residential	S	Posted
104 Railway St, Yennora	Residential (R9)	S	Posted
Units 1-19, 85 Railway St, Yennora NSW 2161	Residential	S	Posted
ELLIS PARADE PROPERTIES (SOUTH)			
2A Ellis Parade, Yennora NSW 2161	Residential (R1)	SE	Posted
Yennora Public School, 6-12 Ellis Parade, Yennora NSW 2161 1-9 Orchardleigh St, Yennora	School (R10)	SW	Posted
DENNISTOUN AVENUE RESIDENCES (NORTH)			
15 Dennistoun Ave, Guildford West	Residential	N	Posted
17 Dennistoun Ave, Guildford West	Residential	N	Posted
17A Dennistoun Ave, Guildford West	Residential	N	Posted
19 Dennistoun Ave, Guildford West	Residential	N	Posted
21 Dennistoun Ave, Guildford West	Residential	N	Posted
21A Dennistoun Ave, Guildford West	Residential	N	Posted
23 Dennistoun Ave, Guildford West	Residential	N	Posted
25 Dennistoun Ave, Guildford West	Residential	N	Posted
27 Dennistoun Ave, Guildford West	Residential	N	Posted
29 Dennistoun Ave, Guildford West	Residential	N	Posted
31A Dennistoun Ave, Guildford West	Residential	N	Posted
31 Dennistoun Ave, Guildford West	Residential	N	Posted
33 Dennistoun Ave, Guildford West	Residential	N	Posted
35 Dennistoun Ave, Guildford West	Residential	N	Posted
35A Dennistoun Ave, Guildford West	Residential	N	Posted
37A Dennistoun Ave, Guildford West	Residential	N	Posted
37 Dennistoun Ave, Guildford West	Residential	N	Posted
39 Dennistoun Ave, Guildford West	Residential	N	Posted



Table 4-1: Distribution of Community Leaflet

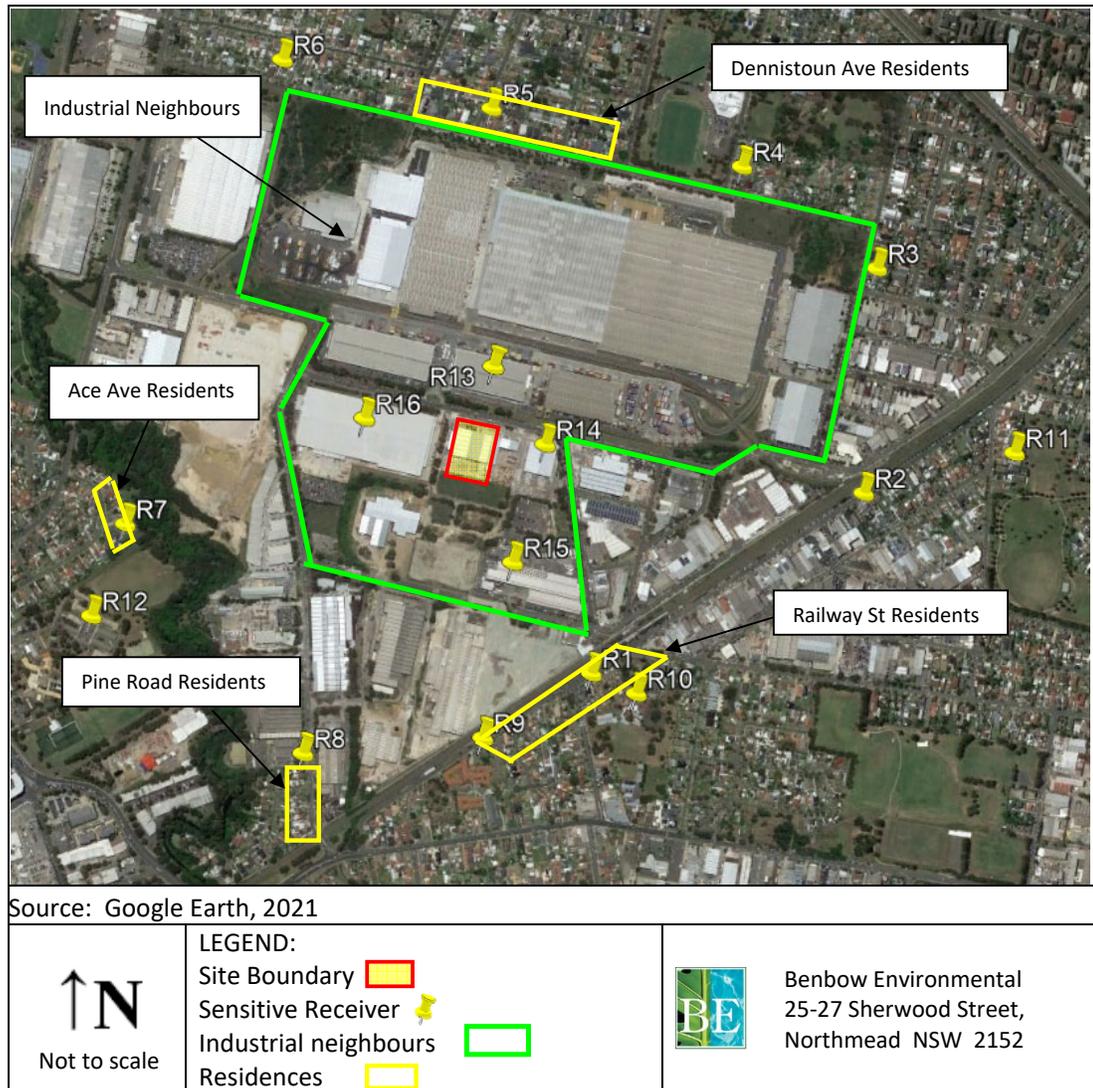
Address	Receiver Type	Direction from Subject Site	Method of Distribution
41 Dennistoun Ave, Guildford West	Residential	N	Posted
41A Dennistoun Ave, Guildford West	Residential	N	Posted
43 Dennistoun Ave, Guildford West	Residential	N	Posted
43A Dennistoun Ave, Guildford West	Residential	N	Posted
45 Dennistoun Ave, Guildford West	Residential (R5)	NNW	Posted
89 Dennistoun Ave, Guildford West	Residential (R6)	NW	Posted
ACE AVENUE RESIDENCES (WEST)			
26 Ace Ave, Fairfield NSW 2165	Residential	W	Posted
28 Ace Ave, Fairfield NSW 2165	Residential (R7)	W	Posted
30 Ace Ave, Fairfield NSW 2165	Residential	W	Posted
32 Ace Ave, Fairfield NSW 2165	Residential	W	Posted
34 Ace Ave, Fairfield NSW 2165	Residential	W	Posted
36 Ace Ave, Fairfield NSW 2165	Residential	W	Posted
38 Ace Ave, Fairfield NSW 2165	Residential	W	Posted
40 Ace Ave, Fairfield NSW 2165	Residential	W	Posted
Fairfield High School, 405 The Horsley Dr, Fairfield NSW 2165	School (R12)	WSW	Posted
OTHER RESIDENTIAL PROPERTIES			
66 Byron Road, Guildford	Residential (R3)	NE	Posted
58 Tamplin Road, Guildford	Residential (R4)	NNE	Posted
Mini Masterminds 16 Junction Street, Old Guildford	Early Learning Centre (R11)	E	Posted
NEIGHBOURING INDUSTRIAL PREMISES			
Stockland Yennora Distribution Centre, Building 1 (Main Office), 14-54 Dennistoun Ave, Yennora	Industrial/Commercial (R13)	N	Emailed Main office
Porter Equipment, Warehouse A, 30 Loftus Road, Yennora NSW 2161	Industrial/Commercial (R14)	E	Posted
5 Kiora Cres, Yennora NSW 2161	Painting Contractor End of Lease Cleaning Industrial/Commercial	SE	Posted
Proposed Industrial Units (under development), 7 Kiora Cres, Yennora NSW 2161	Industrial/Commercial	S	Posted & Emailed to CBRE Emailed to Ascendas REIT
Enviro Waste, 14-16 Kiora Cres, Yennora NSW 2161	Liquid Waste Plant Industrial/Commercial (R15)	SSE	Posted
SBN Building Contractors 12 Kiora Cres, Yennora NSW 2161	Industrial/Commercial	SE	Posted



Table 4-1: Distribution of Community Leaflet

Address	Receiver Type	Direction from Subject Site	Method of Distribution
Fast Flow Augers Manufacturer 10 Kiora Cres, Yennora NSW 2161	Industrial/Commercial	S	Posted
CDM Logistics, 27-49 Nelson Rd, Yennora (Abletts Transport & Thompson's Transport)	Logistics Company Industrial/Commercial	S	Emailed
51 Nelson Road, Yennora NSW 2161 (Under development – CBRE)	Industrial/Commercial	S	Posted to CBRE
XL Precast 1 Norrie Street, Yennora	Precast Concrete Industrial/Commercial	E	Posted
DB Schenker, 38 Pine Road, Yennora	Logistics Company Industrial/Commercial (R16)	W	Posted
The Iconic 205 Fairfield Road, Yennora	Commercial	W	Posted

Figure 4-1: Map showing approximate distribution of community leaflet



No face to face community consultation was undertaken due to COVID-19.

4.3 ASSESSMENT REQUIREMENTS

The Secretary's Environmental Assessment Requirements (SEARs) obtained for the proposed development include key issues and requirements identified by the DPIE and relevant regulatory authorities noted previously. These are provided in the following tables. A copy of the SEARs is also provided in Attachment 1.



Table 4-2: Planning Secretary’s Environmental Assessment Requirements

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
General Requirements		
The environmental impact statement (EIS) for the development must meet the form and content requirements of clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (the Regulation).		
In addition, the EIS must include:		
<ul style="list-style-type: none"> – a detailed description of the development, including: – an accurate history of the site, including development consents – the need for the proposed development – justification for the proposed development – likely staging of the development – likely interactions between the development and existing, approved and proposed operations in the vicinity of the site – plans of any proposed building works – contributions required to offset the proposal and – infrastructure upgrades or items required to facilitate the development, including measures to ensure these upgrades are appropriately maintained. 	<ul style="list-style-type: none"> 1.1 2.6 1.3 15 1.1.2 5.1 	<ul style="list-style-type: none"> 1-1 2-8 1-3 15-1 1-3 5-1
<ul style="list-style-type: none"> • consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments 	3	3-1
<ul style="list-style-type: none"> • consideration of issues discussed in Attachment 2 (public authority responses to key issues) • a risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment 	8.6	8-25
<ul style="list-style-type: none"> • a detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: <ul style="list-style-type: none"> – a description of the existing environment, using sufficient baseline data – an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes and – a description of the measures that would be implemented to avoid, minimise, – mitigate and if necessary, offset the potential impacts of the development, – including proposals for adaptive management and/or contingency plans to – manage significant risks to the environment. • a consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS. 	<ul style="list-style-type: none"> 6 8 10 12 12.1 	<ul style="list-style-type: none"> 6-25 8-1 10-1 12-1 12-1



Table 4-2: Planning Secretary's Environmental Assessment Requirements

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<p>The EIS must also be accompanied by:</p> <ul style="list-style-type: none"> • high quality files of maps and figures of the subject site and proposal • a report from a qualified quantity surveyor providing: <ul style="list-style-type: none"> – a detailed calculation of the capital investment value (CIV) of the proposal (as defined in clause 3 of the Environmental Planning and Assessment Regulation 2000) of the proposal, including details of all assumptions and components from which the CIV calculation is derived. The report shall be prepared on company letterhead and indicate the applicable GST component of the CIV – an estimate of the jobs that will be created by the development during the construction and operational phases of the proposed development and – certification that the information provided is accurate at the date of preparation. 	<p>Appendix 11 5.10</p> <p>5.5.3</p>	<p>5-24</p> <p>5-18</p>
<p>Key Issues</p> <p>The EIS must include an assessment of the potential impacts of the proposal (including cumulative impacts) and develop appropriate measures to avoid, mitigate, manage and/or offset these impacts.</p>		
<p>The EIS must address the following specific matters:</p> <ul style="list-style-type: none"> • Statutory and strategic context – including: <ul style="list-style-type: none"> – detailed justification for the proposal and the suitability of the site – detailed justification that the proposed land use is permissible with consent – a detailed description of the history of the site, including the relationship between the proposed development and all development consents and approved plans previously and/or currently applicable to the site – demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, adopted precinct plans, draft district plan(s) and adopted management plans and justification for any inconsistencies. This includes, but is not limited to: <ul style="list-style-type: none"> ○ State Environmental Planning Policy (Infrastructure) 2007 ○ State Environmental Planning Policy (State and Regional Development) 2011 ○ State Environmental Planning Policy No. 55 – Remediation of Land ○ Holroyd Local Environmental Plan 2013 ○ Draft Cumberland Local Environmental Plan 2020 ○ Greater Sydney Region Plan: A Metropolis of Three Cities ○ Our Greater Sydney 2056: Central City District Plan ○ Future Transport Strategy 2056. 	<p>1.3 15.1.3</p> <p>2.6</p> <p>3</p>	<p>1-3 15-3</p> <p>2-8</p> <p>3-1</p>



Table 4-2: Planning Secretary’s Environmental Assessment Requirements

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<ul style="list-style-type: none"> • Suitability of the Site – including: <ul style="list-style-type: none"> – a detailed justification that the site can accommodate the proposed resource – recovery facility, having regard to the scope of the operations of the existing – facility and its environmental impacts and relevant mitigation measures. • Community and Stakeholder Engagement – including: <ul style="list-style-type: none"> – a detailed community and stakeholder participation strategy which identifies who in the community has been consulted and a justification for their selection, other stakeholders consulted and the form(s) of the consultation, including a justification for this approach – a report on the results of the implementation of the strategy including issues raised by the community and surrounding owners and occupiers that may be impacted by the proposal – details of how issues raised during community and stakeholder consultation have been addressed and whether they have resulted in changes to the proposal and – details of the proposed approach to future community and stakeholder engagement based on the results of the consultation. 	<p>1.4.2 15</p> <p>12</p> <p>4</p>	<p>1-4 15-1</p> <p>12-1</p> <p>4-1</p>
<ul style="list-style-type: none"> • Waste Management – including: <ul style="list-style-type: none"> – a description of each of the waste streams that would be accepted at the site including maximum daily, weekly and annual throughputs and the maximum size for stockpiles – details of the source of the waste streams to justify the need for the proposed processing capacity – a description of waste processing operations (including flow diagrams for each waste stream), including a description of the technology to be installed, resource outputs and the quality control measures that would be implemented – details of how waste would be stored (including the maximum daily storage capacity of the site) and handled on site, and transported to and from the site including details of how the receipt of non-conforming waste would be dealt with – detail the developments waste tracking system for incoming and outgoing waste – detail the quality of waste produced and final dispatch locations – details of the waste management strategy for construction and ongoing operational waste generated – the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021 and – details of consistency with the EPA’s Standards for Managing Construction Waste in NSW (November 2018). 	<p>Appendix 7</p>	
<ul style="list-style-type: none"> • Air Quality and Odour – including: <ul style="list-style-type: none"> – a quantitative assessment of the potential air quality, dust and odour impacts of the development in accordance with relevant Environment Protection Authority guidelines – the details of buildings and air handling systems and – details of proposed mitigation, management and monitoring measures. 	<p>Appendix 1</p>	



Table 4-2: Planning Secretary’s Environmental Assessment Requirements

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<ul style="list-style-type: none"> • Soils and Water – including: <ul style="list-style-type: none"> – an assessment of potential surface and groundwater impacts associated with the development, including potential impacts on watercourses, riparian areas, groundwater, and groundwater-dependent communities nearby – a detailed site water balance including a description of the water demands and breakdown of water supplies, and any water licensing requirements – details of stormwater/wastewater management system including the capacity of onsite detention system(s), onsite sewage management and measures to treat, reuse or dispose of water 	8.3	8-7
<ul style="list-style-type: none"> – description of the measures to minimise water use – detailed flooding assessment – description of the proposed erosion and sediment controls during construction – characterisation of water quality at the point of discharge to surface and/or groundwater against the relevant water quality criteria (including details of the contaminants of concern that may leach from the waste into the wastewater and proposed mitigation measures to manage any impacts to receiving waters and monitoring activities and methodologies) and – characterisation of the nature and extent of any contamination on the site and surrounding area. 		
<ul style="list-style-type: none"> • Noise and Vibration – including: <ul style="list-style-type: none"> – a quantitative noise and vibration impact assessment undertaken by a suitably qualified person in accordance with the relevant Environment Protection Authority guidelines and including an assessment of nearby sensitive receivers – cumulative impacts of other developments and – details and justification of the proposed noise mitigation, management and monitoring measures. 	Appendix 2	



Table 4-2: Planning Secretary’s Environmental Assessment Requirements

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<ul style="list-style-type: none"> • Traffic and Transport – including: <ul style="list-style-type: none"> – details of all traffic types and volumes likely to be generated during construction and operation, including a description of key access / haul routes – an assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts at key intersections using SIDRA or similar traffic model – - plans demonstrating how all vehicles likely to be generated during construction and operation and awaiting loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network – details and plans of any proposed the internal road network, loading dock servicing and provisions, on-site parking provisions, and sufficient pedestrian and cyclist facilities, in accordance with the relevant Australian Standards – details of the largest vehicle anticipated to access and move within the site, including swept path analysis – swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site and – details of road upgrades, infrastructure works or new roads or access points required for the development if necessary. 	Appendix 3	
<ul style="list-style-type: none"> • Fire and Incident Management – including: <ul style="list-style-type: none"> – Identification of the aggregate quantities of combustible waste products to be stockpiled at any one time – technical information on the environmental protection equipment to be installed on the premises such as air, water and noise controls, spill clean-up equipment and fire (including location of fire hydrants and water flow rates at the hydrant) management and containment measures – details regarding the fire hydrant system and its minimum water supply capabilities appropriate to the site’s largest stockpile fire load 	8.6.3	8-28



Table 4-2: Planning Secretary’s Environmental Assessment Requirements

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<ul style="list-style-type: none"> – details of size and volume of stockpiles and their management and separation to minimise fire spread and facilitate emergency vehicle access consideration of consistency with NSW Fire & Rescue Fire Safety Guideline Fire Safety in Waste Facilities (February 2020) and – detailed information relating to the proposed structures addressing relevant levels of compliance with Volume One of the National Construction Code (NCC). – Hazards and Risk- including a preliminary risk screening in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and the Department’s Applying SEPP 33, with clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. If the preliminary risk screening indicates that the development is “potentially hazardous”, a Preliminary Hazard Analysis (PHA) must be prepared in accordance with the Department’s Hazardous Industry Planning Advisory Paper No. 6, ‘Hazard Analysis’ and Multi-level Risk Assessment. <p>Note: <i>The proposed development is located close to Jemena’s “Sydney Primary Main 550mm” gas pipeline (APGA Australian Pipeline Database (APD)). This pipeline is not licenced under the Pipelines Act 1967, but is understood to be operated in accordance with Australian Standards 2885 Pipelines – Gas and liquid petroleum (AS 2885). From the APD, it is noted that the entire proposed development area is within the measurement length (ML) specified in AS 2885 for this pipeline. The Applicant must consult with Jemena Limited to ensure that the existing pipeline can continue to operate in accordance with AS 2885 at all stages off the SSD (including construction and operation).</i></p>	8.6	8-25
<ul style="list-style-type: none"> • Biodiversity – including an assessment of the proposal’s biodiversity impacts in accordance with the Biodiversity Conservation Act 2016, including the preparation of a Biodiversity Development Assessment Report (BDAR) where required under the Act, except where a waiver for preparation of a BDAR has been granted. 	8.4	8-16
<ul style="list-style-type: none"> • Ecologically sustainable development – including a description of how the development will incorporate the principles of ecologically sustainable development in the design, construction and ongoing operation of the development. • Planning agreement/development contributions – demonstration that satisfactory arrangements have been or would be made to provide, or contribute to the provision of, necessary local and regional infrastructure required to support the development. 	11	11-1
<p>Consultation</p> <p>During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners.</p>		



Table 4-2: Planning Secretary’s Environmental Assessment Requirements

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<p>In particular you must consult with:</p> <ul style="list-style-type: none"> • Cumberland City Council • Environment Protection Authority • NSW Fire and Rescue • Environment, Energy and Science Group • Transport for NSW • Sydney Water • Jemena Limited • surrounding local landowners and stakeholders • any other public transport, utilities or community service providers. <p>The EIS must describe the consultation process and the issues raised and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</p>	4.1 Attachment 2	4-1



Table 4-3: DPI&E & NRAR Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<p>Include:</p> <ul style="list-style-type: none"> The identification of an adequate and secure water supply for the life of the project. This includes confirmation that water can be sourced from an appropriately authorised and reliable supply. This is also to include an assessment of the current market depth where water entitlement is required to be purchased. A detailed and consolidated site water balance. Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts. Proposed surface and groundwater monitoring activities and methodologies. Consideration of relevant legislation, policies and guidelines, including the NSW Aquifer Interference Policy (2012), the Guidelines for Controlled Activities on Waterfront Land (2018) and the relevant Water Sharing Plans (available at https://www.industry.nsw.gov.au/water). 	8.3.2.1	8-9
	8.3.2	8-9



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<p>The EPA has considered the details of the proposal as provided in the Preliminary Environmental Assessment ('PEA') and has identified the information it requires to issue its general terms of approval in Attachment A. The EPA's key information requirements for the proposal include</p> <p>1. The Facility must be enclosed – The EPA requires that all waste and materials are stored and processed inside an enclosed building. All waste handling activities, including receipt, sorting, processing, sampling, quarantine, storage and loading must be conducted within an enclosed building.</p> <ul style="list-style-type: none"> No waste, including finished products, may be stored outside. Any external haulage areas or roads must be sealed hardstand. Any unused external surfaces must be sealed hardstand or vegetated 	5.2	5-1
<p>2. Waste Management – the Environmental Assessment include a detailed assessment of the waste management processes to be undertaken at the Premises. This includes but is not limited to:</p> <ul style="list-style-type: none"> details of the sources of waste to be received at the Premises; details of the types and quantities of each type of waste to be received at the Premises; details of the maximum volume of waste to be stored on the Premises at any one time; details of the maximum annual throughput of waste for be processed at the Premises; a description of waste processing procedures for each waste type; the PEA indicates that the proposal will trigger the scheduled activities of resource recovery and waste processing. The EPA is unable to issue a licence for both these activities simultaneously. Resource recovery applies to activities which dispose of less than 50% of waste after processing, while waste processing applies to activities that dispose of more than 50% of waste after processing; a description of how the proponent will meet the EPA's record keeping and reporting requirements, including weighing material in and out of the Premises (refer to the EPA's Waste Levy Guidelines for more information – available at http://www.epa.nsw.gov.au/your-environment/waste/waste-levy; a detailed site plan(s) identifying areas for: <ul style="list-style-type: none"> haulage; waste receipt, processing, storage and loading (for each waste type) quarantine; infrastructure for environmental controls including dust, noise, water and wheelwash; weighbridge; site boundaries; stormwater drainage areas; and unused stabilised areas; details of the type and quantities of materials to be produced and their intended fate; details of any materials produced under a Resource Recovery Order, and the controls in place for meeting the conditions of that order; <p>a description of procedures for dealing with non-conforming waste (i.e. waste not permitted to be received at the Premises).</p>	Appendix 7	



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<p>3. Waste types – the EPA requires detailed information on the waste types proposed to be received at the Premises. For each waste type the applicant must detail the physical and chemical content of the waste, the types of pollution which may result from the storage and processing of that waste and mitigation measures for managing any such impacts.</p> <p>The list of waste types to be received at the Premises must be made clear.</p>	Appendix 7	
<p>Please note that the EPA will not consider including the following waste types on the licence:</p> <ul style="list-style-type: none"> Excavated Natural Material or other wastes listed under a resource recovery exemption – resource recovery exemptions apply to the application of waste to land. It is not appropriate to list these on an environment protection licence. The EPA may consider allowing receipt of Virgin Excavated Natural Material and soils at the Premises. 	5.4.3	5-9
<p>4. Water Management – the EPA expects that assessment of the impacts to water be included in the application. This must include as a minimum characterisation of any proposed discharges from the premises (both volume and quality), assessment of the potential impacts from these discharges and proposed mitigation measures to manage any impacts. The Environmental Assessment must address potential impacts on South Creek, its riparian and flood zones, including a flood impact assessment.</p> <p>Discharges includes, but are not limited to stormwater (contaminated and uncontaminated), and waste water (such as from dewatering). Please refer to Attachment A for detail of what is to be included in assessment of water impacts.</p> <p>Please refer to Attachment A for detail of what is to be included in water impact assessments. Details of stormwater management during both construction and operation must be included in the Environmental Assessment.</p>	Appendix 6	
<p>5. Wheelwash - Best practice waste management facilities contain a wheelwash to reduce risk of contaminants being tracked out onto public roads. The EPA notes that the Report does not contain reference to a wheelwash for the site. The Proponent should set out in the Environmental Assessment whether a wheelwash will be installed and if not, justification as to why a wheelwash will not be installed</p>	5.6.3.1 Appendix 6	5-20



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<p>6. Air Quality - The Environmental Assessment should include an air quality assessment that identifies all potential air emissions from the proposal with particular regard to dust generated by the large scale of dust producing works taking place on the site. The air assessment must consider the proximity of the proposal to the residential areas surrounding the site. The proponent must assess the impact of these discharges and demonstrate effective control of all identified air emissions from the proposal. Please refer to Attachment A for detail of what is to be included in the air quality impact assessment.</p> <p>As this proposal is for a large scale facility (150,000 tpa), you will need to take special precautions to prevent dust being emitted offsite through the open doors of the building. The proponent should consider the installation of a dust extraction system to minimise dust in the building which can potentially emit offsite through open doors used by traffic. Any openings in the building must be included when modelling dust emissions from the site.</p> <p>Please note, that in relation to air impacts, a place where someone works may be considered a sensitive receiver. Therefore, industrial neighbours adjacent to the proposal must be included as sensitive receivers when conducting an air quality or odour impact assessment. In carrying out the air assessment, the proponent should refer to the relevant guidelines as listed in Attachment A and any relevant industry codes of practice and best practice management guidelines.</p>	Appendix 1	
<p>8. Changes to the Protection of the Environment Operations (Waste) Regulation - The Applicant should be aware that changes to the Protection of the Environment Operations (Waste) Regulation commenced on 16 November 2018, which legislates "Standards for managing construction waste in NSW" (https://www.epa.nsw.gov.au/publications/managewaste/18p1270-standards-for-managing-construction-waste-in-nsw). These standards must be complied with from 16 May 2019, regardless of when approval was given for the facility. The EPA encourages the Applicant to be fully aware of these legislative requirements and ensure their operations are compliant.</p>	Appendix 7	



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<p>Authorised amount and financial assurance - It should also be noted that there are several requirements for holders of environment protection licenses, including a limit on the maximum amount of waste permitted onsite at any one time, monthly recording and reporting and provision of a financial assurance. The EPA will discuss these matters further with the Applicant at the licensing stage.</p> <p>In carrying out the assessment, the proponent should refer to the relevant guidelines as listed in Attachment B and any relevant industry codes of practice and best practice management guidelines.</p> <p>Please note that this response does not cover biodiversity or Aboriginal cultural heritage issues, which are the responsibility of the Office of Environment and Heritage.</p> <p>The Proponent should be made aware that any commitments made in the Environmental assessment may be formalised as approval conditions and may also be placed as formal licence conditions.</p> <p>The Proponent should be made aware that, consistent with provisions under Part 9.4 of the Protection of the Environment Operations Act 1997 (“the Act”) the EPA may require the provision of a financial assurance and/or assurances. The amount and form of the assurance(s) would be determined by the EPA and required as a condition of an Environment Protection Licence (“EPL”).</p> <p>In addition, as a requirement of an EPL, the EPA will require the Proponent to prepare, test and implement a Pollution Incident Response Management Plan and/or Plans in accordance with Section 153A of the Act.</p>	12.2.3	12-5
Executive Summary		
The executive summary should include a brief discussion of the extent to which the proposal achieves identified environmental outcomes.		
The Proposal		
1. Objectives of the Proposal		
<ul style="list-style-type: none"> • The objectives of the proposal should be clearly stated and refer to: <ol style="list-style-type: none"> a) the size and type of the operation, the nature of the processes and the products, by-products and wastes produced b) a life cycle approach to the production, use or disposal of products c) the anticipated level of performance in meeting required environmental standards and cleaner production principles d) the staging and timing of the proposal and any plans for future expansion e) the proposal’s relationship to any other industry or facility. 	1.1.1	1-2



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
2. Description of the Proposal - General		
<ul style="list-style-type: none"> • Outline the production process including: <ol style="list-style-type: none"> a) the environmental “mass balance” for the process – quantify in-flow and out-flow of materials, any points of discharge to the environment and their respective destinations (sewer, stormwater, atmosphere, recycling, landfill etc) b) any life-cycle strategies for the products. • Outline cleaner production actions, including: <ol style="list-style-type: none"> a) measures to minimise waste (typically through addressing source reduction) b) proposals for use or recycling of by-products c) proposed disposal methods for solid and liquid waste d) air management systems including all potential sources of air emissions, proposals to re-use or treat emissions, emission levels relative to relevant standards in regulations, discharge points e) water management system including all potential sources of water pollution, proposals for re-use, treatment etc, emission levels of any wastewater discharged, discharge points, summary of options explored to avoid a discharge, reduce its frequency or reduce its impacts, and rationale for selection of option to discharge. f) soil contamination treatment and prevention systems. 	1.1	1-1
<ul style="list-style-type: none"> • Outline construction works including: <ol style="list-style-type: none"> a) actions to address any existing soil contamination b) any earthworks or site clearing; re-use and disposal of cleared material (including use of spoil on-site) c) construction timetable and staging; hours of construction; proposed construction methods d) environment protection measures, including noise mitigation measures, dust control measures and erosion and sediment control measures. • Include a site diagram showing the site layout and location of environmental controls. 	5.3	5-5
Air		
<ul style="list-style-type: none"> • Identify all sources or potential sources of air emissions from the development. <p><i>Note: emissions can be classed as either:</i></p> <ul style="list-style-type: none"> – point (e.g. emissions from stack or vent) or – fugitive (from wind erosion, leakages or spillages, associated with loading or unloading, conveyors, storage facilities, plant and yard operation, vehicle movements (dust from road, exhausts, loss from load), land clearing and construction works). 	Appendix 1	
<ul style="list-style-type: none"> • Provide details of the project that are essential for predicting and assessing air impacts including: <ol style="list-style-type: none"> a) the quantities and physio-chemical parameters (e.g. concentration, moisture content, bulk density, particle sizes etc) of materials to be used, transported, produced or stored b) an outline of procedures for handling, transport, production and storage c) the management of solid, liquid and gaseous waste streams with potential to generate emissions to air. 	Appendix 1	



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Noise and Vibration		
<ul style="list-style-type: none"> Identify all noise sources or potential sources from the development (including both construction and operation phases). Detail all potentially noisy activities including ancillary activities such as transport of goods and raw materials. 	Appendix 2	
<ul style="list-style-type: none"> Specify the times of operation for all phases of the development and for all noise producing activities. 	Appendix 2	
<ul style="list-style-type: none"> For projects with a significant potential traffic noise impact provide details of road alignment (include gradients, road surface, topography, bridges, culverts etc), and land use along the proposed road and measurement locations – diagrams should be to a scale sufficient to delineate individual residential blocks. 	Appendix 2	
Water		
<ul style="list-style-type: none"> Provide details of the project that are essential for predicting and assessing impacts to waters including: <ol style="list-style-type: none"> the quantity and physio-chemical properties of all potential water pollutants and the risks they pose to the environment and human health, including the risks they pose to Water Quality Objectives in the ambient waters (as defined on http://www.environment.nsw.gov.au/ieo/index.htm, using technical criteria derived from <i>the Australian and New Zealand Guidelines for Fresh and Marine Water Quality</i>, ANZECC 2000) the management of discharges with potential for water impacts drainage works and associated infrastructure; land-forming and excavations; working capacity of structures; and water resource requirements of the proposal. 	8.3.2 Appendix 6	8-9 Appendix 6
<ul style="list-style-type: none"> Outline site layout, demonstrating efforts to avoid proximity to water resources (especially for activities with significant potential impacts e.g. effluent ponds) and showing potential areas of modification of contours, drainage etc. 	8.3.2	8-9
<ul style="list-style-type: none"> Outline how total water cycle considerations are to be addressed showing total water balances for the development (with the objective of minimising demands and impacts on water resources). Include water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options. 	8.3.2	8-9
Waste and Chemicals		
<p>Provide details of the quantity and type of both liquid waste and non-liquid waste generated, handled, processed or disposed of at the premises. Waste must be classified according to the EPA's <i>Waste Classification Guidelines 2014 (as amended from time to time)</i></p>	Appendix 7	



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<ul style="list-style-type: none"> • Provide details of liquid waste and non-liquid waste management at the facility, including: <ol style="list-style-type: none"> a) the transportation, assessment and handling of waste arriving at or generated at the site b) any stockpiling of wastes or recovered materials at the site c) any waste processing related to the facility, including reuse, recycling, reprocessing (including composting) or treatment both on- and off-site d) the method for disposing of all wastes or recovered materials at the facility e) the emissions arising from the handling, storage, processing and reprocessing of waste at the facility f) the proposed controls for managing the environmental impacts of these activities. 	Appendix 7	
<ul style="list-style-type: none"> • Provide details of spoil disposal with particular attention to: <ol style="list-style-type: none"> a) the quantity of spoil material likely to be generated b) proposed strategies for the handling, stockpiling, reuse/recycling and disposal of spoil c) the need to maximise reuse of spoil material in the construction industry d) identification of the history of spoil material and whether there is any likelihood of contaminated material, and if so, measures for the management of any contaminated material e) designation of transportation routes for transport of spoil. 	Appendix 7	
<ul style="list-style-type: none"> • Provide details of procedures for the assessment, handling, storage, transport and disposal of all hazardous and dangerous materials used, stored, processed or disposed of at the site, in addition to the requirements for liquid and non-liquid wastes. 	Appendix 7	
<ul style="list-style-type: none"> • Provide details of the type and quantity of any chemical substances to be used or stored and describe arrangements for their safe use and storage. 	8.6.1	8-25
<ul style="list-style-type: none"> • Reference should be made to the guidelines: EPA's <i>Waste Classification Guidelines 2014 (as amended from time to time)</i> 	Appendix 7	
ESD		
<ul style="list-style-type: none"> • Demonstrate that the planning process and any subsequent development incorporates objectives and mechanisms for achieving ESD, including: <ol style="list-style-type: none"> a) an assessment of a range of options available for use of the resource, including the benefits of each option to future generations proper valuation and pricing of environmental resources b) identification of who will bear the environmental costs of the proposal. 	11	11-1
3. Rehabilitation		
<ul style="list-style-type: none"> • Outline considerations of site maintenance, and proposed plans for the final condition of the site (ensuring its suitability for future uses). 	12	12-1
4. Consideration of Alternatives and Justifications for the Proposal		
<ul style="list-style-type: none"> • Consider the environmental consequences of adopting alternatives, including alternative: <ol style="list-style-type: none"> a) sites and site layouts b) access modes and routes c) materials handling and production processes d) waste and water management e) impact mitigation measures f) energy sources 	1.4.1	1-4



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<ul style="list-style-type: none"> • Selection of the preferred option should be justified in terms of: <ul style="list-style-type: none"> a) ability to satisfy the objectives of the proposal b) relative environmental and other costs of each alternative c) acceptability of environmental impacts and contribution to identified environmental objectives d) acceptability of any environmental risks or uncertainties e) reliability of proposed environmental impact mitigation measures f) efficient use (including maximising re-use) of land, raw materials, energy and other resources. 	1.3	1-3
The Location		
1. General		
<ul style="list-style-type: none"> • Provide an overview of the affected environment to place the proposal in its local and regional environmental context including: <ul style="list-style-type: none"> a) meteorological data (e.g. rainfall, temperature and evaporation, wind speed and direction) b) topography (landform element, slope type, gradient and length) c) surrounding land uses (potential synergies and conflicts) d) geomorphology (rates of landform change and current erosion and deposition processes) e) soil types and properties (including erodibility; engineering and structural properties; dispersibility; permeability; presence of acid sulfate soils and potential acid sulfate soils) f) ecological information (water system habitat, vegetation, fauna) g) availability of services and the accessibility of the site for passenger and freight transport. 	6	6-25
2. Air		
<ul style="list-style-type: none"> • Describe the topography and surrounding land uses. Provide details of the exact locations of dwellings, schools and hospitals. Where appropriate provide a perspective view of the study area such as the terrain file used in dispersion models. 	Appendix 1	
<ul style="list-style-type: none"> • Describe surrounding buildings that may effect plume dispersion. 		
<ul style="list-style-type: none"> • Provide and analyse site representative data on following meteorological parameters: <ul style="list-style-type: none"> a) temperature and humidity b) rainfall, evaporation and cloud cover c) wind speed and direction d) atmospheric stability class e) mixing height (the height that emissions will be ultimately mixed in the atmosphere) f) katabatic air drainage g) air re-circulation. 		
3. Noise and Vibration		
<ul style="list-style-type: none"> • Identify any noise sensitive locations likely to be affected by activities at the site, such as residential properties, schools, churches, and hospitals. Typically the location of any noise sensitive locations in relation to the site should be included on a map of the locality. 	Appendix 2	
<ul style="list-style-type: none"> • Identify the land use zoning of the site and the immediate vicinity and the potentially affected areas. 		



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
4. Water		
<ul style="list-style-type: none"> Describe the catchment including proximity of the development to any waterways and provide an assessment of their sensitivity/significance from a public health, ecological and/or economic perspective. The Water Quality and River Flow Objectives on the website: http://www.environment.nsw.gov.au/ieo/index.htm should be used to identify the agreed environmental values and human uses for any affected waterways. This will help with the description of the local and regional area. 	6.3.1	6-27
5. Soil Contamination Issues		
<ul style="list-style-type: none"> Provide details of site history – if earthworks are proposed, this needs to be considered with regard to possible soil contamination, for example if the site was previously a landfill site or if irrigation of effluent has occurred. 	8.3.1	8-7
Identification And Prioritisation Of Issues/Scoping Of Impact Assessment		
<ul style="list-style-type: none"> Provide an overview of the methodology used to identify and prioritise issues. The methodology should take into account: <ol style="list-style-type: none"> relevant NSW government guidelines industry guidelines EISs for similar projects relevant research and reference material relevant preliminary studies or reports for the proposal consultation with stakeholders. 	7	7-1
<ul style="list-style-type: none"> Provide a summary of the outcomes of the process including: <ol style="list-style-type: none"> all issues identified including local, regional and global impacts (e.g. increased/ decreased greenhouse emissions) key issues which will require a full analysis (including comprehensive baseline assessment) issues not needing full analysis though they may be addressed in the mitigation strategy justification for the level of analysis proposed (the capacity of the proposal to give rise to high concentrations of pollution compared with the ambient environment or environmental outcomes is an important factor in setting the level of assessment). 		
The Environmental Issues		
1. General		
<ul style="list-style-type: none"> The potential impacts identified in the scoping study need to be assessed to determine their significance, particularly in terms of achieving environmental outcomes, and minimising environmental pollution. 	7.2	7-9
<ul style="list-style-type: none"> Identify gaps in information and data relevant to significant impacts of the proposal and any actions proposed to fill those information gaps so as to enable development of appropriate management and mitigation measures. This is in accordance with ESD requirements. 		
Describe baseline conditions		
<ul style="list-style-type: none"> Provide a description of existing environmental conditions for any potential impacts. 	6	6-25
Assess impacts		
<ul style="list-style-type: none"> For any potential impacts relevant for the assessment of the proposal provide a detailed analysis of the impacts of the proposal on the environment including the cumulative impact of the proposal on the receiving environment especially where there are sensitive receivers. 	8	8-1



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<ul style="list-style-type: none"> Describe the methodology used and assumptions made in undertaking this analysis (including any modelling or monitoring undertaken) and indicate the level of confidence in the predicted outcomes and the resilience of the environment to cope with the predicted impacts. The analysis should also make linkages between different areas of assessment where necessary to enable a full assessment of environmental impacts e.g. assessment of impacts on air quality will often need to draw on the analysis of traffic, health, social, soil and/or ecological systems impacts; etc. The assessment needs to consider impacts at all phases of the project cycle including: exploration (if relevant or significant), construction, routine operation, start-up operations, upset operations and decommissioning if relevant. The level of assessment should be commensurate with the risk to the environment. 		
<i>Describe Management And Mitigation Measures</i>		
<ul style="list-style-type: none"> Describe any mitigation measures and management options proposed to prevent, control, abate or mitigate identified environmental impacts associated with the proposal and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented. Proponents are expected to implement a ‘reasonable level of performance’ to minimise environmental impacts. The proponent must indicate how the proposal meets reasonable levels of performance. For example, reference technology based criteria if available, or identify good practice for this type of activity or development. A ‘reasonable level of performance’ involves adopting and implementing technology and management practices to achieve certain pollutant emissions levels in economically viable operations. Technology-based criteria evolve gradually over time as technologies and practices change. Use environmental impacts as key criteria in selecting between alternative sites, designs and technologies, and to avoid options having the highest environmental impacts. Outline any proposed approach (such as an Environmental Management Plan) that will demonstrate how commitments made in the EIS will be implemented. Areas that should be described include: <ul style="list-style-type: none"> a) operational procedures to manage environmental impacts b) monitoring procedures c) training programs d) community consultation e) complaint mechanisms including site contacts f) strategies to use monitoring information to improve performance g) strategies to achieve acceptable environmental impacts and to respond in event of exceedences. 	12	12-1
2. Air		
<i>Describe baseline conditions</i>		
<ul style="list-style-type: none"> Provide a description of existing air quality and meteorology, using existing information and site representative ambient monitoring data. 		



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Assess Impacts		
<ul style="list-style-type: none"> Identify all pollutants of concern and estimate emissions by quantity (and size for particles), source and discharge point. Estimate the resulting ground level concentrations of all pollutants. Where necessary (e.g. potentially significant impacts and complex terrain effects), use an appropriate dispersion model to estimate ambient pollutant concentrations. Discuss choice of model and parameters with the EPA. Describe the effects and significance of pollutant concentration on the environment, human health, amenity and regional ambient air quality standards or goals. Describe the contribution that the development will make to regional and global pollution, particularly in sensitive locations. For potentially odorous emissions provide the emission rates in terms of odour units (determined by techniques compatible with EPA procedures). Use sampling and analysis techniques for individual or complex odours and for point or diffuse sources, as appropriate. <i>Note: With dust and odour, it may be possible to use data from existing similar activities to generate emission rates.</i> Reference should be made to Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC, 2016); Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC, 2007); Assessment and Management of Odour from Stationary Sources in NSW (DEC, 2006); Technical Notes: Assessment and Management of Odour from Stationary Sources in NSW (DEC, 2006) 	8.1 Appendix 1	8-1 Appendix 1
Describe Management and Mitigation Measures		
<ul style="list-style-type: none"> Outline specifications of pollution control equipment (including manufacturer's performance guarantees where available) and management protocols for both point and fugitive emissions. Where possible, this should include cleaner production processes. 	8.6	8-25
3. Noise and Vibration		
Describe baseline conditions		
<ul style="list-style-type: none"> Determine the existing background (LA90) and ambient (LAeq) noise levels in accordance with the <i>NSW Industrial Noise Policy</i>. Determine the existing road traffic noise levels in accordance with the <i>NSW Environmental Criteria for Road Traffic Noise</i>, where road traffic noise impacts may occur. 	Appendix 2	



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<ul style="list-style-type: none"> • The noise impact assessment report should provide details of all monitoring of existing ambient noise levels including: <ul style="list-style-type: none"> a) details of equipment used for the measurements b) a brief description of where the equipment was positioned c) a statement justifying the choice of monitoring site, including the procedure used to choose the site(s), having regards to Fact Sheets A and B of the <i>NSW Industrial Noise Policy</i> d) details of the exact location of the monitoring site and a description of land uses in surrounding areas e) a description of the dominant and background noise sources at the site f) day, evening and night assessment background levels for each day of the monitoring period g) the final Rating Background Level (RBL) value h) graphs of the measured noise levels for each day should be provided i) a record of periods of affected data (due to adverse weather and extraneous noise), methods used to exclude invalid data and a statement indicating the need for any re-monitoring. 	Appendix 2	
Assess Impacts		
<ul style="list-style-type: none"> • Determine the project specific noise levels for the site. For each identified potentially affected receiver, this should include: <ul style="list-style-type: none"> a) determination of the intrusive criterion for each identified potentially affected receiver b) selection and justification of the appropriate amenity category for each identified potentially affected receiver c) determination of the project amenity criterion for each receiver d) determination of the appropriate maximum noise level event assessment (sleep disturbance) trigger level. • Maximum noise levels during night-time period (10pm-7am) should be assessed to analyse possible affects on sleep. Determine expected noise level and noise character likely to be generated from noise sources during: <ul style="list-style-type: none"> a) site establishment b) construction c) operational phases d) transport including traffic noise generated by the proposal e) other services. Note: The noise impact assessment report should include noise source data for each source in 1/1 or 1/3 octave band frequencies including methods for references used to determine noise source levels. Noise source levels and characteristics can be sourced from direct measurement of similar activities or from literature (if full references are provided). • Determine the noise levels likely to be received at the reasonably most affected location(s) (these may vary for different activities at each phase of the development). 	Appendix 2	



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<ul style="list-style-type: none"> • The noise impact assessment report should include: <ul style="list-style-type: none"> a) a plan showing the assumed location of each noise source for each prediction scenario b) a list of the number and type of noise sources used in each prediction scenario to simulate all potential significant operating conditions on the site c) any assumptions made in the predictions in terms of source heights, directivity effects, shielding from topography, buildings or barriers, etc d) methods used to predict noise impacts including identification of any noise models used e) The weather conditions considered for the noise predictions f) the predicted noise impacts from each noise source as well as the combined noise level for each prediction scenario g) for developments where a significant level of noise impact is likely to occur, noise contours for the key prediction scenarios should be derived h) an assessment of the need to include modification factors as detailed in Fact sheet C of the <i>NSW Noise Policy for Industry</i> 	Appendix 2	
<ul style="list-style-type: none"> • Discuss the findings from the predictive modelling and, where relevant noise criteria have not been met, recommend additional mitigation measures. 		
<ul style="list-style-type: none"> • The noise impact assessment report should include details of any mitigation proposed including the attenuation that will be achieved and the revised noise impact predictions following mitigation. <ul style="list-style-type: none"> a) Where relevant noise/vibration levels cannot be met after application of all feasible and reasonable mitigation measures the residual level of noise impact needs to be quantified. 		
<ul style="list-style-type: none"> • For the assessment of existing and future traffic noise, details of data for the road should be included such as assumed traffic volume; percentage heavy vehicles by time of day; and details of the calculation process. These details should be consistent with any traffic study carried out in the EIS. 		
<ul style="list-style-type: none"> • Where blasting is intended an assessment in accordance with the <i>Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration</i> (ANZECC, 1990) should be undertaken. The following details of the blast design should be included in the noise assessment: <ul style="list-style-type: none"> a) bench height, burden spacing, spacing burden ratio b) blast hole diameter, inclination and spacing c) type of explosive, maximum instantaneous charge, initiation, blast block size, blast frequency. 		
<i>Describe management and mitigation measures</i>		
<ul style="list-style-type: none"> • Determine the most appropriate noise mitigation measures and expected noise reduction including both noise controls and management of impacts for both construction and operational noise. This will include selecting quiet equipment and construction methods, noise barriers or acoustic screens, location of stockpiles, temporary offices, compounds and vehicle routes, scheduling of activities, etc. 	Appendix 2	



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<ul style="list-style-type: none"> • For traffic noise impacts, provide a description of the ameliorative measures considered (if required), reasons for inclusion or exclusion, and procedures for calculation of noise levels including ameliorative measures. Also include, where necessary, a discussion of any potential problems associated with the proposed ameliorative measures, such as overshadowing effects from barriers. Appropriate ameliorative measures may include: <ul style="list-style-type: none"> a) use of alternative transportation modes, alternative routes, or other methods of avoiding the new road usage b) control of traffic (eg: limiting times of access or speed limitations) c) resurfacing of the road using a quiet surface d) use of (additional) noise barriers or bunds e) treatment of the façade to reduce internal noise levels buildings where the night-time criteria is a major concern f) more stringent limits for noise emission from vehicles (i.e. using specially designed ‘quite’ trucks and/or trucks to use air bag suspension g) driver education h) appropriate truck routes i) limit usage of exhaust breaks j) use of premium muffles on trucks k) reducing speed limits for trucks l) ongoing community liaison and monitoring of complaints m) phasing in the increased road use. 	Appendix 2	
4. Water		
<i>Describe Baseline Conditions</i>		
<ul style="list-style-type: none"> • Describe existing surface and groundwater quality – an assessment needs to be undertaken for any water resource likely to be affected by the proposal and for all conditions (e.g. a wet weather sampling program is needed if runoff events may cause impacts). <i>Note: Methods of sampling and analysis need to conform with an accepted standard (e.g. Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC 2004) or be approved and analyses undertaken by accredited laboratories).</i> • Provide site drainage details and surface runoff yield. 	6.3	6-27
<ul style="list-style-type: none"> • State the ambient Water Quality and River Flow Objectives for the receiving waters. These refer to the community’s agreed environmental values and human uses endorsed by the Government as goals for the ambient waters. These environmental values are published on the website: http://www.environment.nsw.gov.au/ieo/index.htm. The EIS should state the environmental values listed for the catchment and waterway type relevant to your proposal. NB: A consolidated and approved list of environmental values are not available for groundwater resources. Where groundwater may be affected the EIS should identify appropriate groundwater environmental values and justify the choice. 	6.3.1.1	6-30



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<ul style="list-style-type: none"> State the indicators and associated trigger values or criteria for the identified environmental values. This information should be sourced from the ANZECC 2000 <i>Guidelines for Fresh and Marine Water Quality</i> (http://www.environment.gov.au/water/publications/quality/nwqms-guidelines-4-vol1.html) (Note that, as at 2004, the NSW Water Quality Objectives booklets and website contain technical criteria derived from the 1992 version of the ANZECC Guidelines. The Water Quality Objectives remain as Government Policy, reflecting the community’s environmental values and long-term goals, but the technical criteria are replaced by the more recent ANZECC 2000 Guidelines). NB: While specific guidelines for groundwater are not available, the ANZECC 2000 Guidelines endorse the application of the trigger values and decision trees as a tool to assess risk to environmental values in groundwater. State any locally specific objectives, criteria or targets, which have been endorsed by the government e.g. the Healthy Rivers Commission Inquiries or the NSW Salinity Strategy (DLWC, 2000) (http://www.environment.nsw.gov.au/salinity/government/nswstrategy.htm). Where site specific studies are proposed to revise the trigger values supporting the ambient Water Quality and River Flow Objectives, and the results are to be used for regulatory purposes (e.g. to assess whether a licensed discharge impacts on water quality objectives), then prior agreement from the EPA on the approach and study design must be obtained. 		
<ul style="list-style-type: none"> Describe the state of the receiving waters and relate this to the relevant Water Quality and River Flow Objectives (i.e. are Water Quality and River Flow Objectives being achieved?). Proponents are generally only expected to source available data and information. However, proponents of large or high risk developments may be required to collect some ambient water quality / river flow / groundwater data to enable a suitable level of impact assessment. Issues to include in the description of the receiving waters could include: <ul style="list-style-type: none"> a) lake or estuary flushing characteristics b) specific human uses (e.g. exact location of drinking water offtake) c) sensitive ecosystems or species conservation values d) a description of the condition of the local catchment e.g. erosion levels, soils, vegetation cover, etc e) an outline of baseline groundwater information, including, but not restricted to, depth to watertable, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment f) historic river flow data where available for the catchment. 	6.3.1.1	6-30
<p>Assess impacts</p> <ul style="list-style-type: none"> No proposal should breach clause 120 of the <i>Protection of the Environment Operations Act 1997</i> (i.e. pollution of waters is prohibited unless undertaken in accordance with relevant regulations). Identify and estimate the quantity of all pollutants that may be introduced into the water cycle by source and discharge point including residual discharges after mitigation measures are implemented. Include a rationale, along with relevant calculations, supporting the prediction of the discharges. 	8.3.2	8-9



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<ul style="list-style-type: none"> Describe the effects and significance of any pollutant loads on the receiving environment. This should include impacts of residual discharges through modelling, monitoring or both, depending on the scale of the proposal. Determine changes to hydrology (including drainage patterns, surface runoff yield, flow regimes, wetland hydrologic regimes and groundwater). Describe water quality impacts resulting from changes to hydrologic flow regimes (such as nutrient enrichment or turbidity resulting from changes in frequency and magnitude of stream flow). Identify any potential impacts on quality or quantity of groundwater describing their source. 		
<ul style="list-style-type: none"> Identify potential impacts associated with geomorphological activities with potential to increase surface water and sediment runoff or to reduce surface runoff and sediment transport. Also consider possible impacts such as bed lowering, bank lowering, instream siltation, floodplain erosion and floodplain siltation. 	8.3.2	8-9
<ul style="list-style-type: none"> Identify impacts associated with the disturbance of acid sulfate soils and potential acid sulfate soils. Containment of spills and leaks shall be in accordance with EPA’s guidelines section ‘Bunding and Spill Management’ at http://www.epa.nsw.gov.au/mao/bundingspill.htm and the most recent versions of the Australian Standards referred to in the Guidelines. Containment should be designed for no-discharge. The significance of the impacts listed above should be predicted. When doing this it is important to predict the ambient water quality and river flow outcomes associated with the proposal and to demonstrate whether these are acceptable in terms of achieving protection of the Water Quality and River Flow Objectives. In particular the following questions should be answered: <ul style="list-style-type: none"> a) will the proposal protect Water Quality and River Flow Objectives where they are currently achieved in the ambient waters; and b) will the proposal contribute towards the achievement of Water Quality and River Flow Objectives over time, where they are not currently achieved in the ambient waters. 	8.3	8-7
<ul style="list-style-type: none"> Consult with the EPA as soon as possible if a mixing zone is proposed (a mixing zone could exist where effluent is discharged into a receiving water body, where the quality of the water being discharged does not immediately meet water quality objectives. The mixing zone could result in dilution, assimilation and decay of the effluent to allow water quality objectives to be met further downstream, at the edge of the mixing zone). The EPA will advise the proponent under what conditions a mixing zone will and will not be acceptable, as well as the information and modelling requirements for assessment. <i>Note: The assessment of water quality impacts needs to be undertaken in a total catchment management context to provide a wide perspective on development impacts, in particular cumulative impacts.</i> Where a licensed discharge is proposed, provide the rationale as to why it cannot be avoided through application of a reasonable level of performance, using available technology, management practice and industry guidelines. 		
<ul style="list-style-type: none"> Where a licensed discharge is proposed, provide the rationale as to why it represents the best environmental outcome and what measures can be taken to reduce its environmental impact. 	Appendix 6	



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<ul style="list-style-type: none"> Reference should be made to <i>Managing Urban Stormwater: Soils and Construction</i> (Landcom, 2004) and <i>Guidelines for Fresh and Marine Water Quality</i> ANZECC 2000). 	Appendix 6	
Describe management and mitigation measures		
<ul style="list-style-type: none"> Outline stormwater management to control pollutants at the source and contain them within the site. Also describe measures for maintaining and monitoring any stormwater controls. 	Appendix 6	
<ul style="list-style-type: none"> Outline erosion and sediment control measures directed at minimising disturbance of land, minimizing water flow through the site and filtering, trapping or detaining sediment. Also include measures to maintain and monitor controls as well as rehabilitation strategies. 		
<ul style="list-style-type: none"> Describe wastewater treatment measures that are appropriate to the type and volume of waste water and are based on a hierarchy of avoiding generation of waste water; capturing all contaminated water (including stormwater) on the site; reusing/recycling waste water; and treating any unavoidable discharge from the site to meet specified water quality requirements. 		
<ul style="list-style-type: none"> Outline pollution control measures relating to storage of materials, possibility of accidental spills (e.g. preparation of contingency plans), appropriate disposal methods, and generation of leachate. 		
<ul style="list-style-type: none"> Describe hydrological impact mitigation measures including: <ol style="list-style-type: none"> site selection (avoiding sites prone to flooding and waterlogging, actively eroding or affected by deposition) minimising runoff minimising reductions or modifications to flow regimes avoiding modifications to groundwater. 		
<ul style="list-style-type: none"> Describe groundwater impact mitigation measures including: <ol style="list-style-type: none"> site selection retention of native vegetation and revegetation artificial recharge providing surface storages with impervious linings monitoring program. 		
<ul style="list-style-type: none"> Describe geomorphological impact mitigation measures including: <ol style="list-style-type: none"> site selection erosion and sediment controls minimising instream works treating existing accelerated erosion and deposition monitoring program. 		
<ul style="list-style-type: none"> Any proposed monitoring should be undertaken in accordance with the <i>Approved Methods for the Sampling and Analysis of Water Pollutants in NSW</i> (DEC 2004). 		
5. Soils and Contamination		
Describe Baseline Conditions		
<ul style="list-style-type: none"> Provide any details (in addition to those provided in the location description - Section C) that are needed to describe the existing situation in terms of soil types and properties and soil contamination. 	8.3.1	8-7



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Assess impacts		
<ul style="list-style-type: none"> Identify any likely impacts resulting from the construction or operation of the proposal, including the likelihood of: <ol style="list-style-type: none"> disturbing any existing contaminated soil contamination of soil by operation of the activity subsidence or instability soil erosion disturbing acid sulfate or potential acid sulfate soils. Reference should be made to Contaminated Sites – Guidelines for Consultants Reporting on Contaminated Sites (OEH, 2011); Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (EPA, 2015). 	8.3.1	8-7
Describe management and mitigation measures		
<ul style="list-style-type: none"> Describe and assess the effectiveness or adequacy of any soil management and mitigation measures during construction and operation of the proposal including: <ol style="list-style-type: none"> erosion and sediment control measures proposals for site remediation – see <i>Managing Land Contamination, Planning Guidelines SEPP 55 – Remediation of Land</i> (Department of Urban Affairs and Planning and Environment Protection Authority, 1998) proposals for the management of these soils – see <i>Acid Sulfate Soil Manual</i> (Acid Sulfate Soil Advisory Committee 1998) and <i>Acid Sulfate Soils Assessment Guidelines</i> (Acid Sulfate Soil Advisory Committee 1998). 	8.3.1	8-7
6. Waste and Chemicals		
Describe baseline conditions		
<ul style="list-style-type: none"> Describe any waste or chemical operations related to the proposal. 	8.5	8-16
Assess Impacts		
<ul style="list-style-type: none"> Assess the adequacy of proposed measures to minimise natural resource consumption and minimize impacts from the handling, transporting, storage, processing and reprocessing of waste and/or chemicals. 	Appendix 7	
<ul style="list-style-type: none"> Reference should be made to the EPA’s <i>Waste Classification Guidelines 2014 (as in force from time to time)</i> 	Appendix 7	



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
<p>If the proposal is an energy from waste facility it must:</p> <ul style="list-style-type: none"> demonstrate that the proposed operation will comply with the NSW EPA’s Energy from Waste Policy Statement; describe of the classes and quantities of waste that would be thermally treated at the facility; demonstrate that waste used as a feedstock in the waste to energy plant would be the residual from a resource recovery process that maximises the recovery of material; detail procedures that would be implemented to control the inputs to the waste to energy plant, including contingency measures that would be implemented if inappropriate materials are identified; detail the location and size of stockpiles of unprocessed and processed recycled waste at the site; demonstrate any waste material (e.g. biochar, ash) produced from the waste to energy facility for land application is fit-for-purpose and poses minimal risk of harm to the environment in order to meet the requirements for consideration of a resource recovery order and /or exemption by the EPA; detail procedures for the management of other solid, liquid and gaseous waste streams; describe how waste would be treated, stored, used, disposed and handled on site, and transported to and from the site, and the potential impacts associated with these issues, including current and future offsite waste disposal methods; and identify the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the <i>NSW Waste Avoidance and Resource Recovery Strategy 2014-21</i>. 	Appendix 7	
Describe Management and Mitigation Measures		
<ul style="list-style-type: none"> Outline measures to minimise the consumption of natural resources. Outline measures to avoid the generation of waste and promote the re-use and recycling and reprocessing of any waste. Outline measures to support any approved regional or industry waste plans. 	Appendix 7	
7. Cumulative Impacts		
<ul style="list-style-type: none"> Identify the extent that the receiving environment is already stressed by existing development and background levels of emissions to which this proposal will contribute. Assess the impact of the proposal against the long term air, noise and water quality objectives for the area or region. Identify infrastructure requirements flowing from the proposal (e.g. water and sewerage services, transport infrastructure upgrades). Assess likely impacts from such additional infrastructure and measures reasonably available to the proponent to contain such requirements or mitigate their impacts (e.g. travel demand management strategies). 	10	10-1
List of Approvals and Licences		
<ul style="list-style-type: none"> Identify all approvals and licences required under environment protection legislation including details of all scheduled activities, types of ancillary activities and types of discharges (to air, land, water). 	14	14-1



Table 4-4: EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Compilation of Mitigation Measures		
<ul style="list-style-type: none"> Outline how the proposal and its environmental protection measures would be implemented and managed in an integrated manner so as to demonstrate that the proposal is capable of complying with statutory obligations under EPA licences or approvals (e.g. outline of an environmental management plan). 	12	12-1
<ul style="list-style-type: none"> The mitigation strategy should include the environmental management and cleaner production principles which would be followed when planning, designing, establishing and operating the proposal. It should include two sections, one setting out the program for managing the proposal and the other outlining the monitoring program with a feedback loop to the management program. 		
Justification for the Proposal		
<ul style="list-style-type: none"> Reasons should be included which justify undertaking the proposal in the manner proposed, having regard to the potential environmental impacts. 	15	15-1



Table 4-5: Cumberland City Council Assessment Requirements and EIS Reference

Key Issues	EIS Reference	
	Section	Page No.
Planning		
1. The Environmental Impact Statement (EIS) shall further detail the proposed development, specifically the process following the sorting and separation of materials, and storage on-site.	5.4	5-6
2. The application constitutes Integrated Development under the Protection of the Environment Operations Act 1997 (POEO Act), pursuant to Clause 4.46 of the Environmental Planning and Assessment Act, 1979 (the Act), which shall be discussed in the EIS. Particular reference is made to Schedule A – Scheduled Activities of the POEO Act, Clause 34 – Resource Recovery, and Clause 42 – Waste Storage. Note: As further information is required to ascertain the full extent of the proposal, as noted under Point 1 above, Clause 39 - Waste Disposal (Application to Land), Clause 40 – Waste Disposal (Thermal Treatment), and Clause 41 – Waste Processing (Non-Thermal Treatment), may also be applicable.	3.2.1.3	3-4
3. The application constitutes Designated Development, pursuant to the Schedule 3 – Designated Development of the Environmental Planning and Assessment Regulations, 2000 (the Regs), which shall be discussed in the EIS. Particular reference is made to Clause 32 – Waste Management Facilities or Works.	3.2.1.2	3-3
4. As assessment of the Holroyd Local Environmental Plan 2013, and Draft Cumberland Local Environmental Plan 2020 shall be undertaken and discussed in the EIS.	3.3	3-16
5. The EIS shall provide confirmation on the application number of the original warehouse building, to which the application relies upon, including a copy of the consent/s and endorsed plans and documents.	5.2	5-1
Engineering		
Flooding		
6. The subject site is located within the Flood Risk precinct. In this regard, a Flood Advice Letter shall be obtained from Council.	4.1.6 Attachm ent 5	4-3
7. The subject development shall comply with the Flood Advice Letter, and should be designed in accordance with Part A, Section 8.0 - Stormwater Management of the Holroyd Development Control Plan 2013 (HDPC).	3.3.2	3-21
8. Stormwater runoff from the manoeuvring area, including access ways, will have to undergo some form of industrial standard primary treatment / separation prior to disposal into existing stormwater systems. In this regard, a stormwater treatment device capable of removing litter, oil, grease and sediment, shall be provided prior to discharge to the stormwater system.	Appendix 6	
9. Parking spaces shall be clear of the medium flood risk area.	5.5.5	5-19
10. Parking spaces shall be clear of Easement F2.	5.5.5	5-19
Stormwater		
11. The development should be designed in accordance with Part A, Section 7.0 - Stormwater Management of the HDPC.	Appendix 6	
12. The stormwater plan shall be prepared by suitably qualified hydraulic engineer.	Appendix 8	
13. Overland flows up to the 1% Annual Exceedance Probability (AEP) storm, shall be addressed in accordance with Council's standards and specifications, and the Upper Parramatta Catchment Trust's O.S.D. Handbook	Appendix 6	
14. Stormwater runoff shall be minimised via reuse and recycling.		



Table 4-5: Cumberland City Council Assessment Requirements and EIS Reference

Key Issues	EIS Reference	
	Section	Page No.
Traffic/Parking		
15. A Traffic Impact Assessment (TIA) report shall be prepared. The TIA report shall address the impacts of the proposed development, and should include, but is not limited to; queuing, parking, traffic generation, entry and exit.	Appendix 3	
16. Left turn manoeuvring of trucks shall not encroach the centre of the road.	Appendix 3	
17. The parking layout shall comply with AS2890.1 and AS2890.6.	Appendix 3	
18. The loading area design shall comply with AS2890.2.	Appendix 3	
19. Sight distance at the entry / exit points shall be demonstrated to comply with AS2890.1. Details such as heights of fencing, parked vehicles on the road, or other structures adjacent to the driveway, shall be considered in the assessment.	Appendix 3	
Environmental Health		
20. The proposed development incorporates scheduled activities as defined under the Protection of the Environment Operations Act 1997. Based on the information provided, and the amount of waste to be processed at the facility, an Environment Protection Licence (EPL) from the NSW Environment Protection Authority (EPA) will be required. The facility will need to comply with any licence requirements as issued by the EPA.	14	14-1
21. All trees that are to remain, are appropriately protected as per AS4970 – 2009 Protection of trees on development. During construction or any time during the development, any pruning works should be carried out in accordance with AS4373.	5.3	5-5
Waste Management		
22. Details of the ongoing management of waste generated by the office and employees shall be provided.	Appendix 7	
Building Certification		
23. A Construction Certificate is required for the installations proposed, and an Occupation Certificate is required prior to the occupation of the premises. Details of the installations and fire safety compliance for the proposal shall be provided to the Certifier for assessment.	5.3	5-5



Table 4-6: DPIE ESS Assessment Requirements and EIS Reference

Key Issues	EIS Reference	
	Section	Page No.
Biodiversity		
Please be advised EES is currently considering a BDAR Waiver request for this SSD. The determination on this request will be forwarded separately.	8.4	8-16
Flooding		
The flood assessment (including associated management of any flood risks) should address the attached EES SEARs Requirements in relation to mainstream and/or overland flooding for the full range of floods.	8.3.2.3.2	8-12
Landscaping		
The flood assessment (including associated management of any flood risks) should address the attached EES SEARs Requirements in relation to mainstream and/or overland flooding for the full range of floods.	8.3.2.3.2	8-12
The BDAR waiver report notes there are recently planted mature-size gum trees on the northern and western boundary of the site and this vegetation is to be retained (page 10). EES notes the Site Plan and Truck Movement plan attached to the Scoping Report show trees along the western boundary but none along the northern boundary. The EIS should clarify this.	8.4 Appendix 10	8-16
If a Landscape Plan is to be prepared for the site, EES recommends it includes details on: <ul style="list-style-type: none"> existing vegetation at the site (location, plant species, number of trees etc) plant species to be planted - the plant species should comprise local provenance species (trees, shrubs and groundcovers) from the native vegetation community that once occurred on the site (rather than use non-local native species or exotics) the proposed removal of any trees - any trees removed are replaced at a ratio greater than 1:1 the pot size of any trees to be planted - advanced sized trees should be used to increase urban tree canopy cover the area/space required to allow planted trees to grow to maturity the plant maintenance regime. 	Appendix 4	
Non-conforming loads		
The Scoping Report states the proposal supports the reduction in illegal dumping by providing a facility that accepts unwanted wastes (section 2, page 3). It indicates records of all truck loads entering the facility would be maintained at the weighbridge and trucks with conforming loads would be weighed on the weighbridge then directed inside the building while non-conforming loads would be rejected and turned away (section 3.3, page 6). EES notes the applicant offers recycling and waste services across the Sydney region and suggests the EIS addresses whether the Yennora facility will provide drivers of non-conforming loads with advice/contact details on other recovery facilities where their loads can be taken to assist prevent illegal dumping of the non-conforming loads.	Appendix 7	



Table 4-7: Sydney Water Assessment Requirements and EIS Reference

Key Issues	EIS Reference	
	Section	Page No.
Comments		
<ul style="list-style-type: none"> Sydney Water requests that detailed domestic and industrial water and wastewater demands be specified within the Environmental Impact Statement. Indicative stormwater, trade wastewater and water re-use quantities should also be included within the EIS report. It is recommended that the proponent engages a Water Servicing Coordinator and meetings are held between the proponent and Sydney Water to ensure that Sydney Water's requirements inform the design process. 	8.3.2	8-9
Sydney Water also requests that the Department of Planning, Industry and Environment include the following Secretary's Environmental Assessment Requirements relating to the provision of water-related services for the subject site:	8.3.2	8-9
Water-related Infrastructure Requirements		
<ol style="list-style-type: none"> The proponent of the development should determine service demands following servicing investigations and demonstrate that satisfactory arrangements for drinking water, wastewater, and if required, recycled water services have been made. The proponent must obtain endorsement and/or approval from Sydney Water to ensure that the proposed development does not adversely impact on any existing water, wastewater or stormwater main, or any other Sydney Water asset, including any easement or property. When determining landscaping options, the proponent should take into account that certain tree species can cause cracking or blockage of Sydney Water pipes and therefore should be avoided. Strict requirements for Sydney Water's stormwater assets (for certain types of development) may apply to this site. The proponent should ensure that satisfactory steps/measures been taken to protect existing stormwater assets, such as avoiding building over and/or adjacent to stormwater assets and building bridges over stormwater assets. The proponent should consider taking measures to minimise or eliminate potential flooding, degradation of water quality, and avoid adverse impacts on any heritage items, and create pipeline easements where required. As this development creates trade wastewater, Sydney Water has trade wastewater requirements which need to be met. By law, the property owner must submit an application requesting permission to discharge trade wastewater to Sydney Water's sewerage system. The proponent must obtain Sydney Water approval for this permit before any business activities can commence. Given this development comprises industrial operations, wastewater may discharge into a sewerage area that is subject to wastewater reuse. Please contact Sydney Water's Business Customer Services to send your permit application or to find out more information. They can be contacted at the following email address: businesscustomers@sydneywater.com.au. 	Appendix 7 Appendix 6	
Integrated Water Cycle Management		
<ol style="list-style-type: none"> The proponent should outline any sustainability initiatives that will minimise/reduce the demand for drinking water, including any alternative water supply and end uses of drinking and non-drinking water that may be proposed, and demonstrate water sensitive urban design (principles are used), and any water conservation measures that are likely to be proposed. This will allow Sydney Water to determine the impact of the proposed development on our existing services and required system capacity to service the development. 	8.3.2.1	8-9



Table 4-8: Transport for NSW Assessment Requirements and EIS Reference

Key Issues	EIS Reference	
	Section	Page No.
<p>Comments</p> <ul style="list-style-type: none"> • Accurate details of the current daily and peak hour vehicle, existing and future public transport networks and pedestrian and cycle movement provided on the road network located adjacent to the proposed development. • Details of estimated total daily and peak hour trips generated by the proposal, including vehicle, public transport, pedestrian and bicycle trips. • The adequacy of existing public transport or any future public transport infrastructure within the vicinity of the site, pedestrian and bicycle networks and associated infrastructure to meet the likely future demand of the proposed development. • Measures to integrate the development with the existing/future public transport network. • The impact of trips generated by the development on nearby intersections, with consideration of the cumulative impacts from other approved developments in the vicinity, and the need/associated funding for, and details of, upgrades or road improvement works, if required (Traffic modelling is to be undertaken using SIDRA network modelling for current and future years). • The identification of infrastructure required to ameliorate any impacts on traffic efficiency and road safety impacts associated with the proposed development. • Identification of the volume and type of traffic movements into and out of the site. • Details on the provision of all queuing and staging of vehicles on site. • Details of travel demand management measures to minimise the impact on general traffic and bus operations, including details of a location-specific sustainable travel plan (Green Travel Plan and specific Workplace travel plan) and the provision of facilities to increase the non-car mode share for travel to and from the site. • Details on the source of materials coming into the site (including any operational constraints). • Details on the provision of driver facilities on site. • The proposed walking and cycling access arrangements and connections to public transport services. • Details of the proposed site vehicle access and parking provisions associated with the proposed development including compliance with the requirements of the relevant Australian Standards (i.e. turn paths, sight distance requirements, aisle widths, etc). • Detailing vehicle circulation, proposed number of car parking spaces and compliance with the appropriate parking codes. • Details of the light and heavy vehicle movements (including vehicle type and likely arrival and departure times), including service vehicle movements. • The proposed access arrangements, including car and bus pick-up/drop-off facilities, and measures to mitigate any associated traffic impacts and impacts on public transport, pedestrian and bicycle networks, including pedestrian crossings and refuges and speed control devices and zones. • Proposed bicycle parking provision, including end of trip facilities, in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance. 	Appendix 3	

Table 4-8: Transport for NSW Assessment Requirements and EIS Reference

Key Issues	EIS Reference	
	Section	Page No.
<ul style="list-style-type: none"> Proposed number of on-site car parking spaces for staff and visitors and corresponding compliance with existing parking codes and justification for the level of car parking provided on-site. An assessment of the cumulative on-street parking impacts of cars and bus pick-up/drop-off, staff parking and any other parking demands associated with the development. An assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures and personal safety in line with CPTED. Emergency vehicle access, service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type and the likely arrival and departure times). The preparation of a preliminary Construction Traffic and Pedestrian Management Plan to demonstrate the proposed management of the impact in relation to construction traffic addressing the following: <ul style="list-style-type: none"> Assessment of cumulative impacts associated with other construction activities (if any). An assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity. Details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process. Details of anticipated peak hour and daily construction vehicle movements to and from the site. Details of on-site car parking and access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicle. Details of temporary cycling and pedestrian access during construction. 	Appendix 3	
Future Development		
<ul style="list-style-type: none"> In July 2020, the Western Sydney Freight Line (stage 1) (WSFL) was gazetted in the Western Sydney Employment Area State Environmental Planning Policy (WSEA SEPP). TfNSW are currently examining options for WSFL Stage 2, between the M7 at Kemps Creek to the main southern freight line at Yennora and should be considered in the EIS. 	Appendix 3	
<p>The Applicant is to demonstrate that the proposal is generally consistent with relevant plans and reports including (but not limited to):</p> <ul style="list-style-type: none"> Future Transport 2056 and supporting plans; and NSW Freight and Ports Plan 2018 – 2023 Guide to Traffic Generating Developments (Roads and Maritime Services, 2002) EIS Guidelines - Road and Related Facilities (DoPI) Cycling Aspects of Austroads Guides NSW Planning Guidelines for Walking and Cycling Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development Standards Australia AS2890.3 (Bicycle Parking Facilities). 	Appendix 3	



5. DESCRIPTION OF PROPOSED DEVELOPMENT

5.1 PROPOSED ACTIVITIES AND SITE USE

The proposed development is for the establishment and operation of a resource recovery facility that would accept, process and store construction and demolition (C&D) and commercial and industrial (C&I) waste. All resource recovery activities and storage of waste would be undertaken within an existing building.

A technologically advanced resource recovery system has been developed specifically for this facility with components to be pre-fabricated off site for installation. A designated pre-sorting and materials inspection area would be located at the start point of the system. The system would consist of a feeder (feed hopper), a waste screen, a series of waste/flip flow screens (3) for sorting heavy and light material, conveyors, air separators, an enclosed picking station and three (3) magnets to enable efficient recovery and separation of material. Separated material would be captured in bays or bins at various points on the line and then transferred to storage bunkers within the building. A small crusher would be located at the end of the system for crushing of any larger materials.

The system has been designed to provide a rate of recovery of materials of up to 90% and is expected to process on average 32 to 42 tonnes per hour. Recovery rates would vary depending on the material, for example, cardboard and paper is expected to have a 90-95% recovery rate, timber 90% and aggregate 99%. Other materials such as plastic would have lower rates of recovery.

Storage bunkers for waste would be established inside the building and would be constructed of structural steel walls. There would be storage bunkers and bins located along the processing line to capture recovered material at various points. These storage bunkers and bins are expected to store a maximum of 2,600 m³ of waste wholly within the building at any one time. The layout of the system would facilitate a regular turnover of waste through the system therefore requiring limited storage space.

No structural changes to the existing building will be required. The site contains existing infrastructure that would be utilised for the proposed development. This includes extensive fire protection equipment and a sprinkler system that is currently being installed within the building by the owner of the property under a separate DA. On-site car parking would be established in the rear hardstand area with consideration given to ease of on-site vehicle movements. Two weighbridges would also be installed on the eastern driveway of the site.

5.2 SITE LAYOUT PLANS

Detailed site plans have been prepared by Carlo Ranieri and Associates. The 'floor plan and equipment layout' (Figure 5-1) shows the details and location of the resource recovery system of equipment and machinery to be installed within the existing building. Also shown are the waste storage areas including stockpiles, storage bunkers and bins. Further details of the system can be viewed on the 'Equipment elevation A and B' plans.



Site plans include:

- A00 – Cover Sheet
- A01 – Existing Site Plan and Floor Plan
- A02 – Proposed Site Plan and Floor Plan
- A03 – Proposed Floor Plan and Equipment Layout
- A04 – Building Elevations
- A05 – Building Elevations
- A06 – Equipment Elevation A
- A07 – Equipment Elevation B and C
- A08 – Fire Water Bunding and Capture Plan

A detailed survey plan (Ref: 74817JP) is provided.

Figure 5-1: Proposed Site Plan and Floor Plan

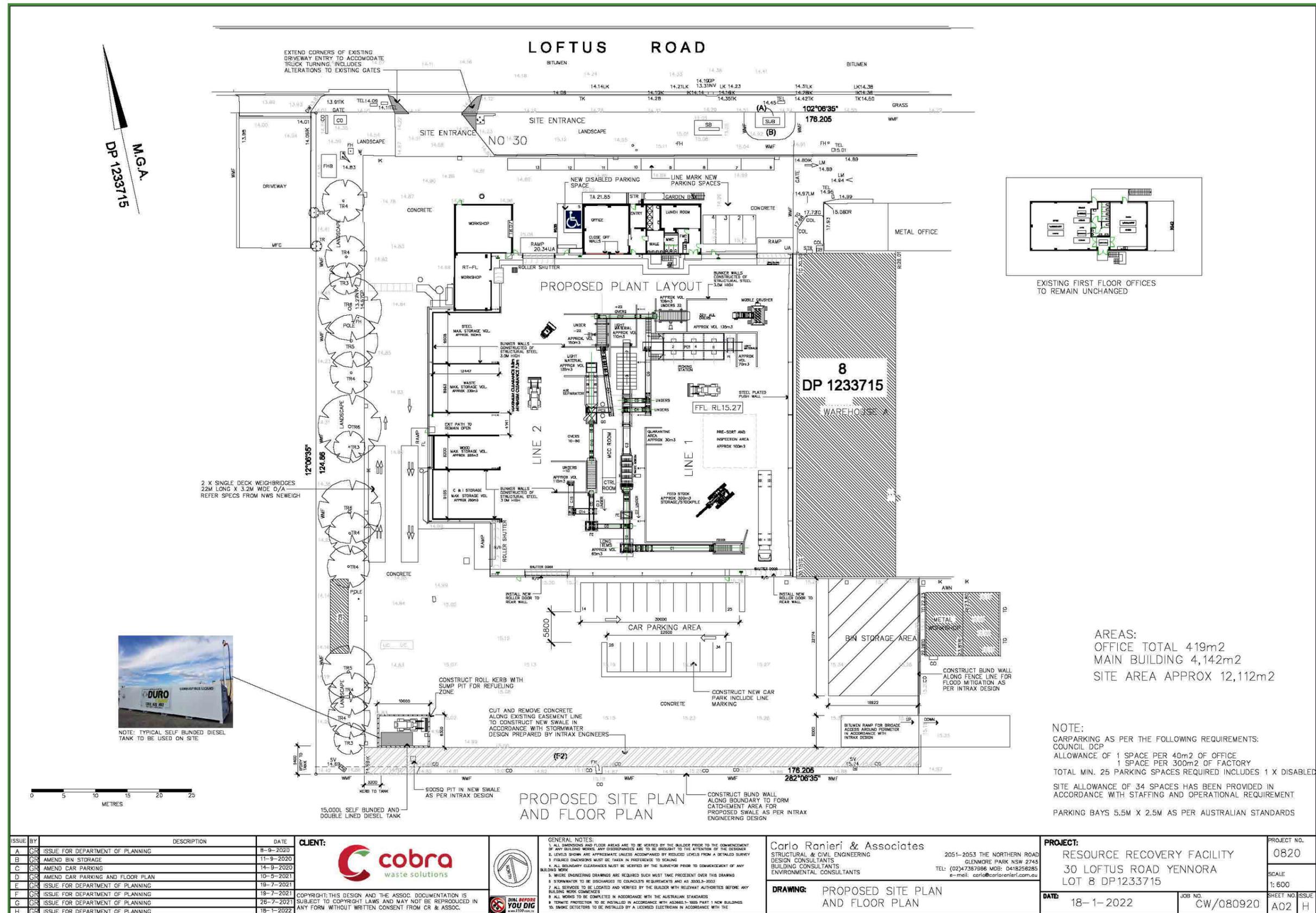
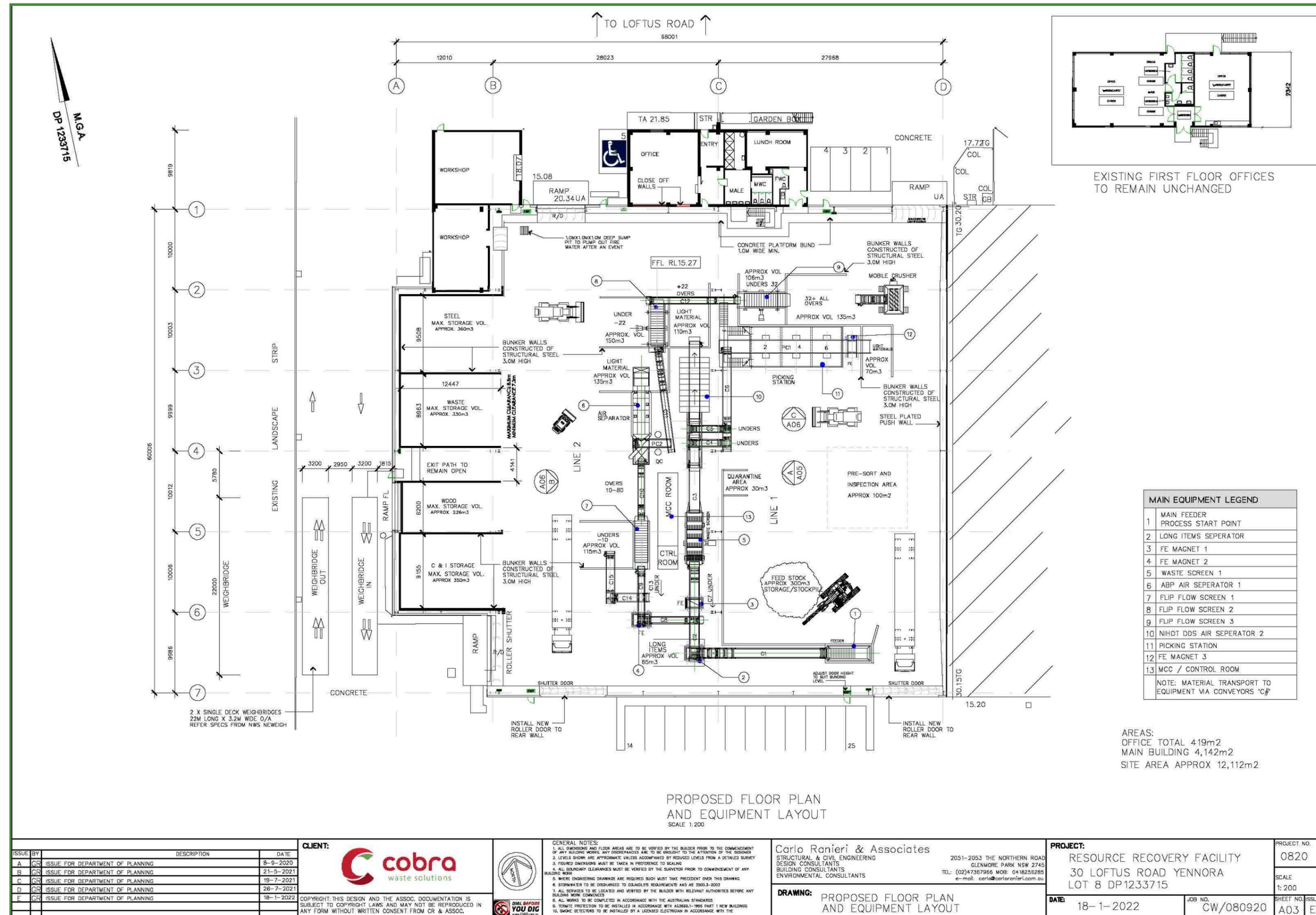


Figure 5-2: Proposed Floor Plan and Equipment Layout





5.3 CONSTRUCTION WORKS

Construction would be limited to installation of pre-fabricated components of the resource recovery system, construction of internal storage bunkers, widening of the driveway and installation of the weighbridges. Two Nuweigh White-Ridge Series 22m single deck weighbridges would be installed including digital indicators, full steel foundation frames (to be placed on a concrete apron slab) as well as yellow side rails for the weighbridges, remote displays on 3 m galvanised poles with mounting brackets and red/green traffic lights. The weighbridges would require a ground bearing pressure of 100 kPa – an apron slab upon which the foundation frame will be bolted. The weighbridges will not require any traditional foundation footings for the loadcell points. Only minor excavation may be required to establish a swale for stormwater and flood management along the rear boundary of the site. All construction work would be confined within the existing building and concrete footprint and no additional land will be impacted outside of the development area. There would be no changes to the existing landscaped areas of the site and no tree removal is required.

In summary, construction works would include:

- Driveway widening;
- Installation of weighbridges;
- Excavation and establishment of a swale at the rear boundary;
- Installation of pre-fabricated components inside the warehouse; and
- Construction of internal storage bunker walls.

Construction works are expected to take 2–3 months to complete and be undertaken in one stage within the hours of 7am–6pm Monday to Friday and 8am–4pm Saturday.

A Construction Environmental Management Plan will be prepared for this minor works prior to completion of the Construction Certificate. An Erosion and Sediment Control Plan is provided with the Stormwater Drawings. Construction waste has been estimated in the Waste Management Plan.

5.3.1 Infrastructure Upgrades

Minor upgrades to stormwater infrastructure will include the installation of a new 4.6 metre wide swale at the rear of the property which would collect stormwater from the rear hardstand area and connect to the existing swale on the adjacent property. An “SPEL Stormceptor” stormwater treatment device will be installed in the new pit to reduce pollutant discharge.

No further infrastructure upgrades are required for the proposed development. All infrastructure upgrades required for the building are related to fire services and were undertaken under a separate development application DA2020/0488 and modification application MOD2021/0084 and included the installation of a fire sprinkler system, occupant warning system and fire hydrant system including addition of a water tank and provision of associated pump room. Details of these upgrades are provided in the following documentation as Attachment 4:

- Attachment 4A – Fire Services Construction Certificate Documentation
- Attachment 4B – Fire Services Architectural Set
- Attachment 4C – Fire Services Council Approval



5.4 PROCESS DESCRIPTION

The plant has been designed to process 150,000 tonnes of C&D and C&I waste materials collected from various businesses across the local and metropolitan Sydney area mainly by company owned trucks. Vehicles arriving at the site would be managed through the truck booking system which is a computerised program called “Waste Edge”. The waste streams will arrive between 6am to 6pm and be sorted through the plant separately in two separate shifts to ensure maximum recovery of recyclable materials. The process would result in incoming C&D and C&I waste streams being separated into different waste types to be sent to recycling facilities for further processing.

The process does not differ regardless of which waste stream is to be processed. Essentially C&D and C&I waste streams accepted would be similar in nature and processing these in two separate shifts would be undertaken to ensure system efficiency rather than to segregate waste types.

C&D waste would be processed during the day shift. C&I waste loads received during the day shift would be unloaded and inspected in the pre-sort and inspection area and complying loads moved to a designated C&I storage bunker (shown on the proposed floor plan and equipment layout) to be processed in the afternoon shift.

All loads received would be inspected separately (one load at a time) in the pre-sort and inspection area as this is a requirement of Inspection Point 2 of the Standards for managing construction waste in NSW and provision to ensure this occurs is included in the Incoming Waste Procedure. The truck would unload and remain until the load is inspected. Non-complying loads would be reloaded onto the truck and the driver instructed to leave the site.

The following process steps would be undertaken. Bracketed numbers within the description below correspond to equipment shown on the drawing A03 ‘Floor Plan and Equipment Layout’ in Figure 5-2:

1. All trucks arriving at the site would enter via the existing driveway access on Loftus Road and be directed over the weighbridge along the western driveway. This would be the first inspection point on site where the contents of the truck would be inspected and paperwork regarding the waste load would be reviewed. Trucks with conforming loads would be weighed on the weighbridge then directed inside the building. Non-conforming loads would be turned away. Records of all truck loads entering the facility would be maintained at the weighbridge.
2. Loads of waste material would be unloaded in the pre-sort inspection area inside the building for initial separation. This would be the second inspection point in the process. Any non-conforming material would be reloaded onto the truck and removed in accordance with a waste inspection procedure. Conforming loads would be moved to the feedstock area for processing or to the C&I bunker for storage depending on the shift. At this point, large items can be manually removed and stored in the appropriate storage bunker. A quarantine area (reject bunker) on site would be established to deal with non-conforming wastes that inadvertently are not picked up at the inspection points.
3. A front end loader would transfer the pre-sorted material to the feedstock area and load it into the infeed hopper/shredder (1) at the start of the process.



4. The material would be fed into the system and conveyed to long items separator (2) for removal of any over-size material. Long items fall into the bunker and be manually sorted into appropriate storage bunkers.
5. A magnet (3) would remove larger pieces of ferrous material which would fall into a separate storage bin and the remaining material would be sent through a waste screen (5).
6. At this point lighter material (Under -70) is directed down a separate line where an electrical magnet (4) would remove smaller pieces of ferrous material which would fall into a storage bin.
7. This lighter material line would pass through a flip flow screen (7) where (-10mm soil) would fall into a bunker. The remaining material would sent through an NIHOT DDS air separator (10) where light material would be removed then two further flip flow screens (8) for separation of under -22mm material and (9) for separation of under -32mm material that would fall into separate bunkers.
8. The overs (32+ mm) material would be put through a crusher. Crushed aggregates would be stored in a bunker.
9. The heavier material waste stream would be conveyed from the waste screen (5) to an ABP air separator (6) where light material would be removed and fall into a bunker. The heavier material would then pass through an enclosed manual picking station (11) where it is separated into paper/cardboard, wood, plastic and other recyclable material. This material would be stored in bins below the picking station.
10. Recovered waste would be transferred to designated storage bunkers within the building as required then loaded into trucks for transport to various facilities for reuse or further processing. General non-recyclable waste would be transferred to a designated storage bunker for removal to landfill.

A process flow diagram is provided as Figure 5-3.

The light material that falls into the “Light material bunkers” shown in Figure 5-3 includes packaging material, bits of plastic, paper, film and PET that are non-recyclable. This waste would be sent to landfill.

Pre-sorted loads of C&I waste are often received at the facility, such as bins consisting solely of scrap metal or cardboard or other packaging material. In this case, these pre-sorted loads would not need to be put through the system but would be stored directly into designated bunkers/bins of the same waste type.



5.4.1 Annual Tonnage

The facility would receive and process up to 150,000 per annum of C&D and C&I waste, and contaminated soil. The expected ratio of C&D to C&I is expected to be 70:30.

Estimates for daily and weekly maximum throughput are 4,000 tonnes per week and 1,000 tonnes per day.

5.4.2 Storage

Four storage bunkers for waste would be established inside the building and would be constructed of 3 metre high structural steel walls. It is expected that non-combustible stockpiles of waste within these bunkers would not exceed 2.8 metres in height. Height and storage of mixed and combustible materials will be confirmed during the Fire Safety Study in consultation with Fire and Rescue following approval.

There would also be storage bunkers and bins located along the processing line to capture recovered material at various points.

These storage bunkers and bins combined are expected to store a total maximum of 2,600 m³ of waste wholly within the building at any one time. The layout of the system would facilitate a regular turnover of waste through the system therefore requiring limited storage space.

No bunding is needed for internal waste storage bunkers. No liquid waste would be accepted on site and no chemicals will be stored in internal waste bunkers. Building bunding would be provided for containment of fire fighting water.

5.4.3 Incoming Waste Materials

Two waste streams would be accepted at the facility and these include:

1. Commercial and Industrial (C&I) waste; and
2. Construction and Demolition (C&D) waste.

These waste streams would be processed separately through the system. This will be undertaken in separate shifts as the C&D waste contains a higher percentage of heavy material.

It is expected that waste types accepted at the site would generally include mixed waste, which would be a combination of the following:

AGG – Aggregate, road base or ballast
AL – Aluminium (non-ferrous)
ASPH – Asphalt
BC – Bricks or concrete
CER – Ceramics, tiles, pottery
COMM – Comingled recyclables
FE – Ferrous (iron or steel)
NFE – Non-ferrous (metals, not iron steel or aluminium)
PAPER – Paper or cardboard



PB – Plasterboard
PL – Plastic
WOOD – Wood, trees or timber

Note: Combined with the incoming waste would be copper electrical wire. From time to time there is expected to be electrical cable, conduit, power point/plugs, distribution boards found in bins of construction and demolition waste. This waste falls under the definition of “building and demolition waste” and does not fall under the E-Waste definition which encompasses electrical appliances and is provided as follows:

E-waste: *Electrical goods, televisions, computers, toasters, radios, ipod, Gameboys, stereos, speakers, VCRs, DVD players, power tools*

All incoming waste is classified as general solid waste (non-putrescible) waste (as per *Waste Classification Guidelines* (2014)). No other waste would be accepted. Estimates of recovered materials and rates of recovery expected are included in Table 5-1.

Table 5-1: Recovered Waste Types, Quantities and Management

Waste Type	Expected Rate of Recovery (%)	Expected Percentage Recovered (% of Total Incoming Material)	Expected Total Waste Recovered (TPA)
Aggregates & fines	99	32	47,500
Ferrous and Non-ferrous metal	90-95	17	25,500
Cardboard & Paper	85-90	8	12,500
Copper Electrical Wire & Cable	70-75	3	4,500
Wood	85-90	15	22,500
Plasterboard & Gyprock	60-65	5	7,500



Waste Type	Expected Rate of Recovery (%)	Expected Percentage Recovered (% of Total Incoming Material)	Expected Total Waste Recovered (TPA)
Plastic	65-70	8	12,000
Non-recyclable (Landfill)	N/A	12	18,000
TOTAL	88	100	150,000

5.4.4 Equipment

Equipment and machinery required for the resource recovery facility includes:

- 2 x weighbridges;
- Resource Recovery and Transfer Facility (RRTF) consisting of:
 - ▶ a control room,
 - ▶ feeder (infeed hopper with shredder),
 - ▶ conveyor belts,
 - ▶ long items separator,
 - ▶ 3X ferrous magnets,
 - ▶ 1X waste screen,
 - ▶ 3X flip flow screens,
 - ▶ a picking station, and
 - ▶ 2x air separators;
- Crusher;
- 30T Excavator;
- 20T Excavator;
- 35T Front end loader x 2;
- Forklifts;
- Water misting system;
- A compressor; and
- Internal structural steel walled storage bunkers.

5.4.4.1 Infeed Hopper with Shredder

The hopper/shredder at point 3 of the process is where the incoming waste stream is fed into the hopper using an excavator and this feeds the material into the shredder. The shredder is used for volume reduction of bulky waste as it contains rows of sharp steel cutters that slowly rotate. The cutters grab the material and pull it through the shredder turning it into smaller pieces.



5.4.4.2 Flip Flow Screens

A flip flow screen separates the waste stream into differing sizes. It works by vibrating at a high frequency to transfer energy into the material particles to prevent them from sticking to the screen media. The media is a flexible mat. Smaller pieces fall through the screen while larger pieces remain on top. Flip flow screens are a more efficient way of separating materials such as aggregates than trommel screens where material can adhere to the surface of the screen. This is due to the streamlined design which is less prone to mechanical wear and tear.

5.4.4.3 Air Separators

Lighter material is separated from the waste stream by the air separators. An air separator works by sorting light from heavy materials with different specific gravities. A vacuum force is created on the surface so the light materials are transported to the top before being discharged. This separates out light material such as bits of plastic, paper, film and PET that are non-recyclable.

5.4.4.4 Ferrous Magnets

There are several points in the process where ferrous material is separated from the waste stream by a magnet. This is because not all ferrous material would be removed from the waste stream at the first magnet, some smaller pieces may get through and would therefore be removed further down the system. Ferrous material is removed from the process at magnets at points (3), (4) and (12).

5.4.4.5 Waste Screen

Waste screens allow sieving of material into different sizes by a rotation/vibration movement. At the waste screen, all -70mm material is separated at this point and this stream is conveyed to a magnet (to separate ferrous material) then to a first flip flow screen (where -10mm is removed) to an air separator (where light material is removed) then to a second flip flow screen (where -22 material is removed) then to a third flop flow screen (where -32mm material is removed). The remaining material left on this line is +32mm which is conveyed to the crusher.

5.4.4.6 Water Misting System

The misting system would contain purpose designed spray nozzles to provide a fine mist that evaporates within seconds. All water droplets would evaporate.

Evaporation depends on temperature, humidity and wind speed. Therefore the misting system would not have a set "evaporation rate". The mean annual average evaporation rate for Sydney is approximately 3 mm per day, then for every square meter of surface area, an average of 3 Litres of water per square metre per day is potentially lost to evaporation. Over a surface area of the building 4142m², potential evaporation rate would be 12,426 Litres per day.

The misting system would use less than 2 litres per minute, which is 1,920 Litres per day. The evaporation rate is higher than the total daily water use of the misting system. It can therefore be assumed that there would be no surface water generated by the misting system.

An example of a similar ceiling mounted system can be found at:



<https://www.tecpro.com.au/pressreleases/dust-problem-resolved-for-waste-transfer-station/>

The misting system to be installed would be purpose designed and focus on points in the system where there is potential for emissions of dust.

5.4.5 Standards for Managing Construction Waste in NSW

The site will have infrastructure, facilities and procedures in place to enable compliance with this standard as detailed in the Table 5-2. A visual representation of this infrastructure at the site shown in Figure 5-4 demonstrates compliance with the standard can be achieved.

Table 5-2: Compliance with Standards for managing construction waste in NSW

No.	Standard	Comment
1	<p>Inspection requirements</p> <p>1.1 Inspection point 1 – verified Weighbridge inspection</p> <p>1.2 Inspection point 2 – Tip and spread inspection area</p> <p>1.3 Training requirements for personnel</p> <p>1.4 Rejected loads register</p>	<p>The waste procedure detailed in Section 5 of the Waste Management Report would be implemented at the site to ensure that inspection requirements are met. This includes training requirements for personnel and details to be included in the rejects loads register.</p> <p>The site has been designed with a weighbridge and a designated tip and spread area.</p>
2	<p>Sorting requirements</p> <p>Loads not rejected under Standard 1 must be sorted and classified into individual listed waste types before being transferred to the waste storage area referred to in Standard 4.</p>	<p>Listed waste types are provided in Section 2.1.4 of the Waste Management Report. Incoming waste streams would be sorted through the system into waste types that would be stored in separate designated bunkers/bins including:</p> <p>AGG – Aggregate, road base or ballast</p> <p>FE – Ferrous (iron or steel)</p> <p>MIX – Mixed waste</p> <p>NFE – Non-ferrous (metals, not iron steel or aluminium)</p> <p>PAPER – Paper or cardboard</p> <p>PB – Plasterboard</p> <p>PL– Plastic</p> <p>WOOD – Wood, trees or timber</p>



Table 5-2: Compliance with Standards for managing construction waste in NSW

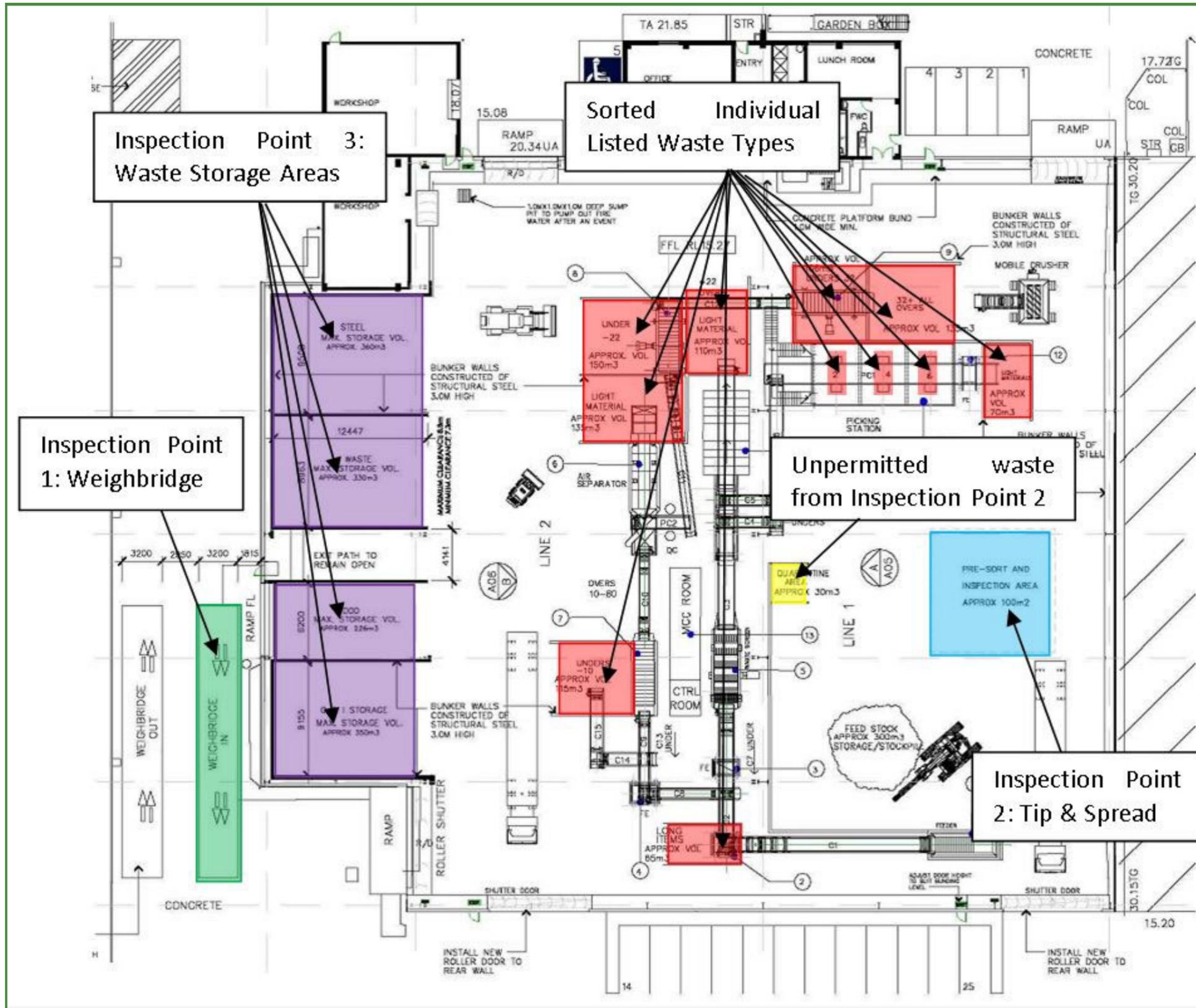
No.	Standard	Comment
3	<p>No mixing of waste</p> <p>C&D waste that has been inspected and sorted in accordance with Standards 1 and 2 must not be mixed with any other waste at the facility unless:</p> <ul style="list-style-type: none"> • That other waste has been inspected and sorted at the facility in accordance with Standards 1 and 2; and • It is of the same listed waste type as the other waste; or • The mixing is carried out to meet the requirements of a RRO or the recovered fines specifications. 	<p>The facility would comply with this standard as described in Section 2.1 of the Waste Management Report.</p> <p>The facility has been designed to have separate areas for waste that has been inspected and sorted and waste that has not. Once sorted, waste falls into bunkers or bins and is not processed or mixed further. The process is limited to sorting of waste, no mixing equipment or processes are proposed.</p>
4	<p>Waste storage requirements</p> <p>4.1 Waste storage area 4.2 Inspection point 3 – waste storage area</p>	<p>Waste storage at the facility would comply with this standard as described in Section 4.7 of the Waste Management Report.</p> <p>Separate designated storage bunkers/bins are marked on site plans showing the waste type that would be contained within these. These bunkers/bins capture sorted waste from the system. Additional bunkers for waste storage are shown on the site plans labelled with waste type to be stored. Signage of these areas can be confirmed once operational during audits of the site.</p> <p>Inspection of waste storage areas would be included in the waste procedure within the EMP and can be confirmed once the site is operational through inspection records that need to be maintained.</p>



Table 5-2: Compliance with Standards for managing construction waste in NSW

No.	Standard	Comment
5	<p>Transport requirements</p> <p>Construction waste must not be transported from the facility unless it has been inspected, sorted and stored in accordance with these standards and the load of waste consists solely of a single listed waste type or waste that meets the requirements of a resource recovery exemption or the recovered fines specification.</p> <p>(Except where waste is rejected at inspection points 1 or 2).</p>	<p>The facility would comply with this standard as described in Section 4.8 of the Waste Management Report.</p> <p>These transport requirements would be addressed within a waste procedure in the EMP and implementation of this standard can be confirmed through an audit once the site is operational.</p>

Figure 5-4: Visual Representation of on-site management of waste





5.5 OPERATIONAL DETAILS

Existing site infrastructure would assist in the establishment of the proposed development.

5.5.1 Utility Connections

5.5.1.1 Water

The site is connected to mains water. Tanks connected to the mains supply are already installed at the site for fire fighting purposes. Water would also be required for the office and amenities. Water use for the process would be limited to the water misting system for dust suppression.

5.5.1.2 Sewage and Wastewater

The site is connected to the sewer network. No wastewater would be generated from the proposed activities as none of the processes undertaken on site generate wastewater.

Existing stormwater infrastructure will be used. Additional stormwater and flood mitigation measures would be implemented including a 4.6m wide swale drain along the southern site boundary to cater for 1% AEP flows from upstream catchment and a new GSIP with SPEL stormsack filter and non return check valve connected to existing swale.

5.5.1.3 Electricity

The site is connected to the electricity network.

5.5.1.4 Telecommunications

Service to be provided by local network provider.

5.5.1.5 Gas, Petrol and Diesel

A 13,000 litre self-bunded diesel tank would be required at the site for refuelling of on-site vehicles. LPG cylinders would be required for forklifts.

5.5.2 Hours of Operations

The proposed facility is requesting approval to operate 24 hours per day, 7 days per week. Two eight (8) hour shifts – day and afternoon shifts would operate on Monday to Saturdays with the remaining hours and Sundays being for general maintenance. Truck movements would be restricted to between the hours of 6:00am to 6:00pm.

A typical daily schedule of activities and their hours of operation is provided below.



Table 5-3: Proposed Hours of Operations

Activity	Day	Time
Waste Processing	Monday to Saturday	7:00am to 11:00pm
	Sundays & Public Holidays	Nil
Cleaning and Maintenance (as required)*	Monday to Sunday	24 hours
	Public Holidays	Nil
Incoming and outgoing truck loads	Monday to Saturday	6:00am to 6:00pm
	Sundays & Public Holidays	Nil

*Staff to work as required – maintenance staff from day or afternoon shift as overtime).

5.5.3 Employment

The proposed development is expected to generate 40 to 50 full time permanent jobs at the facility as well as up to 100 indirect jobs and 30 construction jobs.

Typical staff numbers are detailed below. This is an approximation of the expected employee positions required and would be re-evaluated once operations commence.

Table 5-4: Typical Staff Numbers

Title	Day Shift	Afternoon Shift	Night Shift
Plant Manager	1	0	0
Supervisor/Leading Hand	1	1	0
Office & Sales Staff	5	0	0
Loader/Excavator Operators	3	2	0
Pickers	6	6	0
Allocator/Weighbridge	1	1	
Truck Drivers	15	0	0
Maintenance	1	1	0-2*
Total Shift Numbers	33	11	2
TOTAL	44		

* Maintenance staff on night shift will be overtime staff from day or afternoon shift.

The above table is for planning purposes only and it is the expected number of positions required for the operation of the facility. These numbers may vary in accordance with requirements of the facility once operations commence.

5.5.4 Traffic

Access and egress to the site is via the driveway from Loftus Road. Truck deliveries and pick ups will be restricted to between the hours of 6:00am and 6:00pm.

Truck movements associated with the proposed development include 168 per day (84 in and 84 out). Skip loaders and hooklift trucks would bring incoming waste into the facility and hooklift trucks would remove recovered materials from the facility. The largest truck that would enter



the site would be a 20 metre semi trailer for the pick up of non-recyclable waste for transport to landfill.

There would also be 72 staff car movements (36 in and 36 out) per day associated with the proposed development.

A full traffic impact assessment has been undertaken to support the development and is provided as Appendix 3. This is summarised in Section 9.4 of the EIS.

5.5.5 Parking

On-site car parking will be provided in accordance with Council requirements. Site plans show the proposed location of car parking spaces on site and an allowance for thirty four (34) spaces. This is adequate for the expected number of employees and visitors to the site with total employees being distributed primarily over two eight (8) hour shifts (Day and afternoon shifts with night shift being for overtime and maintenance only). It is assumed that five trucks would park on site and these truck drivers would require a car parking space. The remaining trucks would park at home or at the Cobra St Marys site.

Signage and barriers would be provided to prevent trucks from entering the car parking area.

5.6 EMISSIONS AND WASTE

5.6.1 Air and Odour

5.6.1.1 Dust

The proposed operations would generate dust air emissions. Dust mitigation measures have been designed into the proposed facility and include a water misting system with water sprayers directed at high dust areas of the system and on storage bunkers that would minimise the emissions of dust.

An air quality impact assessment provides further details on air emissions, local air quality and details of proposed mitigation measures.

5.6.1.2 Odour

Odour emissions would be negligible due to the nature of the materials accepted and the proposed processes to be undertaken on site. An odour assessment is not required and a justification for this is presented in Section 8.1 and in the AQIA.

5.6.1.3 Water Misting System

A water misting system would be installed within the building to suppress dust emissions from the process. One such system is the Coolfog system which is designed to produce a fine mist by pressurising water through nozzles to produce tiny water droplets that effectively encapsulate dust particles in the air. The mist effectively suppresses dust by sticking to the dust particles and causing them to fall to the ground while the water droplets evaporate.

Technical specifications for this system can be downloaded at: www.coolfog.com.au



5.6.2 Noise and Vibration

Noise will be generated from the processes on the site. The typical sources of noise from the facility include:

- X1 waste screen
- X2 air separator
- X3 flip flow screens
- X1 crusher
- X2 excavators
- X2 front end loaders
- X2 forklifts
- X1 Compressor
- X1 Shredder
- Truck movements.

The majority of noise sources would be minimised by the enclosed building. A noise impact assessment demonstrates compliance with criteria and presents recommended mitigation measures.

5.6.3 Water and Wastewater

This site will not accept liquid wastes. Additionally, no processes on site will generate wastewater.

Water will be used onsite for:

- Dust suppression in the water misting system; and
- Office and amenities.

Existing stormwater infrastructure, which includes downpipes and stormwater pits, would be utilised to collect and direct roof and surface water away from the development area. Additional stormwater and flood mitigation measures would be implemented to capture runoff from the rear hardstand area including a 4.6m wide swale drain along the southern site boundary to cater for 1% AEP flows from upstream catchment and a new GSIP with SPEL stormsack filter and non return check valve connected to existing swale. These additional stormwater measures are shown on the Stormwater Plans.

A wheel wash facility is not required.

5.6.3.1 Wheel Wash Facility

A wheel wash facility was not required. The facility has been designed in accordance with current best practice within an enclosed building and all waste processing activities and storage is to be within the building. Trucks would remain on sealed surfaces for the duration of their visit to the site. No external stockpiling or unsealed surfaces are included in the proposed development. Therefore a truck wheel wash is not considered warranted and is not included in the development.

5.6.3.2 Dust Suppression

A water misting system would purpose designed for the facility and installed with water sprayers located on points in the system to suppress potential emissions of dust. The misting system would contain purpose designed spray nozzles to provide a fine mist that evaporates within seconds. All water droplets would evaporate.

The misting system would use less than 2 litres per minute, which is 1,920 Litres per day. The evaporation rate is higher than the total daily water use of the misting system. It can therefore be assumed that there would be no surface water generated by the misting system.

5.6.3.3 Leachate

Leachate is defined under the NSW EPA Environmental Guidelines: Solid Waste Landfills, Second Edition 2016 as:

***Leachate:** the liquid that passes through, or is released by, waste. It arises from the inherent moisture content of the waste and from rainwater (and sometimes groundwater) percolating through or contacting the waste mass. Leachate may contain high levels of dissolved solids, ammonia, organic matter, and sometimes metals and other pollutants. These levels are typically well above background levels for undisturbed or slightly disturbed groundwater and surface water systems. The levels are also well above national quality guidelines for drinking water and other beneficial reuses of water.*

In this case, there would be no external waste storage or stockpiles. All waste would be received in covered trucks, unloaded, processed and loaded within the enclosed building. Therefore, no leachate would be generated.

5.6.4 Land

There would be no waste or materials applied to the land. The development area is currently and will remain a fully sealed surface. The potential for contamination of land due to on-site activities is low.

5.6.5 Waste

The proposed facility deals with waste. Waste would be brought onto site for processing for the purpose of generating reusable materials. All waste received at the site would consist of general solid (non-putrescible) waste. The end products would be sent to recycling plants for further processing or for reuse. There would be non-recyclable material generated as a consequence of the process and this waste would be sent to landfill.

The recovered materials to be generated include wood, plastic, scrap metal, paper & cardboard and aggregates. Recovered aggregates would be sent off site for application to land under the recovered aggregates order and exemption. The other recovered material would be sent on for further processing at licensed recycling facilities.

Any non-recyclable waste would be sent to landfill.



A waste management report has been prepared (Appendix 7) which details the waste types to be received, waste processing description, end products and estimated quantities. A waste management plan, as required by Cumberland City Council, has been prepared and is included in the waste management report.

5.7 CLEANER PRODUCTION ACTIONS

Cleaner Production Actions would be implemented at the site through a comprehensive Environmental Management Plan (EMP). This would provide a decision making structure and action plan to include cleaner production into day to day operations and provides a tool for implementation.

Cleaner production is a preventative environmental protection approach whereby industrial processes are designed to maximise output while minimising waste and emissions. Cleaner Production actions that can be implemented at the facility include:

- Source reduction;
- Good housekeeping; and
- Process changes including better process control, equipment modification, upgrades in technology
- Improvements to control measures that minimise environmental emissions.

5.7.1 Measures to Minimise Waste

The facility recycles waste. Minimising waste generated from the recycling process is in the environmental and financial interest of the facility. Operations on site will be continually optimised to minimise the generation of waste from the process.

Minor quantities of waste would be generated from the office and amenities areas. Recycling bins for office paper and cardboard would be provided and employees would be encouraged to recycle printer cartridges and other office items.

5.7.2 Proposals for Use or Recycling of By-Products

The system has been designed to maximise the generation of reusable material through the comprehensive separation processes that produce high quality by-products. Future technologies in system design and improvements would be an ongoing objective in the site's EMP.

5.7.3 Air management systems

Cleaner production techniques to manage air emissions at the facility include:

- A misting spray system within the building that would be automatically activated for the duration of dusty activities.
- Water sprayers located on material storage bays that are manually activated to suppress dust as required.

Continual improvement to the effectiveness of this system would be an ongoing objective of the site's EMP.



5.8 CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

The draft Cumberland DCP requires a crime risk assessment to be undertaken against the Crime Prevention and the Assessment of Development Applications Guidelines for larger developments. This evaluates the potential for crime in an area and assist in determining CPTED strategies needed. For the purposes of this development, as the building already exists, crime risk has been assessed based on the four CPTED design concepts including surveillance, access control, territorial reinforcement and space management/maintenance and compliance with these concepts.

Security fencing is provided to the site with lockable gates at the entry driveway. The gates would be open during the day to allow deliveries but locked at night between the hours of 6pm and 6am. There is limited opportunity for the general public to access the site as it is a private industrial facility. The gate house would be controlled by weighbridge staff and strict entry requirements would apply as the facility is a resource recovery facility where detailed waste records need to be kept.

Compliance of the site with the principles of CPTED is shown in the following table:

Table 5-5: Compliance of the proposal with the principles of Crime Prevention Through Environmental Design

DCP Requirement	Compliance
<p><u>Surveillance</u></p> <ul style="list-style-type: none"> • Streets and public spaces can be observed from nearby buildings • Clear sightlines exist between public and private places • Effective lighting of public places is adopted • Spots that facilitate entrapment are eliminated • Attractive landscaping, with proper light and clear sight lines, is used to prevent offenders finding a place to hide or entrap victims 	<p>Yes. The site is designed such that private and public areas are clearly defined through landscaping at the front of the site, fencing and gates for security purposes and lighting.</p>
<p><u>Access Control</u></p> <ul style="list-style-type: none"> • Design landscapes and physical locations e.g. footpaths that direct pedestrians into target areas • Public spaces which attract people into the area and discourage intruders • Restricted access to internal areas or high risk areas like car parks or other rarely visited areas (e.g by having doors, shrubs, fences and gates • Selectively placed entrances and exits, fencing, lighting and landscaping to control the flow of access or to limit access 	<p>Yes. Footpaths will be clearly marked providing direction for pedestrians to offices and safe walkways when on site. The entire site is fenced with one entrance driveway clearly marked from Loftus Road. This entrance is gated. It is a requirement for all trucks to check in via the weighbridge. A security fence along the boundary limits access to the site.</p>



Table 5-5: Compliance of the proposal with the principles of Crime Prevention Through Environmental Design

DCP Requirement	Compliance
<p><u>Territorial Reinforcement</u></p> <ul style="list-style-type: none"> • Design with clear distinction between public and private spaces by using physical barriers (e.g. fences) and symbolic barriers (e.g. vegetation) • Design that encourages people to gather in a public place and to feel some responsibility for its use and condition • Environmental markers (e.g. signage, walkways, pavers, lighting, bollards and fencing) which define intended use and ownership. 	<p>Yes. Physical barriers in the form of fences and gates are provided. Landscaping is provided. Signage is used to direct people to office areas and safe walkways on site.</p>
<p><u>Space Management / Maintenance</u></p> <ul style="list-style-type: none"> • Site cleanliness • Vandal resistant materials and fixtures • Rapid repair of vandalism and graffiti • Well maintained landscaping • Well maintained pedestrian and car park lighting • Well maintained public infrastructure (e.g. seats, signs, bollards) 	<p>Yes. Vandalism is not an issue. Landscaping, pedestrian areas, signage, lighting and seating are well maintained. Locked gates and security fencing already exist.</p>

5.9 SITE REHABILITATION

No site rehabilitation is required.

5.10 CAPITAL INVESTMENT VALUE

A QS report has been prepared by Newin Building Cost Planning Services and is provided in Appendix 11. Based on the project design documentation the project capital investment value has been estimated to be \$3,439,822 inclusive of GST.

6. EXISTING ENVIRONMENT

6.1 GEOLOGY AND SOILS

6.1.1 Geological and Soil Landscapes

The 'Penrith 1:100,000 Geological Map Sheet 9030' describes the geological composition of the area as follows:

*'WIANAMATTA GROUP Rw (undifferentiated)
Rwb: Shale, carbonaceous claystone, laminate, fine to medium-grained lithic sandstone,
rare coal and tuff.'*

The soil map 'Soil Landscape of Penrith 1:100,000 Sheet 9030' shows that the subject site is located in an area classified as 'Blacktown (bt)', which is described as follows:

'Landscape – gently undulating rises on Wianamatta Group shales. Local relief to 30 m, slopes are usually >5%. Broad rounded crests and ridges with gently inclined slopes. Cleared Eucalypt woodland and tall open-forest (dry sclerophyll forest).

Soils – shallow to moderately deep (>100 cm) hardsetting mottled texture contrast soils, Red and Brown Podzolic Soils (Dr3.21, Dr3.31, Db2.11, Db2.21) on crests grading to Yellow Podzolic Soils (Dy2.11, Dy3.11) on lower slopes and in drainage lines.

Limitations – moderately reactive highly plastic subsoil, low soil fertility, poor soil drainage.'

6.1.2 Acid Sulfate Soils

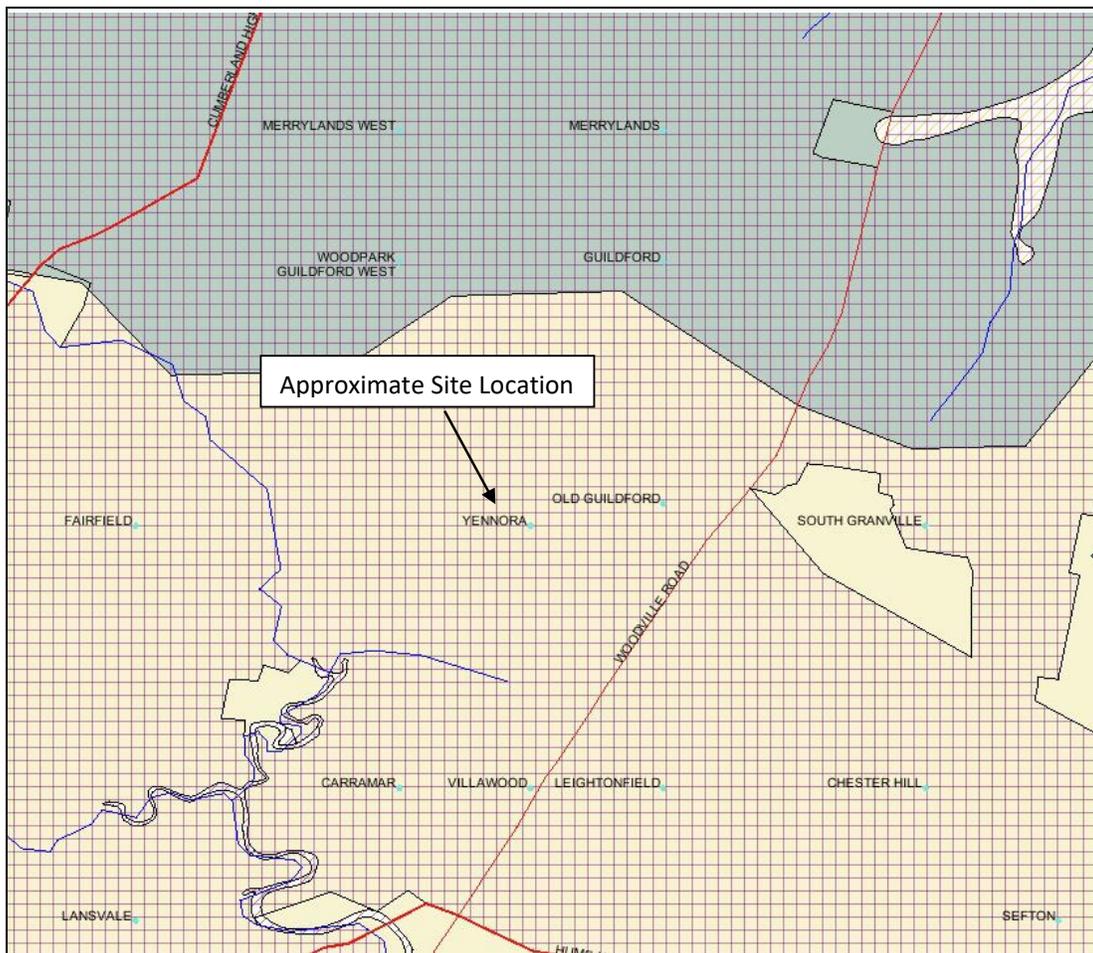
Acid Sulfate Soils (ASS) are naturally occurring soils and sediments that formed under waterlogged conditions. They contain iron sulphide (predominantly pyrite), when water logged, or in an anoxic environment, ASS remain benign. However, if drained, excavated or exposed to air by a lowering of the water table, the sulphides react with oxygen to form sulfuric acid, sometimes in large quantities (for every tonne of sulfidic material that completely oxidises, 1.6 tonnes of pure sulfuric acid is produced). ASS contains traces of metals such as iron, aluminium and arsenic. Once acid forms, it mobilises any metals held within the soil. Rainfall washes this mixture into the surrounding environment, polluting land and nearby waterways. Accumulation of acid and metals becomes toxic to plants and animals, especially aquatic organisms. Built structures are highly susceptible to ASS, as acid will slowly corrode concrete, steel, roads and building foundations.

A search of the CSIRO Atlas of Australian Acid Sulfate Soils database shows this site is located over an area having a low probability of occurrence and a very low confidence level of ASS occurrence. The map in Figure 6-1 illustrates these findings. Additionally, the subject site is not classed on an area of acid sulphate soils on the Holroyd LEP 2013 maps.

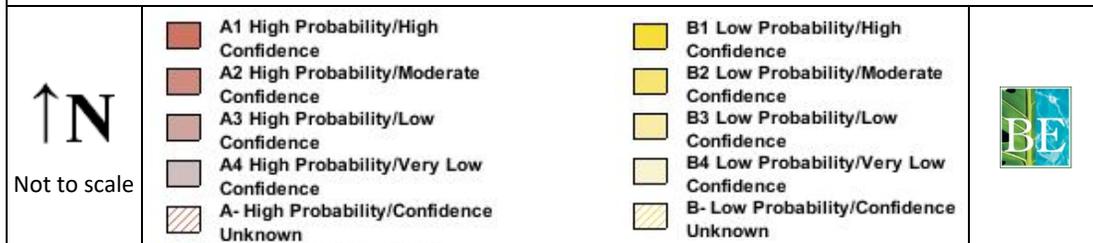
Only minor excavation may be required to establish a swale for stormwater and flood management along the rear boundary of the site.

Due to the minimal earthworks required by the development and location of the site in relation to acid sulphate soil occurrence, an acid sulphate soil assessment is not deemed necessary.

Figure 6-1: ASS Map



Source: ASRIS CSIRO 2021

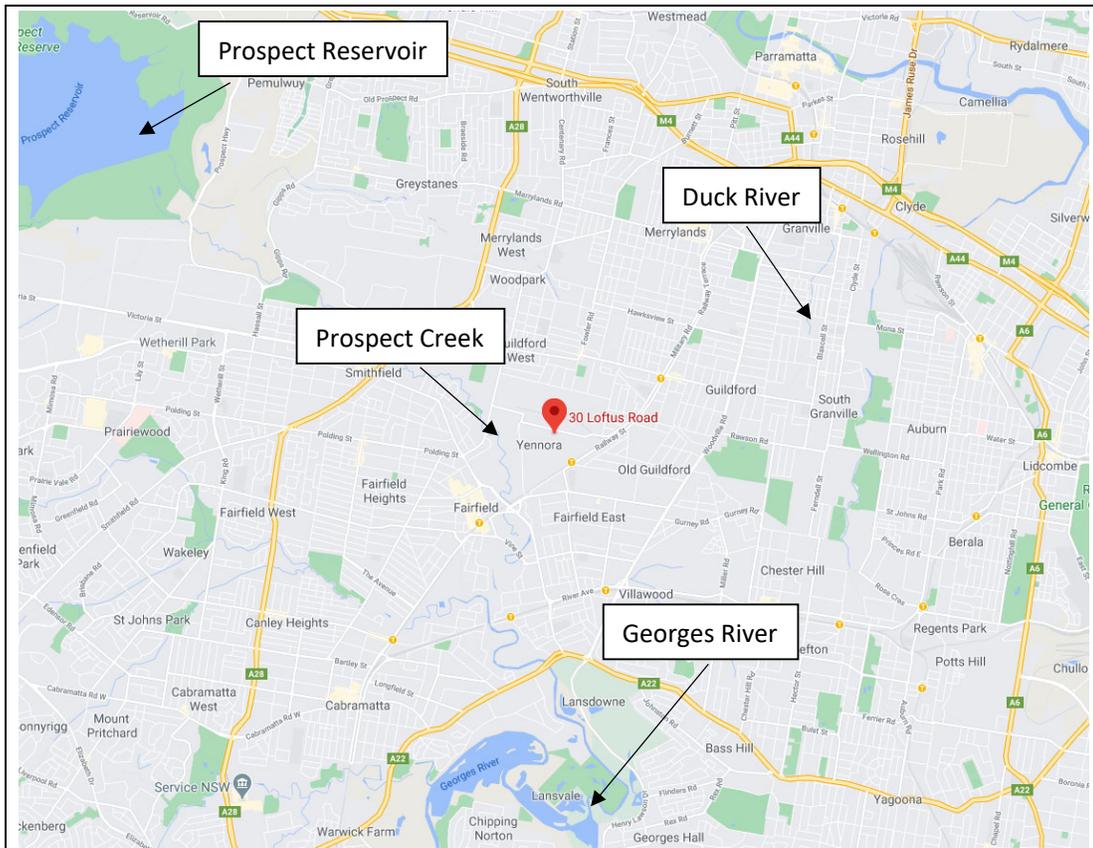


6.2 TOPOGRAPHY

The site is within an industrial area. Its surface terrain is flat and concreted.

A three-dimensional view of the local topography surrounding the site has been provided in Figure 6-2, with the terrain/vertical axis exaggerated by a factor of 10. It should be noted that this figure is an approximation of the actual terrain, based on information that has been digitised from local contour maps.

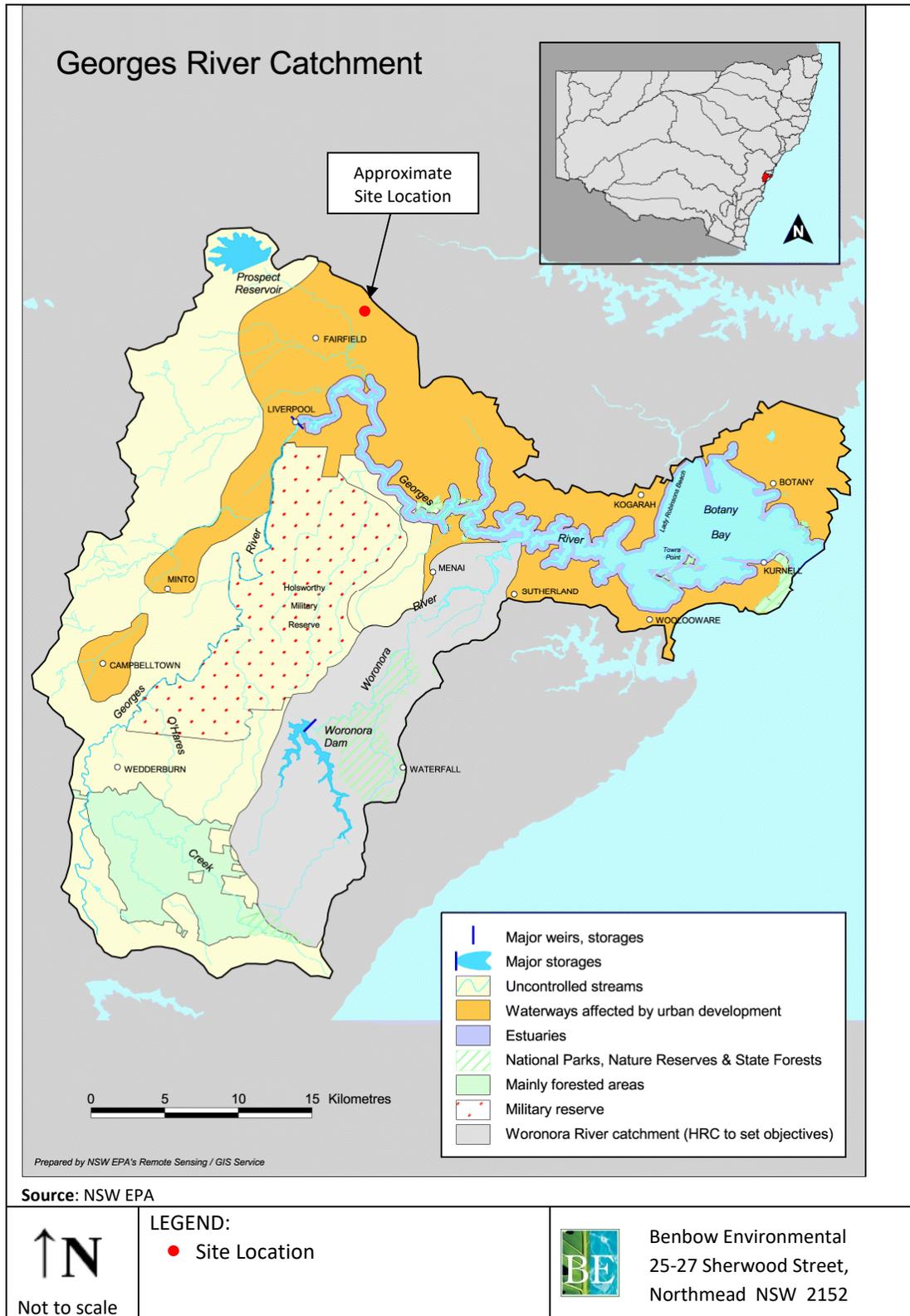
Figure 6-3: Nearest Waterways Map



Source: Google Maps 2021

<p>Not to scale</p>	<p>LEGEND:</p> Site Location	<p>Benbow Environmental 25-27 Sherwood Street, Northmead NSW 2152</p>
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Figure 6-4: Georges River Catchment



6.3.1.1 Water Quality and River Flow Objectives

This section provides the Water Quality Objectives (WQOs) and the River Flow Objectives (RFOs) in Table 6-1 and Table 6-2 for the Georges River catchment, which should be used to develop plans and actions affecting water quality and river health. There are no discharges to waterways associated with the proposed development; nevertheless, WQOs and RFOs are provided for completeness of information on the potentially receiving waters.

As shown in Figure 6-4, the site is located in 'Waterways affected by Urban Development'. The relevant WQOs and RFOs are summarised below in Table 6-1 and Table 6-2 respectively. If needed, key water quality indicators and related numerical criteria (default trigger values) relevant to assessing and monitoring the health of aquatic ecosystems can be found at: <http://www.environment.nsw.gov.au/ieo/GeorgesRiver/report-02.htm>

Table 6-1: Relevant Water Quality Objectives (WQOs)

WQO	Objective
Aquatic Ecosystems	<i>Maintaining or improving the ecological condition of waterbodies and their riparian zones over the long term</i>
Visual Amenity	<i>Aesthetic qualities of waters</i>
Secondary Contact Recreation	<i>Maintaining or improving water quality for activities such as boating and wading, where there is a low probability of water being swallowed</i>
Primary Contact Recreation	<i>Maintaining or improving water quality for activities such as swimming in which there is a high probability of water being swallowed</i>

Table 6-2: Relevant River Flow Objectives (RFOs)

RFO	Objective
Maintain wetland and floodplain inundation	<i>Maintain or restore the natural inundation patterns and distribution of floodwaters supporting natural wetland and floodplain ecosystems</i>
Maintain Natural Flow Variability	<i>Maintain or mimic natural flow variability in all streams</i>
Maintain Natural Rates of Change in Water Levels	<i>Maintain rates of rise and fall of river heights within natural bounds</i>
Minimise Effects of Weirs and Other Structures	<i>Minimise the impact of instream structures</i>

6.3.1.2 Catchment Management Plan

Georges Riverkeeper Strategic Plan 2018-2022 is a four-year plan produced by Georges Riverkeeper. Georges Riverkeeper is a management body that facilitates proactive waterway management that is adaptive and integrated across other areas of member councils, rather than being reactive and piecemeal. There are five focus areas in the Strategic Plan which are:

- Catchment Actions Program, previously the Riverkeeper Program
- River Health Monitoring Program
- Stormwater Program

- Research Program
- Education & Capacity Building Program

6.3.2 Groundwater

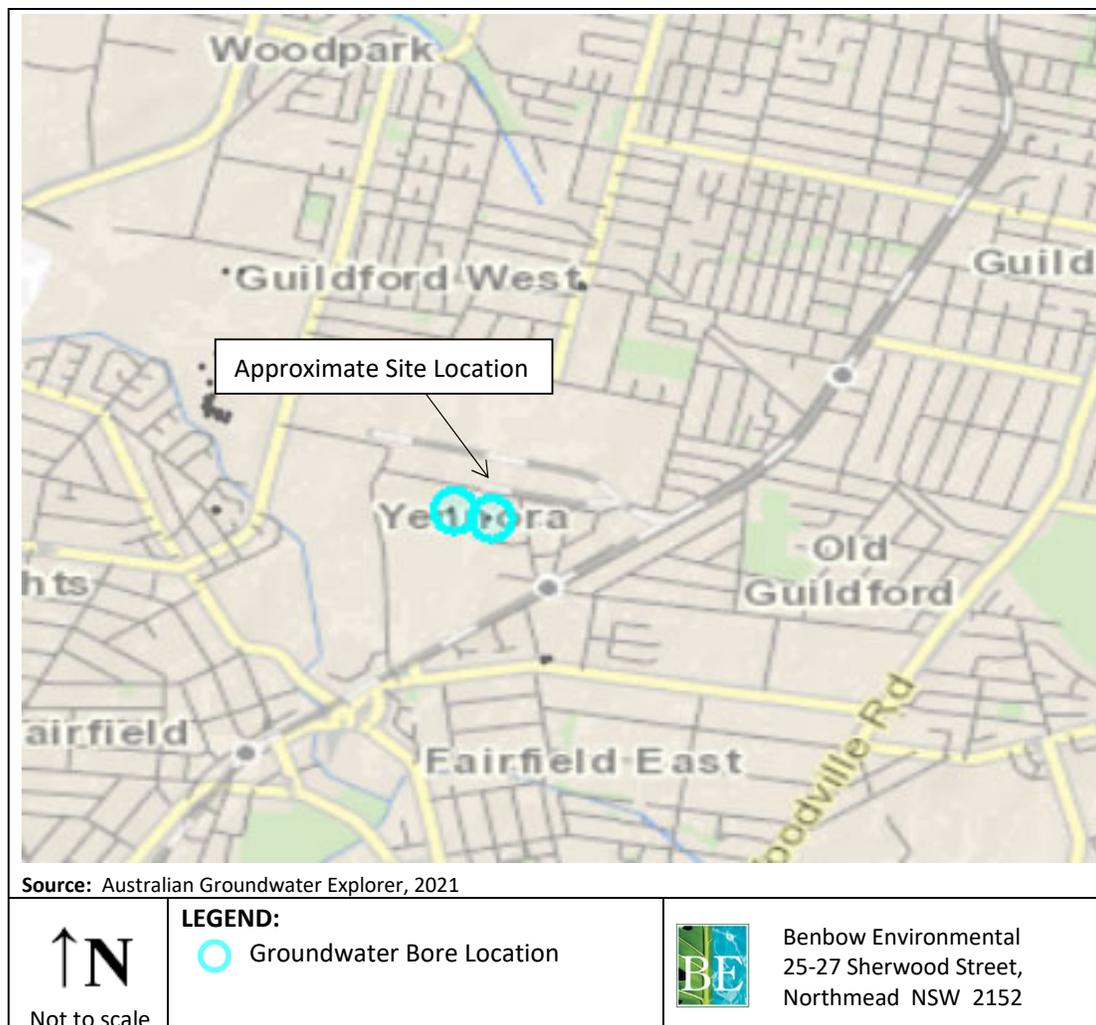
According to the groundwater map by the NSW Department of Primary Industries – Office of Water, there are two (2) groundwater bores within 500 m of the subject site. Available data for these bores is presented in Table 6-3 and the bore locations in relation to the site is shown in Figure 6-5.

Table 6-3: Available Data for Groundwater Bores within 500 m of the subject site.

Bore	Depth (m)	Standing Water Level (m)	Saline
GW114855.1.1	7	-	No
GW114854.1.1	7	-	No

Note: ‘ - ’ indicates no data available

Figure 6-5: Groundwater Bores Within 500 m of the Proposed Development





6.3.3 Flooding

The Section 10.7(5) & (2) certificate no. PC2020/3699 for the site identifies that development on the land or part of the land is subject to flood related development controls.

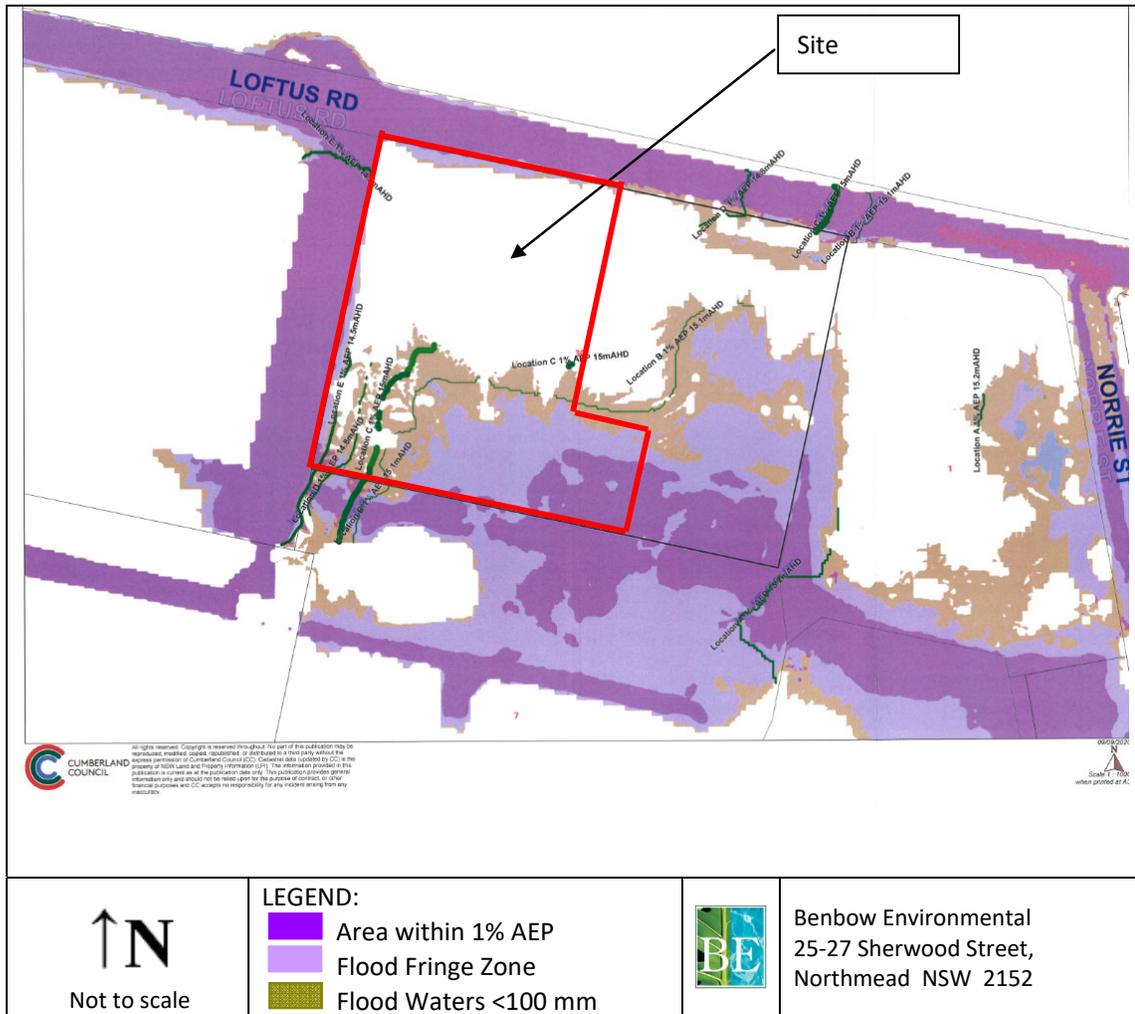
Advice was received from Cumberland City Council regarding the sites flood risk (Attachment 5). A flood map is shown in Figure 6-6. Council stated the following regarding flood risks on the site:

"The above property is shown to be affected by the 1 % Annual Exceedance Probability (AEP) flood, according to the information available to Council from the "Prospect Creek Overland Flood Study" prepared by Lyall & Associates Consulting Water Engineers in June 2017.

The 1 % AEP flood level refers to a flood which has a 1 % chance of being equalled or exceeded in any one year and this site has been assessed as a medium flood risk. It should be noted that a flood could occur that is more severe than the 1 % AEP flood at any time".

A flood mitigation works easement exists along the southern boundary of the site. This area is to remain clear of any works, activities or storage. A stormwater management plan has been prepared that proposes treatment of this area to manage stormwater and flooding at the site.

Figure 6-6: Cumberland City Council Issued Flood Map for Loftus Road



The subject site contains areas of land within the 1% AEP and flood fringe zone. The Holroyd LEP 2013 does not have flood maps, however Clause 6.4 of the LEP states the following regarding flood planning:

6.4 Flood planning

- (1) *The objectives of this clause are as follows—*
 - (a) *to minimise the flood risk to life and property associated with the use of land,*
 - (b) *to allow development on land that is compatible with the land’s flood hazard, taking into account projected changes as a result of climate change,*
 - (c) *to avoid significant adverse impacts on flood behaviour and the environment.*
- (2) *This clause applies to land at or below the flood planning level.*
- (3) *Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development—*
 - (a) *is compatible with the flood hazard of the land, and*
 - (b) *will not significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties, and*
 - (c) *incorporates appropriate measures to manage risk to life from flood, and*



(d) will not significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses, and

(e) is not likely to result in unsustainable social and economic costs to the community as a consequence of flooding.

(4) A word or expression used in this clause has the same meaning as it has in the Floodplain Development Manual (ISBN 0 7347 5476 0) published by the NSW Government in April 2005, unless it is otherwise defined in this clause.

(5) In this clause, flood planning level means the level of a 1:100 ARI (average recurrent interval) flood event plus 0.5 metres freeboard.

The proposed development will be within an existing concreted industrial facility and requires no construction or establishment of structures. The nearest watercourse is approximately 770 m west of the site. The proposed development and its activities will not adversely affect flood behaviour or involve impacts to riverbanks or cause erosion.

6.4 HERITAGE

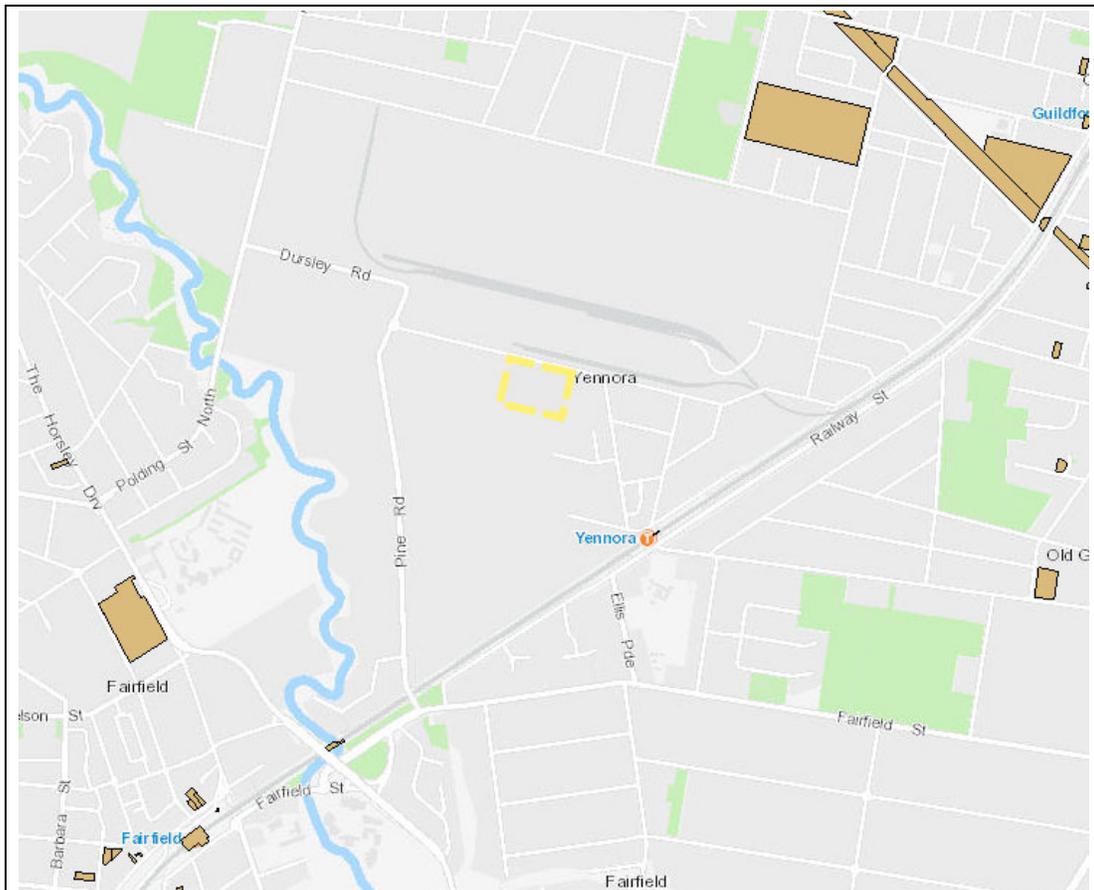
A search for heritage places and items was conducted via the OE&H State Heritage Inventory, an online heritage database which includes listings from Aboriginal Places, State Heritage Register, Interim Heritage Orders, State Agency Heritage Registers and Local Environmental Plans.

The subject land was found not to be affected by an Interim Heritage Order under the provisions of the *Heritage Act 1977*. No Aboriginal Places or European heritage locations have been identified or uncovered on the subject site or in its vicinity.

The site is also not listed as being a heritage item or containing items under the Holroyd LEP 2013. An application for exemption from preparing an Aboriginal cultural heritage impact assessment report (ACHAR) has been prepared by McCardle Cultural Heritage (Appendix 9).

Figure 6-7 shows the nearest heritage items to the site, including "Linnwood" 1.1 km north-east and Fairfield Public School 1.2 km south-west of the property boundary.

Figure 6-7: Heritage Map



Source: NSW Planning Portal 2021

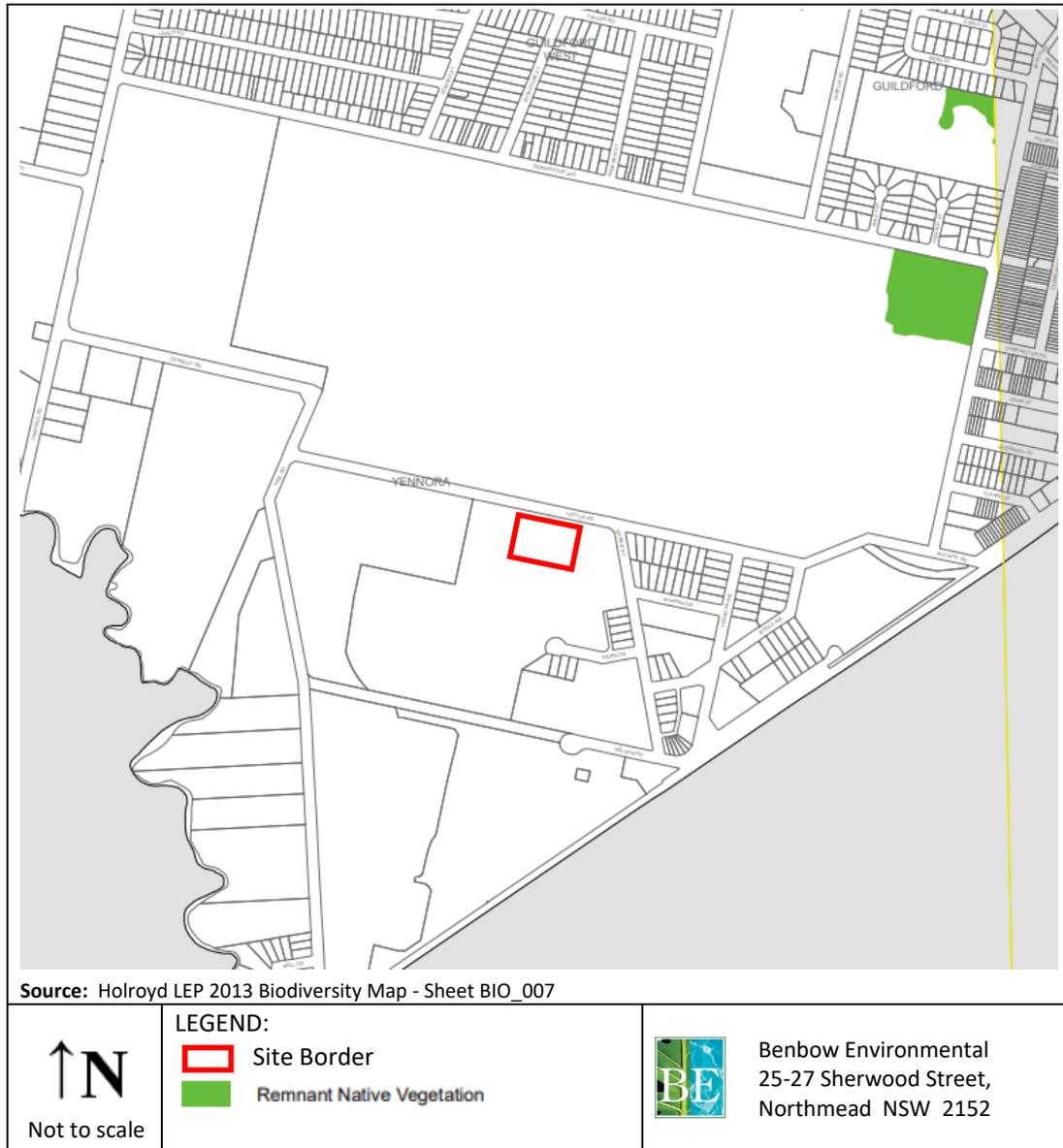
<p>↑ N Not to scale</p>	<p>LEGEND:</p> <ul style="list-style-type: none"> Site Border Aboriginal Place of Heritage Significance Conservation Area - General Conservation Area - Landscape Heritage Conservation Area Item - Aboriginal Item - Archaeological Item - General Item - Landscape 	<p>Benbow Environmental 25-27 Sherwood Street, Northmead NSW 2152</p>
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6.5 FLORA AND FAUNA

The site is a fully developed, existing industrial facility. With the exception of scattered trees in a landscaped area along the perimeter, there is no vegetation on site. No vegetation removal will be required for the development.

An area of terrestrial biodiversity exists approximately 665 m north-east of the site as shown on the Holroyd LEP 2013 terrestrial biodiversity map sheet BIO_007 (Figure 6-8). The proposed development and site operations would not impact this area of biodiversity.

Figure 6-8: Terrestrial Biodiversity Map



6.5.1 Environmentally Sensitive Land

As per the Holroyd LEP 2013, the site and its surrounds are not classified as containing “Environmentally Sensitive Land”.

Figure 6-9, obtained from NSW Planning Portal, shows the nearest environmentally sensitive land in relation to the site (Chipping Norton Lake). This land is approximately 4.1 km south of the site and will not be impacted by the proposed development.

Figure 6-9: Environmentally Sensitive Land Map

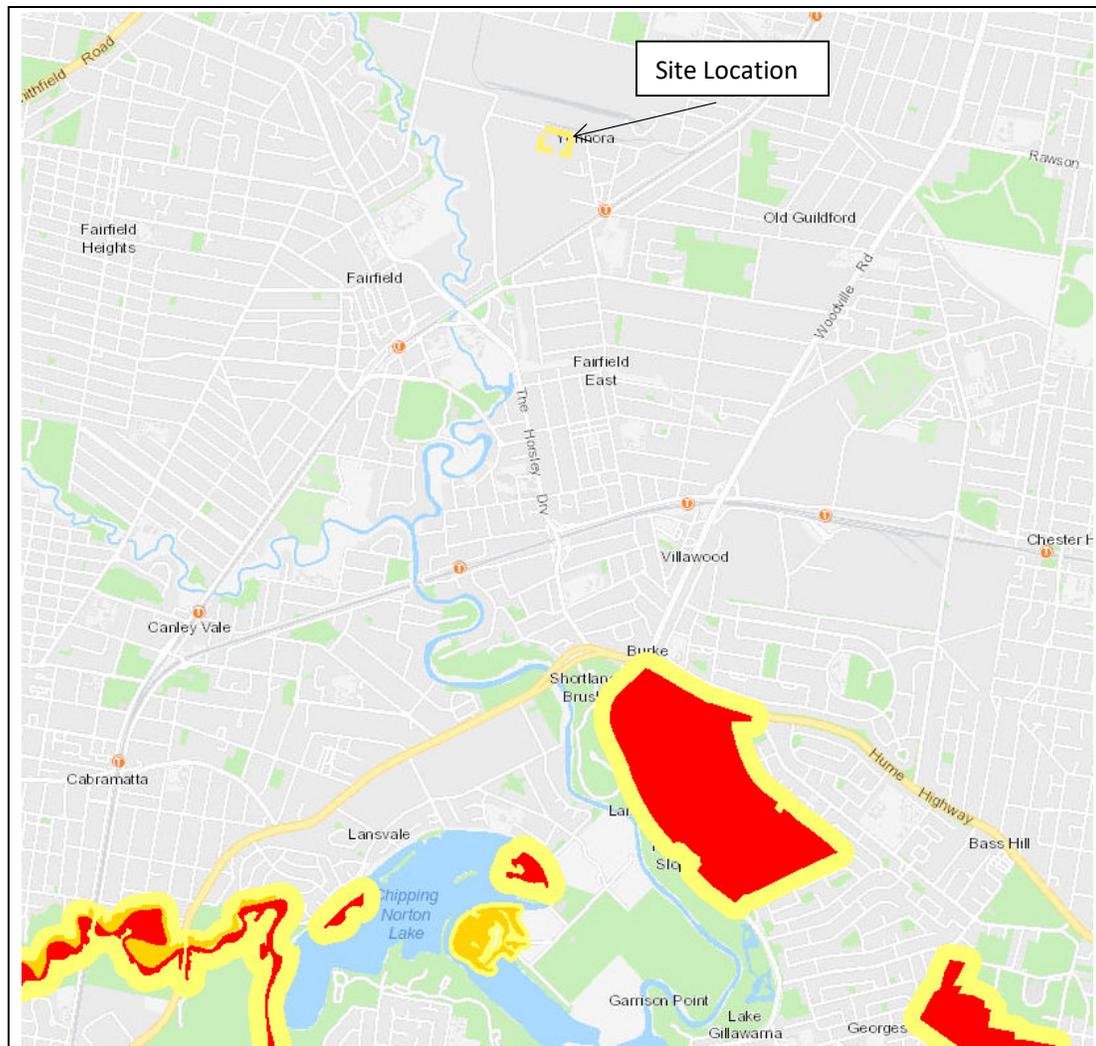


6.5.2 Bushfire Prone Land

The Holroyd LEP 2013 does not list the site or its surrounds as “Bushfire Prone Land”.

The nearest bushfire prone land in relation to the site is approximately 3.1 km south of the site within the Liverpool City Council LGA (Figure 6-10). Bushfire risk or hazard is not expected to impact the proposed development and therefore does not need to be assessed.

Figure 6-10: Bushfire Prone Land Map



Source: NSW Planning Portal 2021

<p>↑ N Not to scale</p>	<p>LEGEND:</p> <ul style="list-style-type: none">  Site Border  Vegetation Category 1  Vegetation Category 2  Vegetation Category 3  Vegetation Buffer 	 <p>Benbow Environmental 25-27 Sherwood Street, Northmead NSW 2152</p>
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6.6 NOISE AMENITY

6.6.1 Nearest Sensitive Receivers

Residential areas are located approximately 670 m to the west in the suburb of Fairfield, 500 m to the south east along Railway Street, Yennora and 600 m north along Dennistoun Avenue in Guildford West.

Yennora Primary School is over 500 metres to the south east. Fairfield High School is over 700 m south west and Fairfield Public School further south west.

The nearest receivers are described in Table 2-1 and shown in Figure 2-5.

Table 6-4: Nearest Sensitive Receivers

Receiver ID	Street Address	Lot & DP	Distance from Site (m)	Direction from Site	Type of Receiver
R1	2A Ellis Parade, Yennora	1 DP 553522	520	SE	Residential
R2	45 Railway Street, Yennora	3 DP 574732	775	E	Residential
R3	66 Byron Road, Guildford	2 DP 975284	875	NE	Residential
R4	58 Tamplin Road, Guildford	7 DP 31391	775	NNE	Residential
R5	45 Dennistoun Avenue, Guildford West	118 DP 10981	76	NNW	Residential
R6	89 Dennistoun Avenue, Guildford West	50 DP 39199	940	NW	Residential
R7	28 Ace Avenue, Fairfield	30 DP 539236	850	WSW	Residential
R8	17 Pine Road, Fairfield	39 DP 13605	800	SW	Residential
R9	104 Railway Street, Yennora	5 DP 812983	630	S	Residential
R10	1-9 Orchardleigh Street, Yennora	1 DP 447926	505	SW	School
R11	16 Junction Street, Old Guildford	1 DP 509537	1,005	E	Childcare Centre
R12	405 The Horsley Drive, Fairfield	1 DP 1063605	750	WSW	School
R13	198 Fairfield Rd, Yennora NSW 2161 (Fairfield Road Park)	23 DP 610787	880	E	Active Recreation
R14	30 A Loftus Road, Yennora	9 DP 1233715	Adjacent	E	Industrial
R15	38 Pine Road, Yennora	200 DP 105758	Adjacent	W	Industrial

Table 6-4: Nearest Sensitive Receivers

Receiver ID	Street Address	Lot & DP	Distance from Site (m)	Direction from Site	Type of Receiver
R16	14-54 Dennistoun Avenue, Yennora	21 DP 1171076	Adjacent	N	Industrial
R17	7 Kiora Crescent Yennora	7 DP1233715	Adjacent	S	Industrial

Figure 6-11: Nearest Sensitive Receivers



6.6.2 Existing Acoustic Environment

The level of background noise varies over the course of any 24-hour period, typically from a minimum at 3.00am to a maximum during morning and afternoon traffic peak hours. Therefore, the NSW EPA Noise Policy for Industry (2017) requires that the level of background and ambient noise be assessed separately for the daytime, evening and night time periods. The Noise Policy for Industry defines these periods as follows:



- **Day** – the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays;
- **Evening** – the period from 6pm to 10pm; and
- **Night** – the remaining periods.

6.6.2.1 Measurement Locations

The environmental noise logger was utilised to measure the existing ambient and background noise levels. Unattended long-term noise monitoring was undertaken from 24th September 2019 to 7th October 2019 at one (1) residential location. An attended noise measurement was conducted on 24th September 2019 at one (1) residential location at 95 Railway Street, Yennora.

The noise logger location is shown in Figure 6-12 and listed in Table 6-5.

Table 6-5: Noise Monitoring Location

Monitoring Location	Methodology	Address
A	Attended monitoring and unattended monitoring	95 Railway Street, Yennora

Figure 6-12: Logger Location





6.6.2.2 Measured Noise Levels

6.6.2.2.1 Long-Term Unattended Noise Monitoring Results

The data was analysed to determine a single assessment background level (ABL) for each day, evening and night time period, in accordance with the NSW EPA Noise Policy for Industry. That is, the ABL is established by determining the lowest tenth-percentile level of the L_{A90} noise data over each period of interest. The background noise level or rating background level (RBL) representing the day, evening and night assessment periods is based on the median of individual ABL's determined over the entire monitoring period.

Only 5 full day time periods were obtained during the long term unattended measurements due to inclement weather conditions. From the logger graphs provided in the Noise Impact Assessment the 5 days are representative of the daily noise patterns throughout the period of monitoring, furthermore the development will operate during the night which will provide a more stringent criterion. Therefore additional monitoring is not required.

The results of the long-term unattended noise monitoring are displayed in the following table.



Table 6-6: Unattended Noise Monitoring Results at 95 Railway Street, Yennora dB(A)

Date	Average L ₁			Average L ₁₀			ABL (L ₉₀)			L _{eq}		
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
24/09/2019	73	73	71	67	67	64	41	43	41	63	62	60
25/09/2019	-	74	72	-	67	60	-	42	40	-	63	60
26/09/2019	-	72	72	-	67	59	-	42	38	-	62	62
27/09/2019	72	73	71	67	67	60	42	46	38	63	63	60
28/09/2019	-	72	-	-	67	-	-	43	-	-	61	-
29/09/2019	-	71	71	-	66	57	-	42	36	-	61	58
30/09/2019	-	73	72	-	67	58	-	40	36	-	62	60
1/10/2019	-	73	71	-	67	58	-	44	37	-	62	60
2/10/2019	-	-	-	-	-	-	-	-	-	-	-	-
3/10/2019	-	-	-	-	-	-	-	-	-	-	-	-
4/10/2019	-	-	-	-	-	-	-	-	-	-	-	-
5/10/2019	72	71	-	68	66	-	43	41	-	63	62	-
6/10/2019	71	71	71	66	65	60	42	43	38	61	61	59
7/10/2019	70	-	70	64	-	56	39	-	38	59	-	58
Average	72	72	71	67	67	59	*	*	*	*	*	*
Median (RBL)	*	*	*	*	*	*	42	42	38	*	*	*
Logarithmic Average	*	*	*	*	*	*	*	*	*	62	62	60

Note: - Indicates values that has not been considered due to adverse weather conditions.

* Indicates values that are not relevant to that noise descriptor.

Value in bold indicates relevant noise descriptor.

A) Value removed as an outlier in total logarithmic average



6.6.2.2 Short Term Operator Attended Noise Monitoring Results

Attended noise monitoring was conducted on Monday the 24th September 2019 in order to gain an understanding of the background noise sources of the area. Noise contributions were obtained from ambient noise sources such as local fauna, road traffic and industrial sources. The results of the short-term attended noise monitoring are displayed in Table 6-7.

The attended measurements showed that the background noise levels were dominated by road traffic and noise from trains passing by.

Table 6-7: Operator Attended Noise Measurements, dB(A)

Location & Date/Time	L _{Aeq}	L _{A90}	L _{A10}	L _{A1}	Comments
Location A Tuesday 24/09/2019 11:50am Daytime Period	63	42	67	74	Truck Passing <79 dB(A) Car Passing <75 dB(A) Train <74 dB(A) Plane <58 dB(A) Residential Noise <57 dB(A) Birds <56 dB(A) Nearby work site <56 dB(A)

6.6.3 Meteorological Conditions

Wind and temperature inversions may affect the noise emissions from the site and are to be incorporated in the assessment when considered to be a feature of the area.

In this section, an analysis of the 2019 weather data obtained from the Bureau of Meteorology (BoM) automatic weather station (AWS) located at Bankstown Airport has been conducted to establish whether significant winds are characteristic of the area.

6.6.4 Wind Effects

Wind is considered to be a feature where source-to-receiver wind speeds (at 10 m height) of 3 m/s or below occur for 30% or more of the time in any assessment period in any season.

6.6.5 Wind Rose Plots

Wind rose plots show the direction that the wind is coming from, with triangles known as “petals”. The petals of the plots in the figures summarise wind direction data into 8 compass directions i.e. north, north-east, east, south-east, etc. The length of the triangles, or “petals”, indicates the frequency that the wind blows from that direction. Longer petals for a given direction indicate a higher frequency of wind from that direction. Each petal is divided into segments, with each segment representing one of the six wind speed classes.

Thus, the segments of a petal show what proportion of wind for a given direction falls into each class. The proportion of time for which wind speed is less than 0.5 m/s, when speed is negligible, is referred to as calm hours or “calms”. Calms are not shown on a wind rose as they have no



direction, but the proportion of time consisting of the period under consideration is noted under each wind rose.

The concentric circles in each wind rose are the axis, which denote frequencies. In comparing the plots it should be noted that the axis varies between wind roses, although all wind roses are similar in size. The frequencies denoted on the axes are indicated beneath each wind rose.

6.6.6 Local Wind Trends

Seasonal wind rose plots for this site utilising BoM Bankstown Airport AWS (ID: 066137) data have been included in Figure 6-13, Figure 6-14 and Figure 6-15 for day, evening and night periods respectively.

Figure 6-13: Wind Rose Plots – BoM Bankstown Airport AWS – 2019 – Day time

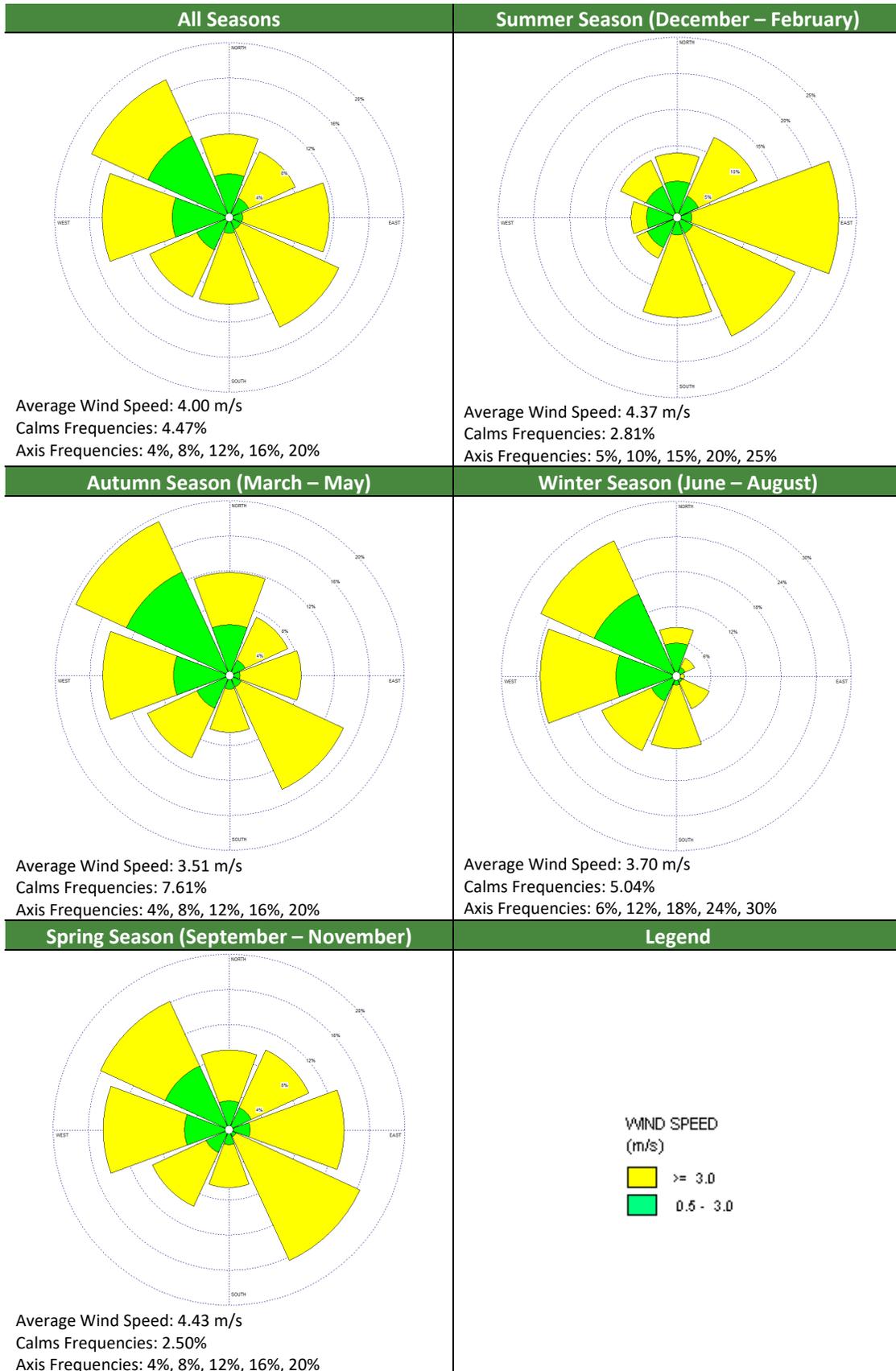




Figure 6-14: Wind Rose Plots – BoM Bankstown Airport AWS – 2019 – Evening time

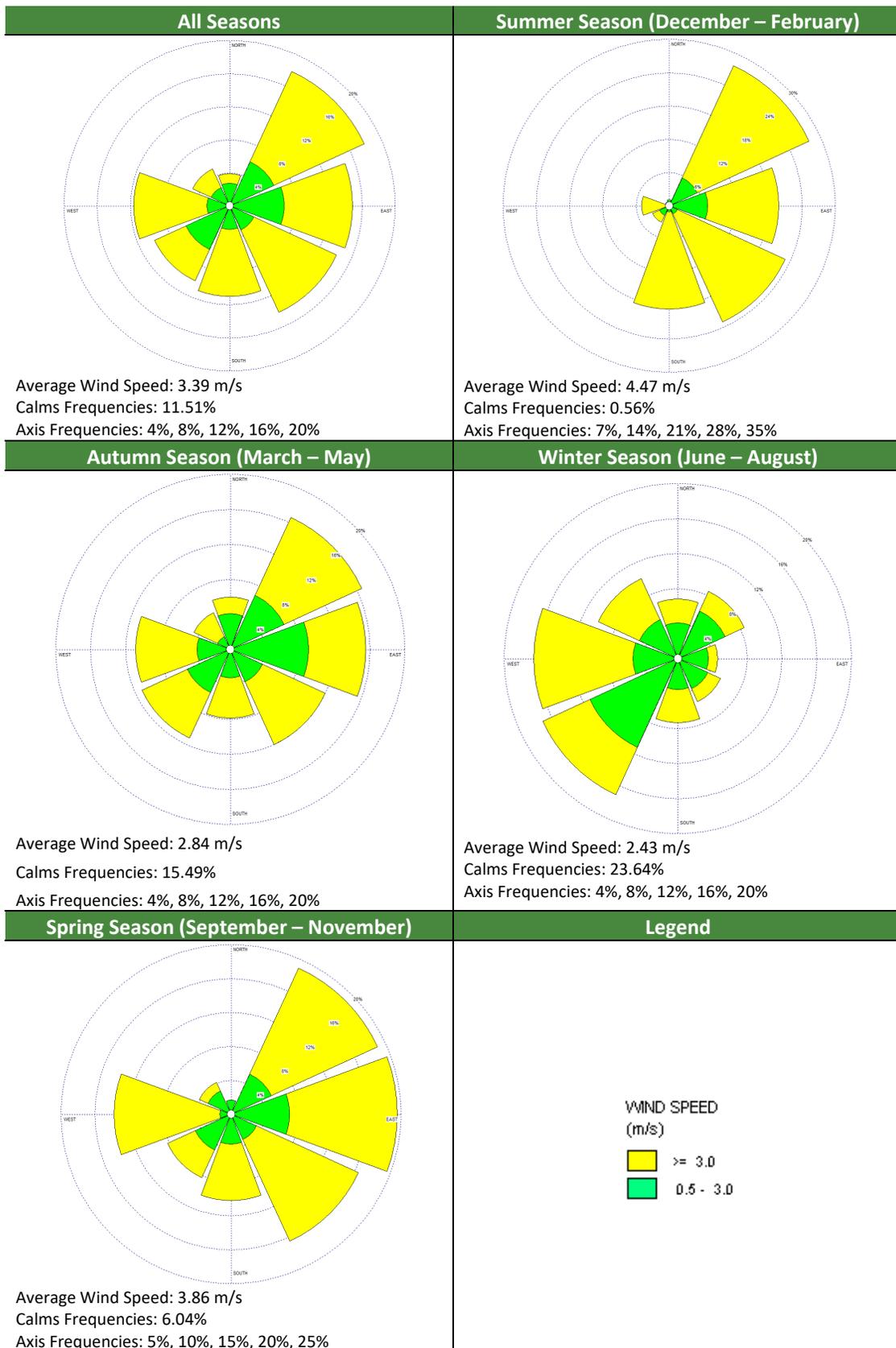
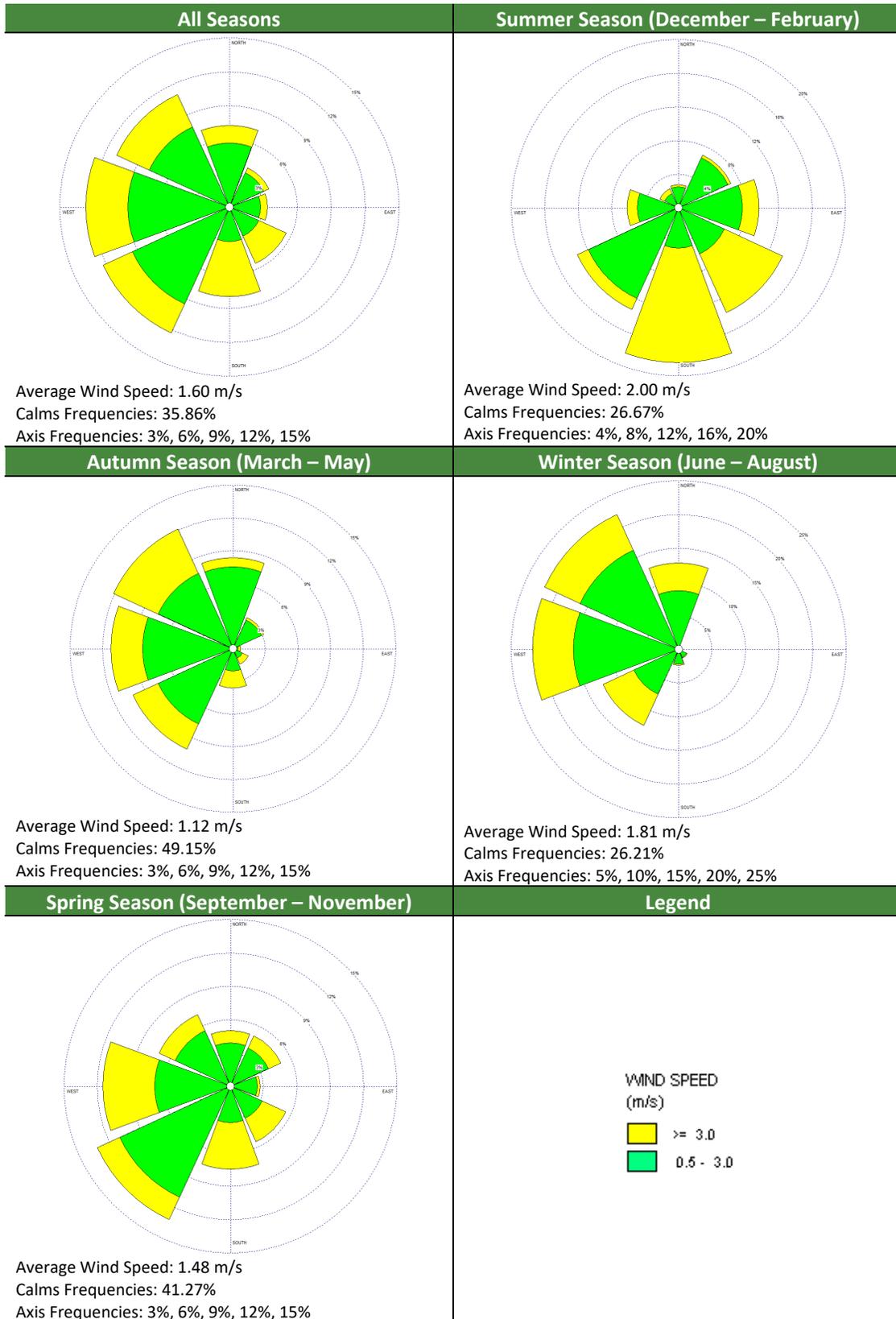




Figure 6-15: Wind Rose Plots – BoM Bankstown Airport AWS – 2019 – Night time





6.7 AIR QUALITY

6.7.1 Background Air Quality

Background air quality parameters from 2020 were obtained from the NSW EPA Chullora air quality monitoring station, located approximately 8 km south-east of the subject site. This station is the nearest to the site and considered indicative of the local air quality on site. The relevant pollutant parameters available from this station were PM_{2.5} and PM₁₀.

The relevant data is summarised in Table 6-8. It should be noted that the below background air quality data is included to illustrate the most recent full year of background air quality data in the local area. The representative meteorological year in the AQIA – 2017 – was selected to best represent long-term average background air quality for air emission modelling purposes.

Table 6-8: Summary of 2020 Data for PM_{2.5} and PM₁₀ from Chullora Air Quality Monitoring Station

Pollutant	Averaging period	Date	Concentration (µg/m ³)
PM _{2.5}	Maximum 24 hr average	08/01/2020	86.2
	2 nd highest 24 hr average	12/01/2020	47.7
	3 rd highest 24 hr average	24/01/2020	40.0
	4 th highest 24 hr average	17/01/2020	35.8
	5 th highest 24 hr average	05/01/2020	35.1
	6 th highest 24 hr average	11/01/2020	33.4
	7 th highest 24 hr average	04/01/2020	31.9
	8 th highest 24 hr average	23/01/2020	28.7
	9 th highest 24 hr average	02/01/2020	28.5
	10 th highest 24 hr average	30/08/2020	24.6
	Annual average	2020	8.8
PM ₁₀	Maximum 24 hr average	23/01/2020	167.9
	2 nd highest 24 hr average	08/01/2020	102.5
	3 rd highest 24 hr average	24/01/2020	88.4
	4 th highest 24 hr average	05/01/2020	65.7
	5 th highest 24 hr average	04/01/2020	65.1
	6 th highest 24 hr average	12/01/2020	63.4
	7 th highest 24 hr average	25/01/2020	56.4
	8 th highest 24 hr average	11/01/2020	50.0
	9 th highest 24 hr average	01/01/2020	47.8
		Annual average	2020



Pollutant	Averaging period	Date	Concentration ($\mu\text{g}/\text{m}^3$)
PM _{2.5}	Maximum 24 hr average	08/03/2017	44.7
	2 nd highest 24 hr average	14/08/2017	39.0
	3 rd highest 24 hr average	02/09/2017	35.7
	4 th highest 24 hr average	09/03/2017	33.3
	5 th highest 24 hr average	27/08/2017	32.6
	6 th highest 24 hr average	12/03/2017	27.9
	7 th highest 24 hr average	12/09/2017	27.5
	8 th highest 24 hr average	07/03/2017	25.8
	9 th highest 24 hr average	15/08/2017	24.7
	Annual average	2017	9.5
PM ₁₀	Maximum 24 hr average	12/10/2017	63.0
	2 nd highest 24 hr average	08/03/2017	54.6
	3 rd highest 24 hr average	14/08/2017	51.9
	4 th highest 24 hr average	24/09/2017	51.3
	5 th highest 24 hr average	09/03/2017	47.9
	Annual average	2017	20.1

Note: Bold values exceed the *Approved Methods* criteria.

6.8 CLIMATE

This section provides background information on the meteorological conditions of the existing area surrounding the proposed development. The referenced meteorological information for rainfall and temperature has been sourced from the Bureau of Meteorology (BoM) monitoring station at Bankstown Airport AWS, Station No. 066137. This station is located approximately 6.4 km south-southeast of the subject site and is considered suitable for reference to general climate conditions in the local area.

6.8.1 Temperature

The mean annual minimum and maximum temperatures at Bankstown Airport AWS are 12.1°C and 23.3°C respectively. The lowest temperatures occur in July, with a mean maximum of 17.4°C and a mean minimum of 5.2°C. The hottest temperatures are recorded during January, with the highest maximum average of 28.5°C. This data is shown in Table 6-9.

Table 6-9: Temperature Statistics at Bankstown Airport AWS

Parameter	Months												Annual
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mean Maximum Temperature (°C)	28.5	27.9	26.4	23.8	20.6	17.8	17.4	19.0	21.7	24.0	25.5	27.6	23.3
Mean Minimum Temperature (°C)	18.3	18.2	16.3	12.8	9.4	6.8	5.2	6.0	8.7	11.9	14.4	16.7	12.1

Source: Bureau of Meteorology, 2021

Note: Statistics are based on data collected from the Year 1968 to 2021



6.8.2 Rainfall

Rainfall data from Bankstown Airport AWS shows mean annual rainfall of 866.4 mm, which results in a monthly mean of 72.2 mm. February is the wettest month, where the mean rainfall reading is 107.5 mm, while the driest month is July with 44.3 mm mean rainfall. The annual mean number of rainy days (with rainfall above 1 mm) is calculated as 81.3 days. This data is shown in Table 6-10.

Table 6-10: Rainfall Statistics – Bankstown Airport AWS

Months Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean Rainfall (mm)	93.0	107.5	100.6	82.4	63.6	79.6	44.3	49.6	44.6	60.1	75.4	67.2	866.4
Decile 5 (Median) Rainfall (mm)	74.6	77.0	82.1	53.8	54.5	55.4	31.2	24.8	37.0	39.2	67.8	55.4	885.8
Mean No. of Days of Rain \geq 1 mm	8.0	8.0	8.5	6.6	6.5	6.9	5.2	4.6	5.4	6.7	7.9	7.0	81.3

Source: Bureau of Meteorology, 2021

Note: Statistics are based on data collected from the Year 1968 to 2021

6.8.3 Wind

Seasonal wind rose plots for this site utilising Bankstown Airport AWS 2019 data have been included and are displayed in Figure 6-16.

Based on the information presented from the 2019 data for Bankstown Airport, annual average wind speeds of 3 m/s and a calms frequency of 17.45% were estimated. Annual winds from the west and north-west were found to be dominant and were present for approximately 13% of the time.

The average summer wind speed was estimated to be 3.50 m/s, with a calms frequency of 11.48%. East, south-east and south winds were found to be dominant at a frequency of around 17%.

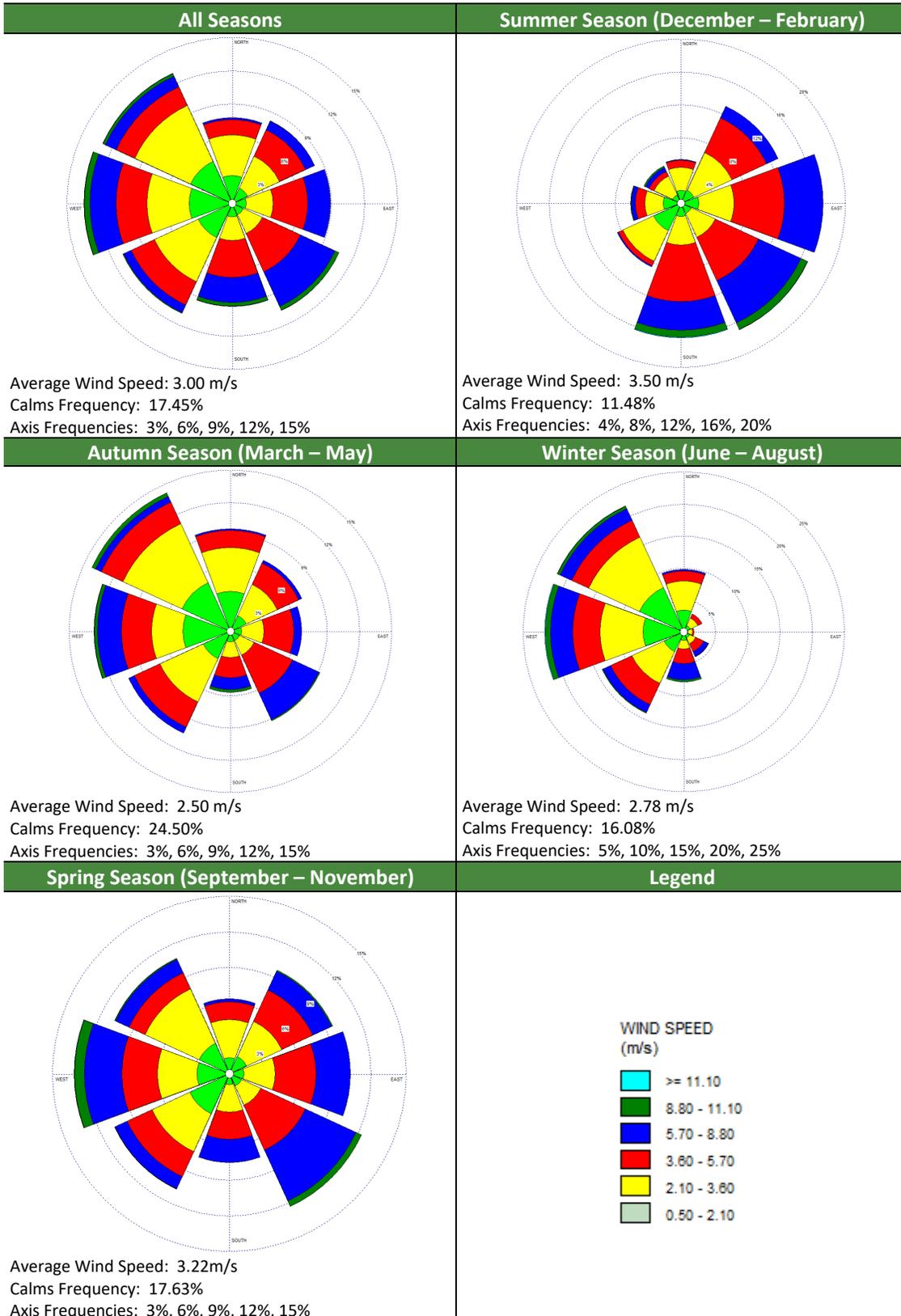
In autumn, dominant winds were blowing from the north-west at a frequency of approximately 14%. Winds from the west accounted for around 12% of winds. The average autumn wind speed was 2.50 m/s with a calms frequency of 24.50%.

The winter season data showed the prevalence of winds from the west and north-west, which accounted for approximately 22% of winds. The average winter wind speed was determined to be 2.78 m/s with a calms frequency of 16.08%.



In the spring time, average wind speeds of 3.22 m/s with a frequency of calms of 17.63% were recorded. Dominant strong winds were found to be present from the west and south-east at around 13%.

Figure 6-16: Wind Rose Plots for the Referenced Meteorological Station – Bureau of Meteorology Bankstown Airport AWS (2019)





7. IDENTIFICATION AND PRIORITISATION OF ISSUES

The identification and prioritisation of the potential environmental impacts of the proposed development were fundamental steps in preparing the EIS.

This process involved the following stages:

1. Review of the proposed site activities and subject site

Once a site had been selected, Initial meetings with the proponent were undertaken to discuss the details of the proposed development. This included an inspection of the subject site and established a preliminary model for the site operations, potential materials and processes required and informed the development of a concept site design. Initial design was based on best practice environmental management techniques.

2. Identification of planning requirements

Review of planning instruments that apply to the land was undertaken to determine any site constraints and zoning rules affecting the property.

3. Early Consultation

Past reports for the existing site were reviewed and relevant NSW government/ industry guidelines were reviewed. A meeting with the Department was arranged as the first step in the consultation process. A brief Scoping Report and concept plan was prepared prior to the meeting that provided a description of the site, proposed activities, incoming waste and recovered materials as well as identification of key environmental issues.

4. Revision of Scoping Report

Based on the discussions with the Department, the Scoping Report and plans were revised to provide additional information regarding the project. This was used to apply for the SEARs.

5. Consultation with regulatory authorities & stakeholders

Consultation included requests for meetings with Cumberland City Council, NSW EPA, Fire and Rescue NSW, Transport for NSW, Environment Energy and Science (EES). A community consultation leaflet was prepared for distribution to neighbouring industrial facilities and nearest residential areas for the purpose of obtaining initial feedback and gauge community interest in the project. Secretary's Environmental Assessment Requirements for the EIS from the DP&E were obtained. This included feedback from relevant regulatory authorities.

Consideration was given to feedback obtained from meetings and the SEARs within relevant technical reports.



7.1 KEY ISSUE RISK ASSESSMENT

The SEARs required a risk assessment identifying key issues. This has been undertaken following the risk assessment methodology outlined in the following sections.

7.1.1 Risk Criteria

The following sub-section defines the risk criteria used in this assessment.

7.1.1.1 Consequence Estimation

Consequence descriptor is used to quantify the potential on-site and off-site impacts in terms of environmental, health and financial impacts. Consequence is described in the following table.

Table 7-1: Consequence Table

Level	Descriptor	Consequences Or Impact Description
1	Insignificant	Confined on-site environmental impacts able to be promptly rectified. No injuries. Financial loss less than \$2,000.
2	Minor	Confined environmental impacts requiring short term recovery with potentially little or no off-site impacts. First Aid treatment. Financial loss \$2,000 to \$20,000.
3	Moderate	Confined environmental impacts requiring medium term recovery both on-site and off-site. Medical treatment required. Financial loss \$20,000 to \$200,000,
4	Severe	Unconfined environmental impacts requiring long term recovery and leaving residual damage both on-site and off-site. Extensive injuries, loss of product capability. Financial loss \$200,000 to \$1M.
5	Catastrophic	Widespread environmental impact requiring long term recovery and leaving major damage both on-site and off-site. Death. Financial loss more than \$1M.

7.1.1.2 Likelihood Estimation

This aspect involves determining how likely an event is to occur. Likelihood is the chance that something might happen and is defined for the purposes of this assessment in the following table.



Table 7-2: Likelihood Table

Level	Descriptor	Likelihood Description
A	Almost Certain	Very likely. The event is expected to occur in most circumstances.
B	Likely	Strong possibility. The event will probably occur in most circumstances.
C	Possible	The event might occur at some time.
D	Unlikely	Not expected. There is a slight possibility the event could occur at some time.
E	Rare	Highly unlikely. The event may occur only in exceptional circumstances.

7.1.2 Level of Risk

The level of risk is defined by the following table.

Table 7-3: Level of Risk Table

		Consequence				
		Insignificant 1	Minor 2	Moderate 3	Severe 4	Catastrophic 5
Likelihood	A (almost certain)	MEDIUM	HIGH	HIGH	VERY HIGH	VERY HIGH
	B (likely)	LOW	MEDIUM	HIGH	HIGH	VERY HIGH
	C (possible)	LOW	MEDIUM	MEDIUM	HIGH	HIGH
	D (unlikely)	LOW	LOW	MEDIUM	MEDIUM	H (10)
	E (rare)	LOW	LOW	LOW	LOW	LOW

Key issues are identified by any level of risk medium and above. The level of assessment can be based on the risk level and is discussed in the risk table. Key issues identified with a high or very high level of risk would need to be quantitatively assessed.

Issues with a low risk level are not considered key issues. A brief discussion is considered adequate for these issues.



7.1.3 Key Issue Risk Table

Table 7-4: Key Issues Risk Assessment

Environmental Aspect	Discussion of Development Features & Potential Impacts	Raw Risk			Assessment Requirements	Key Issue
		Consequence	Likelihood	Raw Risk Level		
STATUTORY AND STRATEGIC CONTEXT	The proposal constitutes state significant development as the proposed capacity of the resource recovery facility exceeds the threshold under Clause 23(3) of the State and Regional Development SEPP. The proposal is required to comply with state, regional and local planning instruments. The risk associated with not complying with planning instruments is assessed.	Severe	Possible	H	A planning assessment is required to assess the proposal against all relevant planning strategies, environmental planning instruments and development control plans.	Yes
SUITABILITY OF THE SITE	The nature of the incoming materials and processes associated with the proposal present a risk of causing pollution if the site is not suitable for the proposed use.	Moderate	Possible	M	A detailed justification for the proposal and suitability of the site is provided.	Yes
COMMUNITY & STAKEHOLDER ENGAGEMENT	The risk of members of the community being impacted by the development could result if aspects are not managed appropriately. Stakeholder engagement is required as the project is state significant.	Severe	Possible	H	Community consultation and stakeholder engagement is an essential part of the EIS process. Opportunity for stakeholders & the community to provide input into requirements for the EIS and to express concerns was required.	Yes
WASTE MANAGEMENT	Waste forms the basis of the development in that the facility would undertake resource recovery and waste processing. Waste classifications for both inputs and outputs include general solid waste (non-putrescible). No hazardous, liquid or toxic waste is included. Resource recovery orders and exemptions are applicable. Potential for waste to contaminate the environment is a risk.	Severe	Possible	H	A detailed waste management assessment is required.	Yes



Table 7-4: Key Issues Risk Assessment

Environmental Aspect	Discussion of Development Features & Potential Impacts	Raw Risk			Assessment Requirements	Key Issue
		Consequence	Likelihood	Raw Risk Level		
AIR QUALITY & ODOUR	<u>Dust</u> Potential dust impacts are associated with the processing and storage of C&D and C&I waste and recovered materials.	Severe	Likely	H	A quantitative air quality impact assessment is required due to the potential for additional dust impacts.	Yes
	<u>Odour</u> No odorous materials would be accepted on site. The proposed processes are simple separation processes and not odour generating.	Insignificant	Unlikely	L	An odour assessment is not warranted. A justification would be provided	
SOILS & WATER	<u>Flooding</u> The property is subject to flood related development controls. Changes to the site may result in changes to flood impacts off-site.	Moderate	Possible	M	Flooding issues require careful consideration.	Yes
	<u>Water</u> The site is fully developed and existing stormwater infrastructure would need to be reviewed for adequacy. The development may require additional stormwater controls. The processes and materials have potential to impact on surface and groundwater. Water use is limited to dust suppression. No wastewater would be generated.	Moderate	Possible	M	Stormwater design and Music modelling (quantitative assessment) is required. A water qualitative assessment would address the potential impacts to surface and groundwater.	



Table 7-4: Key Issues Risk Assessment

Environmental Aspect	Discussion of Development Features & Potential Impacts	Raw Risk			Assessment Requirements	Key Issue
		Consequence	Likelihood	Raw Risk Level		
	<p><u>Soil</u> The site is fully developed and sealed. Past site uses warrant a preliminary site investigation to determine the contamination status of the site. A site auditor statement and past investigations for the site would be reviewed. Outcomes of this review would inform whether additional investigations are required. Minor excavations may be required for the establishment of a swale. No other disturbance to soil or excavations are proposed.</p>	Moderate	Possible	M	Contamination is to be assessed in accordance with SEPP 55. A soil assessment would address the potential impacts to land.	
NOISE & VIBRATION	<p>Noise generating equipment is required for the proposed operations. 24/7 operations are proposed. Sensitive receptors are located in close proximity to the site. Additional truck movements are associated with the ongoing operations. Construction works are minor.</p>	Severe	Possible	H	A quantitative noise impact assessment is required for construction and operation. Road traffic noise is also required to be assessed.	Yes
TRAFFIC & TRANSPORT	<p>Additional truck movements would be associated with the development potentially resulting in impacts to the existing road network and intersections. On site car parking is needed and restrictions to the flood affected area of the site would need to be considered. On-site manoeuvring of trucks is required.</p>	Severe	Likely	H	A full traffic assessment is required. Swept path analysis would be provided. Car parking required would be assessed.	Yes
FIRE & INCIDENT MANAGEMENT	<p>Combustible waste will be stored at the site. Fire requirements for the building and fire brigade access will need to be considered. As this development is a waste facility, the FRNSW guidelines for waste facilities needs to be addressed.</p>	Severe	Possible	H	A fire engineering design is required. Fire risk will be assessed.	Yes



Table 7-4: Key Issues Risk Assessment

Environmental Aspect	Discussion of Development Features & Potential Impacts	Raw Risk			Assessment Requirements	Key Issue
		Consequence	Likelihood	Raw Risk Level		
HAZARD & RISK	<p><u>Chemicals</u> No significant quantities of hazardous chemicals are to be used in the process. Quantities of chemicals would be relatively minor and do not trigger SEPP 33, therefore a preliminary hazard analysis is not required.</p>	Minor	Possible	M	SEPP 33 risk screening required. Chemical management issues addressed.	Yes
	<p><u>Biosecurity</u> Biosecurity is not considered an issue as there are no putrescible or odorous waste to be accepted.</p>	Insignificant	Unlikely	L	Brief discussion included.	No
	<p><u>Bushfire</u> The land is not bushfire prone.</p>	Minor	Unlikely	L	Brief discussion included.	No
BIODIVERSITY	<p>Preliminary findings determined that land does not include or comprise critical habitat, nor is it in the immediate vicinity of any threatened species. The land has been previously cleared of all vegetation. A BDAR waiver application has been submitted and granted.</p>	Insignificant	Rare	L	Brief discussion included.	No
HERITAGE	<p>A search of the NSW State Heritage Inventory found no Aboriginal places or items of heritage on, or within the vicinity of the site and that the site is fully concreted with no vegetation and therefore a full Aboriginal and Cultural Heritage Assessment is not considered required. The development does not require excavation work that will disturb the ground surface. An Aboriginal Heritage Exemption is sought.</p>	Minor	Unlikely	L	A heritage assessment is not required. Heritage will be briefly discussed.	No



Table 7-4: Key Issues Risk Assessment

Environmental Aspect	Discussion of Development Features & Potential Impacts	Raw Risk			Assessment Requirements	Key Issue
		Consequence	Likelihood	Raw Risk Level		
VISUAL	The site is a fully developed industrial site. Based on preliminary plans, changes on site would not significantly impact on the visual appearance of the site.	Minor	Unlikely	L	A discussion of visual amenity has been provided.	No
ECOLOGICAL SUSTAINABLE DEVELOPMENT	Additional processes are likely to impact on environmental aspects. The proposal is state significant. Therefore, ecological sustainable development needs to be discussed in detail.	Moderate	Possible	M	ESD discussed in detail	Yes
CUMULATIVE IMPACTS	Due to the size and nature of the proposed development, controlling for direct environmental impacts would minimise any cumulative impacts from the proposed development. Some aspects such as noise, dust impacts, traffic and stormwater have been assessed cumulatively in their assessments.	Moderate	Possible	M	Cumulative impacts are briefly discussed. Results of any cumulative assessments are provided.	Yes
HUMAN HEALTH AND SAFETY	Preliminary investigations into the potential impacts to human health resulting from liquid waste recycling facilities are either negligible or appropriately mitigated. Furthermore, the nature of the drilling mud is inert or chemically inactive. No hazardous materials are associated with the processing operations.	Minor	Unlikely	L	A detailed assessment is not warranted. A brief discussion on human health is provided.	No
SOCIO-ECONOMIC	The initial estimate of the value of the development is \$ 5 million. Employment is expected to be for 50 new full time positions. The development is expected to have numerous positive contributions to the community in terms of socio-economic impacts.	Minor	Unlikely	L	Socio-economic aspects are briefly discussed.	No



7.2 SUMMARY OF KEY ISSUES

Based on all the above considerations, potential issues have been prioritised as follows:

- **Noise and vibration**
A quantitative noise impact assessment is required due to the large number of noise generating sources proposed to ensure noise levels from the facility meet EPA criteria.
- **Air quality and odour**
A quantitative air quality assessment is required due to the potential for dust to be generated from the processing and storage of waste and recovered material. No odorous materials or odour generating processes are proposed at the site. Therefore an Air Quality Impact Assessment focussing on dust impacts has been undertaken.
- **Traffic and transport**
A full traffic assessment has been undertaken due to the expected traffic increases likely to impact on the existing road network.
- **Strategic Context**
A detailed justification for the proposal and suitability of the site was undertaken. The proposal also needed to be assessed against all relevant planning strategies, environmental planning instruments and development control plans.
- **Waste management & Types**
The proposed facility would accept and process waste materials. Waste Management was identified as a key issue by NSW EPA. Therefore, a waste management report has been provided.
- **Flooding**
Flood planning controls apply to the land and part of the external section of the property is flood liable land. Impacts on flooding need to be considered if any changes are proposed for this area of the land. Flooding is addressed in the Civil Services and Stormwater Management Plans prepared by Intrax Projects in Appendix 8.
- **Hazards and Risks (including Chemical Management and Fire & Incident Management and Bushfire)**

No hazardous chemicals are to be used in the process. Quantities of chemicals are relatively minor and do not trigger SEPP 33, therefore a preliminary hazard analysis is not required. Chemical management has been discussed.

Fire is a potential environmental issue as the site will contain some combustible materials. Therefore, the fire risk has been assessed and required fire protection equipment has been identified.

The land is not within bushfire prone land.

- **Water**
The site is fully developed and the proposed waste processing operations would not require water. No wastewater would be generated. Existing stormwater infrastructure and drainage



has been assessed for adequacy and formalised in a Stormwater Report and accompanying plans. Potential impacts to waterways as a result of the proposed activities is considered. The need for additional control measures has also been assessed.

- **Soil**
The site is fully developed and sealed. Numerous site investigations on contamination have been undertaken due to the past uses of the site. The contamination status of the site has been determined in prior reports and is discussed in the EIS. Only minor excavation may be required to establish a swale for stormwater and flood management along the rear boundary of the site. The potential impacts to land as a result of the proposed activities would be minimal.
- **Visual amenity**
The subject site is located within an established industrial area and contains an existing industrial building, infrastructure and landscaping. This would not be altered and therefore the views of the site will remain unaltered. A brief discussion is provided.
- **Heritage**
The site does not contain any heritage items. An exemption from undertaking an ACHAR has been prepared by McCardle Cultural Heritage (Appendix 9).
- **Flora and Fauna / Biodiversity**
A BDAR waiver was provided with the Scoping Report. The BDAR waiver was granted and is provided in Appendix 10. Flora and Fauna is briefly discussed.
- **Cumulative Impacts**
Due to the size and nature of the proposed development, controlling for direct environmental impacts would minimise any cumulative impacts from the proposed development. Cumulative impacts are briefly discussed.
- **Human Health and Safety**
Incoming materials are inert and therefore a detailed assessment is not warranted. A brief discussion is provided.



8. ENVIRONMENTAL IMPACTS AND SAFEGUARDS

8.1 AIR QUALITY

An Air Quality Impact Assessment (AQIA) has been undertaken for the proposed development. A full copy of the AQIA is provided as Appendix 1.

8.1.1 Odour

Odorous compounds in waste include sulfur-containing compounds, nitrogen-containing compounds as well as aldehydes, carboxylic acids, terpenes, and many others. These compounds are typically produced from degradation and anaerobic breakdown of organic waste.

The two waste streams to be accepted at the facility include:

1. Commercial and Industrial (C&I) waste; and
2. Construction and Demolition (C&D) waste.

It is expected that waste streams accepted at the site would generally include mixed waste, which would be a combination of the following:

- AGG – Aggregate, road base or ballast
- AL – Aluminium (non-ferrous)
- ASPH – Asphalt
- BC – Bricks or concrete
- CER – Ceramics, tiles, pottery
- COMM – Comingled recyclables
- FE – Ferrous (iron or steel)
- NFE – Non-ferrous (metals, not iron steel or aluminium)
- PAPER – Paper or cardboard
- PB – Plasterboard
- PL – Plastic
- WOOD – Wood, trees or timber

All incoming waste is classified as general solid waste (non-putrescible) waste (as per *Waste Classification Guidelines* (2014)). No Putrescible waste would be accepted.

The *Waste Classification Guidelines* (2014) describe non-putrescible materials as those that “typically do not: readily decay under standard conditions, emit offensive odours, attract vermin or other vectors (such as flies, birds and rodents)”.

The incoming waste would not include any putrescible materials that are likely to decay under standard condition and are unlikely to emit offensive odour or odours compounds found in other types of waste.

As none of the materials stored or processed on-site and none of the processes undertaken are odour-generating it is expected that there would be no odour emissions associated with the facility. Therefore, odour does not warrant further assessment.

8.1.2 Dust Assessment Criteria

TSP, PM₁₀ and PM_{2.5} emissions were modelled for the operation of the proposed resource recovery facility in accordance with the “*Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*” (EPA 2016). Odour is not considered as a potential emission that would be generated from the proposed development, given the nature of the incoming waste materials (non-putrescible GSW), and therefore odour was not assessed.

8.1.3 Dust Control Measures

The following mitigation measures will be implemented at the subject site for the purposes of minimising emissions of dust:

- Dust emitting activities limited to inside the building;
- Automatic closing roller shutter doors;
- Roller shutter doors closed during evening and night activities; and
- Dust suppression water sprays used within building.

8.1.4 Dispersion Model and Emission Data

The air dispersion model AERMOD was used for the prediction of off-site dust impacts associated with the air emissions from the proposed operations. One worst case scenario was modelled.

8.1.5 Predicted Impacts

The maximum impacts for annual TSP and PM₁₀ emissions at all sensitive receptors are predicted to comply with the *Approved Methods* for the criteria annual averaging period.

The maximum predicted impacts for PM₁₀ and PM_{2.5} for the 24-hour period and PM_{2.5} for the annual period are predicted to exceed the *Approved Methods* for the criteria due to elevated background concentrations.

In cases of elevated background concentrations, the NSW EPA requires a demonstration that no additional exceedances of the impact assessment criteria will occur as a result of the proposed site activities. Contemporaneous addition of the predicted daily increments of PM₁₀ and PM_{2.5} with daily measured background levels for 2017 showed no additional days of exceedance.

The proposed site operations, with dust controls in place, are unlikely to cause harm to human health or the environment.

8.2 NOISE

A full Noise Impact Assessment (NIA) has been undertaken for the proposed development and is provided in Appendix 2. This section summarises the noise impact assessment. Section 6.6.1 details the nearest sensitive receivers and existing acoustic environment.



8.2.1 Operational Noise Impact Assessment

8.2.1.1 Project Specific Noise Levels

The project noise trigger levels for the site have been established in accordance with the principles and methodologies of the NSW Noise Policy for Industry (EPA, 2017).

The table below presents the rating background level, project intrusive noise level, recommended amenity noise level, and project amenity noise level. The project noise trigger level is the lowest value of intrusiveness or project amenity noise level after conversion to $L_{Aeq\ 15\ minute}$, dB(A) equivalent level. Sleep disturbance trigger levels associated with operational activities are presented in Table 8-1 below.

Table 8-1: Project Noise Trigger Levels (PNTL) for Operational Activities, dB(A)

Receiver	Type of Receptor	Time of day	Rating background noise level	Project intrusiveness noise level ($L_{eq(15\ minute)}$)	Recommended amenity noise level $L_{Aeq\ period}$	Project amenity noise level $L_{Aeq\ 15\ minute}^1$	PNTL $L_{Aeq\ 15\ minute}$	Sleep Disturbance L_{Amax}
R1-R9	Residential - Suburban	Day	42	47	60	58	47	-
		Evening	42	47	50	48	47	-
		Night	38	43	45	43	43	53
R10-R12	School Classroom (Childcare Centre)	Noisiest 1-hour period when in use	-	-	$L_{Aeq\ 1hr} = 50$ (external)	50 ²	50	-
R13	Active Recreation	When in use	-	-	55	53	53	-
R14-R17	Industrial	When in use	-	-	70	68	68	-

Notes:

- 1) These levels have been converted to $L_{Aeq\ 15\ minute}$ using the following: $L_{Aeq\ 15\ minute} = L_{Aeq\ period} + 3\ dB$ (NSW Noise Policy for Industry Section 2.2).
- 2) This value has been conservatively assumed that $L_{Aeq\ 15\ minute}$ is equivalent to $L_{Aeq\ 1hr}$.

8.2.1.2 Predicted Impacts

Two operational scenarios were considered in the noise model. The first scenario is representative of daytime operations (6am-6pm) with external vehicle movements and rear open roller shutter doors. Scenario 2 considers evening time and night time under neutral and adverse weather conditions, with no external vehicle movements and roller shutter doors closed.

During the day, evening and night periods the operational noise levels are predicted to comply with the Noise Policy for Industry at all residential receivers for all considered weather conditions. Sleep disturbance is not expected to occur at any residential receiver.



During daytime operations noise levels are predicted to exceed the industrial amenity noise criteria at the neighbouring industrial sites:

- R14: 30 A Loftus Road, Yennora in the carpark by 9 dB(A)
- R17: 7 Kiora Crescent Yennora outside the newly built warehouse by 2 dB(A).

The noise levels would comply with the noise criteria of 68 dB(A) within the industrial buildings located on these sites where workers would undertake the vast majority of their shift as the building façade would provide significant noise attenuation of over 10 dB. The dominant source is noise from the open roller shutter doors. Therefore it is recommended fast acting automatic roller shutter doors be installed to minimise noise impacts on neighbouring industrial premises by reducing the time the doors are left open. Scenario 2 represents the roller shutter doors in the closed position 100% of the time and results show compliance with the associated criteria, therefore, the site is expected to comply during the day when the roller shutter doors are closed. Other recommendations such as, no external vehicle movements and roller shutter doors closed during the evening and night period are effective and have also been modelled. No further noise controls are considered warranted.

The predicted noise levels are shown in the table below.



Table 8-2: Predicted Noise Levels – Operational Activities dB(A)

Receptor	Project Criteria $L_{eq(15 \text{ minute})}$			Project Criteria L_{Amax}	Scenario 1 neutral		Scenario 2a) neutral		Scenario 2 b) wind conditions		Scenario 2c) temperature inversion	
	Day	Evening	Night		Predicted $L_{Aeq(15 \text{ minute})}$	Predicted L_{Amax}						
R1	47	47	43	53	35✓	40✓	29✓	34✓	34✓	39✓	34✓	39✓
R2	47	47	43	53	34✓	39✓	31✓	36✓	36✓	41✓	36✓	41✓
R3	47	47	43	53	34✓	39✓	31✓	36✓	36✓	41✓	36✓	41✓
R4	47	47	43	53	35✓	40✓	32✓	37✓	37✓	42✓	37✓	42✓
R5	47	47	43	53	32✓	37✓	29✓	34✓	34✓	39✓	34✓	39✓
R6	47	47	43	53	32✓	37✓	29✓	34✓	33✓	38✓	33✓	38✓
R7	47	47	43	53	42✓	47✓	32✓	37✓	36✓	41✓	36✓	41✓
R8	47	47	43	53	33✓	38✓	28✓	33✓	33✓	38✓	33✓	38✓
R9	47	47	43	53	31✓	36✓	27✓	32✓	32✓	37✓	32✓	37✓
R10	50			NA	40✓	-	33✓	-	38✓	-	38✓	-
R11	50			NA	31✓	-	28✓	-	33✓	-	33✓	-
R12	50			NA	42✓	-	33✓	-	37✓	-	37✓	-
R13	53			NA	31✓	-	28✓	-	33✓	-	33✓	-
R14	68			NA	77*	-	61✓	-	62✓	-	62✓	-
R15	68			NA	63✓	-	56✓	-	58✓	-	58✓	-
R16	68			NA	55✓	-	52✓	-	54✓	-	54✓	-
R17	68			NA	70*	-	55✓	-	57✓	-	57✓	-

✓Complies ✗ Non-compliance



8.2.1.3 Noise Control Measures

The following noise control measures are recommended:

- Restrict external vehicle movements to: 6am-6pm;
- Roller shutter doors to be closed 6pm-6am; and
- Fast acting roller shutter doors to be installed and programmed to be closed when not in use.

With the above controls in place the site is expected to comply with the project noise trigger levels at all receivers for all operational scenarios.

8.2.2 Road Traffic Noise Impact Assessment

168 truck movements are expected per day. Four trucks have been considered to pass in a 15 minute period, therefore a worst case scenario of sixteen truck pass bys have been considered to occur in any one hour period in the day. The trucks are assumed to travel at the posted speed of 50 km/h along Pine Road and Military Road and 60 km/h along Fairfield Road and Polding Street North. Trucks have been modelled considering two moving point sources at heights of 1.5 m and 3 m above ground level in order to account for the engine (1.5 m) and the exhaust outlet (3 m).

Table 8-3: Predicted Levels for Road Traffic Noise

Receptor	Local Roads Noise Criteria	Site Contribution
	Day	Day
163 Military Road, Guildford	60 $L_{Aeq, 15 \text{ hour}}$	55 $L_{Aeq, 15 \text{ hour}}$ ✓
R8, 17 Pine Road, Fairfield	55 $L_{Aeq, 1 \text{ hour}}$	55 $L_{Aeq, 1 \text{ hour}}$ ✓
134 Fairfield Road, Guildford West	55 $L_{Aeq, 1 \text{ hour}}$	54 $L_{Aeq, 1 \text{ hour}}$ ✓
4 Polding Street North, Fairfield	55 $L_{Aeq, 1 \text{ hour}}$	53 $L_{Aeq, 1 \text{ hour}}$ ✓

The road traffic noise impacts from vehicles travelling on Loftus Road are well shielded from the residential receivers, with industrial properties and significant distances located between the roads and the residential receivers. From Table 8-3, it can be seen that the predicted road traffic noise contributions will comply with the road noise criteria.

Therefore, the proposed vehicle movements are predicted to comply with the NSW Road Noise Policy, and no additional mitigation strategies are recommended.



8.2.3 Statement of Potential Noise Impacts

Noise emissions from the site were predicted by using noise modelling software, SoundPlan (V7.3).

This noise impact assessment has been prepared in accordance with the following guidelines and documents:

- NSW Environment Protection Authority, Noise Policy for Industry 2017; and
- Department of Environment, Climate Change and Water NSW, Road Noise Policy (DECCW, 2011).

The following noise control measures are recommended:

- Restrict external vehicle movements to: 6am-6pm;
- Roller shutter doors to be closed 6pm-6am; and
- Fast acting roller shutter doors to be installed and programmed to be closed when not in use.

With the above controls in place the site is expected to comply with the NSW EPA Noise Policy for Industry at all receivers for all operational scenarios.

Compliance with the guidelines set out in the NSW Road Noise Policy was predicted at all considered receptors.

No construction will take place therefore construction noise and vibration impacts are not expected.

8.3 SOIL AND WATER

8.3.1 Soil

The site is already fully developed and there would be no excavation or disturbance to soil as a result of the proposed development. The land is identified as having moderate salinity in the Holroyd LEP 2013 maps, however this is not likely to be an issue as only minimal soil disturbance may be required to establish a swale for stormwater and flood management along the rear boundary of the site

The sealed nature of the site, inert materials handled and absence of pathways to soils will ensure the proposed site operations and activities will not have any impact to soils.

8.3.1.1 Potential Pollutants

Pollutants that have the potential to impact soil and waters associated with the proposed development include:

- Heavy metals (e.g: lead, cadmium, chromium, copper and zinc).
- Total suspended solids (TSS);
- Elevated pH;
- Total recoverable hydrocarbons (TRH);
- BTEX (Benzene, toluene, ethylbenzene and xylene); and
- Polycyclic Aromatic Hydrocarbons (PAH).



Pollutants may result from the proposed site activities such as:

- Pollutants within incoming wastes; and
- Chemicals stored and used.

Potential pathways are restricted due to all operational activities/stored materials located within the warehouse and the inert, non-putrescible nature of materials accepted, handled and stored on-site (C&D and C&I waste). Additionally, potentially hazardous fuels, chemicals and other materials will be stored within self-bunded and fully sealed areas.

Proposed activities, potential pollutants and pathways are summarised in the following table.

Table 8-4: Potential pollutants and pathways

Activity	Potential pollutants	Potential pathways
Processing and storage of incoming waste and recovered materials	<ul style="list-style-type: none"> • Total suspended solids • Elevated pH • Windblown litter 	Stormwater runoff High winds
Diesel storage & refuelling	<ul style="list-style-type: none"> • Total recoverable hydrocarbons • BTEX; • PAH 	Spills and leaks

8.3.1.2 Potential Impacts to Soil and Land

8.3.1.2.1 Construction Works

Construction is expected to be limited to installation of pre-fabricated components of the resource recovery system, establishment of a swale, construction of internal storage bunkers and installation of the weighbridges. Only minor excavation may be required to establish a swale for stormwater and flood management along the rear boundary of the site. No other excavation or construction works are required. All construction work would be confined within the existing building and concrete footprint and no additional land will be impacted outside of the development area. An erosion and sediment control plan has been prepared to manage potential erosion from construction works. There would be no changes to the existing landscaped areas of the site and no tree removal is required.

8.3.1.2.2 Operational Works

Potential pollutants from use of the resource recovery facility are detailed in Section 8.3.1.1.

Potential impacts to soil from the proposed development and mitigation measures to be implemented are summarised in the table below.



Table 8-5: Potential Risks to Soil and Mitigation Measures

Potential Contaminant and Source	Potential Impact on Soil	Safeguards and Mitigation Measures
Processing & Storage: <ul style="list-style-type: none"> • Total suspended solids • Elevated pH • Windblown litter 	Contaminated stormwater runoff seeping into the ground Litter	<ul style="list-style-type: none"> • All processing and storage within enclosed building • Water misting system • Sealed surfaces • Stormwater treatment device on outlet to swale
Diesel storage & refuelling spills and leaks <ul style="list-style-type: none"> • Total recoverable hydrocarbons • BTEX; • PAH 	Stormwater contaminated with total recoverable hydrocarbons seeping into the ground	<ul style="list-style-type: none"> • Self bunded storage tank • Spill kits • Sealed surfaces • Stormwater treatment device on outlet to swale

The inert nature of the materials, and the safeguards designed into the development, there is expected to be negligible impacts from the proposed development on soil. There is expected to be negligible stormwater contamination into subsoils from the proposed activities with these limitations of the use of the site in place. An EMP for the management of the site will provide the detailed work practices to ensure mitigation measures are adequately implemented.

8.3.2 Water

A Stormwater Assessment Report (Appendix 6) has been undertaken for the proposed development. Potential impacts to water from the proposed development include sediment/contaminant runoff into stormwater and chemical storage and use. Additionally, groundwater and groundwater dependent ecosystems may be impacted by contaminants seeping into groundwater.

All waste processing activities will be undertaken within the building. All truck loads will be covered and there would be no external waste storage. No liquid waste would be accepted. Minor quantities of chemicals will be used and stored on site. A 13 kL self-bunded diesel storage tank will be located externally in accordance with AS1940-2017: The storage and handling of flammable and combustible liquids. Diesel is a C1 combustible liquid. This tank will be located on sealed hardstand with an available spill kit nearby.

8.3.2.1 Water Supply and Use

The site is connected to mains waster and the proposed development would use mains water for all water related activities which are limited to office and amenities, and dust suppression. The site is connected to the domestic sewer system.



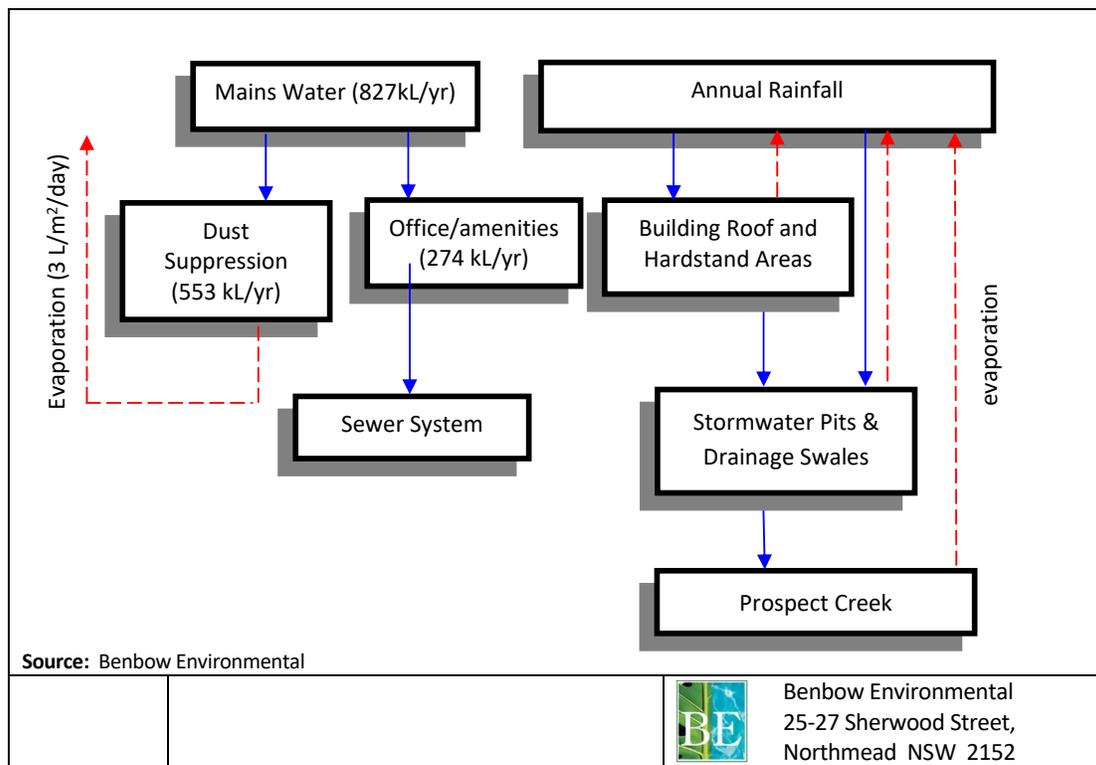
There will be no wastewater generated and a tradewaste agreement (TWA) is not required. Waste accepted and recovered materials generated during onsite processes is solid and inert and therefore involves no wastewater discharge.

The following are estimated daily and annual water requirements:

Office use: 951 Litres per day (274 kL/yr)
 Dust suppression: 1,920 Litres per day (553 kL/yr)
 TOTAL water requirement: 2,871 Litres per day (827 kL/yr)

Figure 8-1 displays a simple site water balance for the development.

Figure 8-1: Site Water Balance



8.3.2.1.1 Water Misting System

A water misting system would purpose designed for the facility and installed with water sprayers located on points in the system where there is potential for emissions of dust. The misting system would contain purpose designed spray nozzles to provide a fine mist that evaporates within seconds. All water droplets would evaporate.

The misting system would use less than 2 litres per minute, which is 1,920 Litres per day. The evaporation rate is higher than the total daily water use of the misting system. It can therefore be assumed that there would be no surface water generated by the misting system.



8.3.2.1.2 Wheel Wash Facility

A wheel wash facility was not required. The facility has been designed in accordance with current best practice within an enclosed building and all waste processing activities and storage is to be within the building. Trucks would remain on sealed surfaces for the duration of their visit to the site. No external stockpiling or unsealed surfaces are included in the proposed development. Therefore a truck wheel wash is not considered warranted and is not included in the development.

8.3.2.2 Wastewater

No wastewater would be generated from the proposed C&D and C&I processing operations. Additionally, the site will not accept or generate liquid wastes. Water use on site is limited to office and amenities, and dust suppression water sprayers.

Office and amenities wastewater is connected to the domestic sewer system and would not enter the stormwater network.

Dust suppression sprays generate a fine mist that encapsulates dust generated during processing activities. Dust suppression spray evaporates quickly and would not contribute to surface waters or wastewater.

8.3.2.3 Stormwater

Storm and surface water generation on site is limited to rainwater falling on external hardstand and roofed areas. Storm and surface waters flow away from the building and processing areas; stormwater will not enter the building, nor be generated within the building.

The nature of the materials to be stored at the site is solid and inert. No wastewater would be generated during C&D and C&I processing operations. All activity areas on site are fully sealed and all C&D and C&I processing operations are undertaken inside the existing building; there are limited avenues for surface waters to be contaminated from site operational activities.

Surface waters flow into stormwater pits intermittently located along the northern and western perimeter of the site. Rainwater that falls on rooftops is directed through downpipes that into a drainage line. The drainage line runs along the northern and western boundary of the site, collects stormwater from hardstand areas along the front and western driveways and discharges into an existing drainage swale south of the site.

Minor upgrades to stormwater infrastructure will include the installation of a new 4.6 metre wide swale at the rear of the property which would collect stormwater from the rear hardstand area and connect to the existing swale on the adjacent property. An "SPEL Stormceptor" stormwater treatment device will be installed in the new pit to reduce pollutant discharge. MUSIC modelling undertaken by Intrax Projects for the site (provided in the Stormwater Management Drawings – Appendix 8) demonstrate that the Holroyd DCP stormwater quality targets will be achieved with the current and proposed stormwater infrastructure.



8.3.2.3.1 Leachate

Leachate is defined under the NSW EPA Environmental Guidelines: Solid Waste Landfills, Second Edition 2016 as:

***Leachate:** the liquid that passes through, or is released by, waste. It arises from the inherent moisture content of the waste and from rainwater (and sometimes groundwater) percolating through or contacting the waste mass. Leachate may contain high levels of dissolved solids, ammonia, organic matter, and sometimes metals and other pollutants. These levels are typically well above background levels for undisturbed or slightly disturbed groundwater and surface water systems. The levels are also well above national quality guidelines for drinking water and other beneficial reuses of water.*

In this case, there would be no external waste storage or stockpiles. All waste would be received in covered trucks, unloaded, processed and loaded within the enclosed building. Therefore, no leachate would be generated.

8.3.2.3.2 Flooding

The site is subject to flood related development controls. The site is not located on flood prone land (as per flood maps reviewed in NSW Planning Portal), however portions located in the southern area of the site have the potential to be affected by the 1% AEP.

A flood mitigation works easement exists along the southern boundary of the site. This area is to remain clear of any works, activities or storage. A stormwater management plan has been prepared that proposes treatment of this area to manage stormwater and flooding at the site.

8.3.2.3.3 Potential Pollutants

The nature of the materials to be stored at the site are solid and inert general C&D and C&I waste (including bricks, wood, concrete, tiles and metal). However, where not managed correctly, dusts and sediments generated during waste material processing may impact stormwater. Additionally, truck and vehicle movements on site and diesel storage may generate oil, grease and heavy metals. Potential pollutants include:

- Heavy metals (e.g: lead, cadmium, chromium, copper and zinc).
- Total suspended solids (TSS);
- Elevated pH;
- Total recoverable hydrocarbons (TRH);
- BTEX (Benzene, Toluene, Ethylbenzene and Xylenes); and
- Polycyclic Aromatic Hydrocarbons (PAH).

Proposed activities, potential pollutants and pathways are summarised in Table 8-6.



Table 8-6: Potential pollutants and pathways

Activity	Potential pollutants	Potential pathways
Processing, handling and storage of C&D/C&I waste	<ul style="list-style-type: none"> • TSS • Elevated pH 	Surface waters coming into contact with waste materials and migrating into stormwater.
Truck/vehicle movements	<ul style="list-style-type: none"> • Heavy metals • TSS • BTEX • PAH 	<p>Vehicle fuel spills and leaks resulting in resulting in discharge of contaminants to stormwater.</p> <p>Tracking of sediment offsite and into the stormwater system.</p>
Refuelling of vehicles (13 kL self-bunded diesel storage tank)	<ul style="list-style-type: none"> • BTEX • PAH 	Spills and leaks during refuelling activities.

8.3.2.3.4 Potential Impacts to Waters

8.3.2.3.4.1 Construction Works

The construction phase of the proposed development has a low potential to impact surface and stormwaters. Construction would be limited to installation of pre-fabricated components of the RRF, construction of internal storage bunkers and installation of the weighbridges. Minor excavation works are limited to establishing the new swale and stormwater discharge point. There would be no importation of fill to the site.

The erosion and sediment control plan provided with the stormwater drawings would minimise risk during construction.

8.3.2.3.4.2 Operational Works

Surface and stormwater have the potential to become contaminated during operational activities, refuelling activities or improper management of chemicals or waste at the site.

Preventative and mitigation measures to be implemented include:

- All activity areas on site are fully sealed;
- All C&D and C&I processing operations are undertaken inside the existing building;
- No wastewater would be generated during C&D and C&I processing operations.
- Surface waters will not come into contact with waste materials;
- The nature of the materials to be stored at the site are solid and inert;
- Minor quantities of chemicals stored on site and within the building;
- Diesel stored externally in self-bunded tank on a hardstand area in accordance with AS1940;
- Refuelling area will be bunded;
- Spill kits to be provided adjacent to diesel tank and refuelling area;
- Staff trained in spill response and emergency procedures; and
- Regular workplace inspection and high standard of housekeeping.



Potential impacts to water from the proposed development and recommended safeguards are summarised in Table 8-7.



Table 8-7: Potential Risks to Water and Mitigation Measures

Proposed Use / Activity	Potential Pollutants	Potential Pathways	Proposed Prevention & Mitigation Measures
Processing, handling and storage of C&D/C&I waste	<ul style="list-style-type: none"> TSS Elevated pH 	<ul style="list-style-type: none"> Surface waters coming into contact with waste materials and migrating into stormwater. 	<ul style="list-style-type: none"> All C&D and C&I processing operations are undertaken inside the building. All activity areas on site are fully sealed. Surface waters do not come into contact with waste materials. Regular workplace inspection.
Truck/vehicle movements	<ul style="list-style-type: none"> Heavy metals TSS BTEX PAH 	<ul style="list-style-type: none"> Vehicle fuel spills and leaks resulting in resulting in discharge of contaminants to stormwater. Tracking of sediment offsite and into the stormwater system. 	<ul style="list-style-type: none"> All activity areas on site are fully sealed. Regular vehicle servicing. Regular workplace inspection.
Refuelling of vehicles (13 kL self-bunded diesel storage tank)	<ul style="list-style-type: none"> BTEX PAH 	<ul style="list-style-type: none"> Spills and leaks during refuelling activities. 	<ul style="list-style-type: none"> Diesel stored in self-bunded tank. Tank stored on sealed hardstand. Spill kits provided. Regular workplace inspection.



Potential impacts to water from the proposed development include sediment/contaminant runoff into stormwater and chemical storage and use. Additionally, groundwater and groundwater dependent ecosystems may be impacted by contaminants seeping into groundwater.

To prevent impacts to stormwater and groundwater from migrating surface waters, the following mitigation measures are to be included in the proposed development:

- All activity areas on site are fully sealed;
- All C&D and C&I processing operations are undertaken inside the existing building;
- No wastewater would be generated during C&D and C&I processing operations.
- Surface waters will not come into contact with waste materials;
- The nature of the materials to be stored at the site are solid and inert;
- Minor quantities of chemicals stored on site and within the building;
- Diesel stored externally in self-bunded tank on a hardstand area in accordance with AS1940;
- Refuelling area will be bunded;
- Spill kits to be provided adjacent to diesel tank and refuelling area;
- Staff trained in spill response and emergency procedures; and
- Regular workplace inspection and high standard of housekeeping.

With the above controls in place the potential risk to waters is considered low.

8.4 FLORA AND FAUNA (BIODIVERSITY)

The site is a fully developed industrial facility that does not contain areas of biodiversity. The nearest area of terrestrial biodiversity exists approximately 665 m north-east of the site and would not be impacted by the proposed development.

No vegetation removal will be required for the development nor impacts to flora or fauna anticipated as a result of the proposal. A BDAR waiver has been approved and is provided as Appendix 10. Further discussion on impacts to biodiversity from the proposed development are not considered warranted.

As noted in the EES SEARs response, the BDAR waiver report incorrectly notes there are recently planted mature-size gum trees on the northern boundary of the site. The mature-size gum trees are only located on the western boundary. There are recent landscape plantings of small shrubs along the northern boundary. This vegetation is to be retained.

8.5 WASTE GENERATION AND MANAGEMENT

A waste management report has been prepared by Benbow Environmental and is provided at Appendix 7 which addresses the SEARs (SSD-9320662). A summary is provided in the following sub-sections.

8.5.1 Proposed Facility

The resource recovery facility would accept up to 150,000 tonnes per year of construction and demolition (C&D) and commercial and industrial (C&I) waste. This waste would be processed to generate a range of recovered materials mainly for reuse in the construction industry and civil



works. The waste streams would be processed over two separate shifts – C&D during day shift and C&I waste during afternoon shift.

The waste accepted would be classified as “General Solid Waste (Non-putrescible)” under the NSW EPA *Waste Classification Guidelines* (2014).

8.5.1.1 Incoming Waste

Two (2) waste streams would be accepted at the facility. These include:

3. Construction and Demolition (C&D) waste; and
4. Commercial and Industrial (C&I) waste.

The source of the waste streams would be from infrastructure and construction projects as well as manufacturing plants within the Sydney metropolitan area.

The incoming waste streams would be made up of the following:

C&D Waste	C&I Waste
▪ Wood	▪ Cardboard
▪ Gyprock – plaster board	▪ Paper
▪ Concrete	▪ Plastic
▪ Brick	▪ Steel
▪ Aggregates	▪ Aluminium
▪ Asphalt	▪ Wood
▪ Steel	
▪ Copper wire & cable	

Waste Types include:

- AGG Aggregate, road base or ballast
- AL Aluminium (non-ferrous)
- ASPH Asphalt
- BC Bricks or concrete
- CER Ceramics, tiles, pottery
- COMM Commingles recyclables
- FE Ferrous (iron or steel)
- MIX Mixed waste
- NF Non-ferrous (metals not iron steel or aluminium)
- PAPER Paper or cardboard
- PB Plasterboard
- PL Plastic
- WOOD Wood, trees or timber

Table 8-8 provides details of the incoming waste as part of the proposed development.



Table 8-8: Incoming Waste Types, Quantities and Management

Waste Stream	Estimated Incoming Waste Quantity (TPA)	NSW EPA Waste Classification ¹	Management
C&D Waste	105,000	General Solid Waste (Non-putrescible)	Mixed C&D waste would be sorted through the RRTF separately from C&I waste. The waste stream will undergo initial inspection, infeed hopper, removal of steel, screening, picking and further screening, air separation, potential crushing and storage.
C&I Waste	45,000	General Solid Waste (Non-putrescible)	Mixed C&I waste would be sorted through the RRTF separately from C&D waste. The waste stream will undergo initial inspection, infeed hopper, removal of steel, screening, picking and further screening, air separation, potential crushing and storage.
TOTAL (TPA)	150,000		

Notes: ¹Waste classification according to *Waste Classification Guidelines* provided.

8.5.1.2 Recovered Material

The recovered materials generated include wood, plastic, scrap metal, paper & cardboard and aggregates. Recovered aggregates would be sent off site for application to land under the recovered aggregates order and exemption. The other recovered material would be sent on for further processing at licensed recycling facilities.

Any non-recyclable waste would be sent to landfill.

Table 8-9 provides details of materials to be recovered and their management.



Table 8-9: Recovered Waste Types, Quantities and Management

Recovered Material ¹	Expected Rate of Recovery (%)	% of Total Incoming Waste	Tonnage Recovered (TPA)	Management
Aggregates & fines	99	32	47,500	This screened into varying standard sizes and directed to the designated external storage bay. Transported offsite to for reuse in construction projects under the NSW EPA <i>Recovered Aggregates Order 2014</i> .
Ferrous and Non-ferrous metal	90-95	17	25,500	This is separated within the system at one of three magnets, falls into a bin and is collected by metal recycling facility for recycling.
Cardboard & Paper	85-90	8	12,500	This waste is removed from the incoming load in the pre-sorting area or within the process at the picking station and stored bins in a designated area within the building. Bins will be transferred offsite for further processing at, a licensed recycling facility. E.g. Visy Recycling
Copper Electrical Wire & Cable	70-75	3	4,500	Copper electrical wire and cable is removed in the pre-sort area and stored in a designated bunker. This material may also be removed at the picking station.
Wood	85-90	15	22,500	Large pieces of wood is removed from pre-sort area and stored in an internal storage bunker. Wood is also removed from the process at the picking station. Wood is transferred offsite for reuse at waste to energy plants or shredded for biofiltration or mulch. E.g. Landscape supply businesses, waste to energy plants.
Plasterboard & Gyprock	60-65	5	7,500	Separated from the waste stream at various points and sent to recycling facility for further processing.



Recovered Material ¹	Expected Rate of Recovery (%)	% of Total Incoming Waste	Tonnage Recovered (TPA)	Management
Plastic	65-70	8	12,000	Plastic is separated from the waste stream at the picking station and stored in a designated bin. It is transferred offsite to a licensed recycling facility for further processing. E.g. Visy Recycling
Non-recyclable (Landfill) ²	N/A	12	18,000	General waste that cannot be recycled is stored removed at various points in the system. It is stored within a designated storage bunker inside the building to be collected by a licensed waste contractor.
TOTAL	88 %	100	150,000	

1. All recovered materials are expected to be classified as General Solid Waste (Non-putrescible).
2. This is non-recyclable material from the waste stream sent to landfill

8.5.2 Maximum Processing Quantities

The maximum waste throughput would be up to 150,000 tonnes of C&D and C&I waste per year. The expected ratio of C&D to C&I is expected to be 70:30.

Estimates for daily and weekly maximum throughput are 4,000 tonnes per week and 1,000 tonnes per day.

8.5.3 Waste Storage

8.5.3.1 Maximum Storage Capacity

The facility would have the capacity to store up to a maximum of 2,600 m³ of waste at any one time within storage bunkers, bins and an internal incoming material stockpile.

8.5.3.2 On-site Waste Storage

All waste and recovered materials would be stored within the building. There would be no external storage of waste. Designated storage bunkers and bins would be established. Bunkers would be constructed of structural steel to a height of 3 metres. Waste storage of non-combustible materials within bunkers is recommended to be maintained at a height of no more than 2.8 metres. Height and storage of mixed and combustible materials will be confirmed during the Fire Safety Study in consultation with Fire and Rescue following approval. However, for the purposes of estimated waste storage capacity, a height of 3 m is assumed.



No bunding is needed for internal waste storage bunkers. No liquid waste would be accepted on site and no chemicals will be stored in internal waste bunkers. Building bunding would be provided for containment of fire fighting water.

A summary of waste storage within the bunkers and bins is provided below.

Table 8-10: Waste Storage Details

Area	Name	Bin/Bunker ID	Waste Type	Storage Capacity (m ³)
1	Pre-sort area	Feed stock	Incoming waste	300
2	Storage Bunkers	1	C&I waste	350
		2	Wood	226
		3	Waste (non-recyclable)	330
		4	Steel	360
3	Process line storage bunkers and bins	5	Long items	65
		6	Unders -10 Aggregates	115
		7	Light Material (1)	135
		8	Under -22 Aggregates	150
		9	Light Material (2)	110
		10	Unders 32 Aggregates	106
		11	Overs 32+ Aggregates	135
		12	Light Material (3)	70
		13	Plasterboard	30
		14	Ferrous Bins	12
		15	Picking Bin 1 – Valuables	10
16	Picking Bin 2 – Wood	10		
17	Picking Bin 3 – Paper/Cardboard	10		
4	Quarantine area	Reject bunker	Reject material	30
5	Skip Bin Storage ¹	N/A	Empty Skip Bins	0
			TOTAL	2,554 m³

1. An external area for the storage of empty skip bins would be established at the rear of the building. No waste would be stored in the bins

The estimated waste storage quantity on site is 2,554 m³. With a factor of safety applied to the estimated storage, the facility seeks approval to store a maximum of 2,600 m³ of waste at the site at any one time.

Due to the varying density of the waste to be stored, the assumption under Clause 42(4) – Waste Storage of Schedule 1 of the POEO Act which states: *For the purposes of this clause, 1 litre of waste is taken to weigh 1 kilogram*. Therefore, a maximum of 2,600 tonnes of waste would be stored within the facility at any one time.



8.5.4 Legal Requirements

The management and storage of waste on site would comply with relevant legislation and guidelines as detailed in the Waste Management Report.

8.5.4.1 EPL Application

The facility will require an environment protection licence for waste processing operations and storage of waste on site. Scheduled activities under the POEO Act include:

- Clause 34 – Resource recovery; and
- Clause 42 – Waste storage

8.5.4.2 Waste Tracking Requirements

The proposed facility would not accept waste that needs to be tracked under the waste tracking system, Schedule 1 of the Waste Regulation. The facility would record waste movements using the weighbridges and waste edge system (a computerised truck booking system).

8.5.4.3 Resource Recovery Orders and Exemptions

Relevant resource recovery exemption and order include: the recovered aggregate order 2014. Quality control measures would be put in place in order to comply with this RRO. In the event the material does not comply with the order, alternative uses for the material such would be investigated.

8.5.4.4 Standards for Managing Construction Waste in NSW

The site will have infrastructure, facilities and procedures in place to enable compliance with this standard. Additional details have been provided in the Waste Management Report (Appendix 7) as referred to in the table below.

Table 3-3: Compliance with Standards for managing construction waste in NSW

No.	Standard	Comment
1	<p>Inspection requirements</p> <p>1.5 Inspection point 1 – verified Weighbridge inspection</p> <p>1.6 Inspection point 2 – Tip and spread inspection area</p> <p>1.7 Training requirements for personnel</p> <p>1.8 Rejected loads register</p>	<p>The waste procedure detailed in Section 5 of the Waste Management Report would be implemented at the site to ensure that inspection requirements are met. This includes training requirements for personnel and details to be included in the rejects loads register.</p> <p>The site has been designed with a weighbridge and a designated tip and spread area.</p>



Table 3-3: Compliance with Standards for managing construction waste in NSW

No.	Standard	Comment
2	<p>Sorting requirements</p> <p>Loads not rejected under Standard 1 must be sorted and classified into individual listed waste types before being transferred to the waste storage area referred to in Standard 4.</p>	<p>Listed waste types are provided in Section 2.1.4 of the Waste Management Report. Incoming waste streams would be sorted through the system into waste types that would be stored in separate designated bunkers/bins including:</p> <p>AGG – Aggregate, road base or ballast FE – Ferrous (iron or steel) MIX – Mixed waste NFE – Non-ferrous (metals, not iron steel or aluminium) PAPER – Paper or cardboard PB – Plasterboard PL– Plastic WOOD – Wood, trees or timber</p>
3	<p>No mixing of waste</p> <p>C&D waste that has been inspected and sorted in accordance with Standards 1 and 2 must not be mixed with any other waste at the facility unless:</p> <ul style="list-style-type: none"> • That other waste has been inspected and sorted at the facility in accordance with Standards 1 and 2; and • It is of the same listed waste type as the other waste; or • The mixing is carried out to meet the requirements of a RRO or the recovered fines specifications. 	<p>The facility would comply with this standard as described in Section 2.1 of the Waste Management Report.</p> <p>The facility has been designed to have separate areas for waste that has been inspected and sorted and waste that has not. Once sorted, waste falls into bunkers or bins and is not processed or mixed further. The process is limited to sorting of waste, no mixing equipment or processes are proposed.</p>



Table 3-3: Compliance with Standards for managing construction waste in NSW

No.	Standard	Comment
4	<p>Waste storage requirements</p> <p>4.1 Waste storage area 4.2 Inspection point 3 – waste storage area</p>	<p>Waste storage at the facility would comply with this standard as described in Section 4.7 of the Waste Management Report.</p> <p>Separate designated storage bunkers/bins are marked on site plans showing the waste type that would be contained within these. These bunkers/bins capture sorted waste from the system. Additional bunkers for waste storage are shown on the site plans labelled with waste type to be stored. Signage of these areas can be confirmed once operational during audits of the site.</p> <p>Inspection of waste storage areas would be included in the waste procedure within the EMP and can be confirmed once the site is operational through inspection records that need to be maintained.</p>
5	<p>Transport requirements</p> <p>Construction waste must not be transported from the facility unless it has been inspected, sorted and stored in accordance with these standards and the load of waste consists solely of a single listed waste type or waste that meets the requirements of a resource recovery exemption or the recovered fines specification.</p> <p>(Except where waste is rejected at inspection points 1 or 2).</p>	<p>The facility would comply with this standard as described in Section 4.8 of the Waste Management Report.</p> <p>These transport requirements would be addressed within a waste procedure in the EMP and implementation of this standard can be confirmed through an audit once the site is operational.</p>

8.5.5 Waste Management

A waste management plan detailing the waste associated with the proposed development in line with Council requirements for demolition, construction and ongoing waste is provided with the development application.

Waste would be managed on site as described in the tables detailed earlier and in the Waste Management Report.

8.5.5.1 Incoming Waste Procedure

An incoming waste procedure would be implemented which details the procedure for inspection of all truck loads and management of any non-conforming waste. The procedure includes training requirements for personnel and requirements for record keeping of incoming and outgoing loads, all vehicles entering the facility and records of any rejected loads.

8.6 HAZARDS AND RISKS

8.6.1 Chemicals and Dangerous Goods Storage

Limited hazardous chemicals are required for the proposed facility. Chemicals are expected to include a 13,000 L self-bunded diesel tank, maintenance oils and grease, and cylinders of welding gases. These will be used for trucks and machinery on site.

Table 8-11 lists dangerous goods, quantities and storage expected on site.

Table 8-11: Chemical Storage

Product Name	Un No.	ADG/GHS	GHS Signal Word	Quantity Storage Capacity	Storage Type	Storage Location
Diesel	1202	ADG: non-dangerous good (Combustible Liquid C1) GHS: Aspiration Hazard: Category 1; Carcinogenicity: Category 2; Flammable Liquids: Category 4; Hazardous to the Aquatic Environment – Long-term hazard: Category 2	DANGER	13,000L	Self-bunded storage tank	Rear external area
Degreaser	1760 – water based degreaser 3082 – solvent based degreaser	Eye Damage/ Irritation: Category 2A Skin Corrosion/Irritation: Category 2	WARNING	50L	Containers	Workshop
Grease	NA			50L	Containers	Workshop
Gearbox Oil	3082	N/A	N/A	20L	Containers	Workshop
Acetylene gas	1001	ADG Class 2.1: Flammable gas Extremely flammable gas		6 cylinders (50kg)	Cylinders	Locked cage in external area
Oxygen gas	1072	ADG Code: Class 2.2 (5.1) – Non-flammable, non-toxic gas, Oxidising agent		6 cylinders (76kg)	Cylinders	adjacent to workshop



Table 8-11: Chemical Storage

Product Name	Un No.	ADG/GHS	GHS Signal Word	Quantity Storage Capacity	Storage Type	Storage Location
Domestic Cleaning Products	Various	Various	Various	Minor quantities Approx 20 litres	Spray bottles	Office

* GHS: Globally Harmonized System of classification and labelling of chemicals
ADG: Australian Dangerous Goods Code

Diesel is considered to be a Flammable Liquid – Category 4 under the Globally Harmonised System of classification and labelling of chemicals. Under Schedule 11 of the Work Health and Safety Regulations 2017, flammable liquids of category 4 have a placard quantity of 10,000 L and a manifest quantity of 100,000 L. Therefore, the diesel tank requires a placard: “COMBUSTIBLE LIQUID – DIESEL” to be put in place in accordance with the regulations.

Dangerous goods of minor quantities only are stored and used at the site and notification to SafeWork NSW is not required as manifest quantities are not exceeded. Likewise, *State Environmental Planning Policy No.33 – Hazardous and Offensive Development (SEPP33)* screening thresholds are not exceeded and does not fit the definition of ‘potentially hazardous industry’ or ‘hazardous storage establishment’. Therefore, a preliminary hazard analysis is not required.

Flammable and combustible liquids must be stored in compliance with AS 1940–2017.

A hydrocarbon spill kit would need to be located adjacent to the diesel storage area.

8.6.2 Preliminary Risk Screening

Details of Dangerous Goods (DG Code) and/or Hazardous Chemicals (GHS Classification) typically used and stored on site, with current and proposed storage quantities have been provided in Table 8-12. Safety Data Sheets (SDS) of all the listed chemicals are available on request.

Chemical management requires a site to comply with the requirements of the *Work, Health and Safety Regulation 2017*. Notification to SafeWork Australia is not required as chemical quantities do not exceed the manifest quantities.

Requirements in Australian Standards also need to be applied when a site stores more than minor quantities of a hazardous substance/chemical belonging to one of the nine Classes of Dangerous Goods. The basis of chemical management safeguards for these classes are described in the following Australian Standards:

- AS 1940–2017 *The storage and handling of flammable and combustible liquids;*
- AS 3780-2008 *The storage and handling of corrosive substances;* and
- AS 4332–2004 *The storage and handling of gases in cylinders.*

Storage of all hazardous chemicals would comply with the above standards. General controls that need to be met for adequate chemical management at the site are as follows:

- Provision of adequate fire protection services;
- Provision of hydrocarbon spill kit near self-bunded diesel tank;
- Provision of spill kit in Workshop area;
- Site securely locked when not in operation;
- Up to date environmental and safety management procedures and systems; and
- Personnel regularly trained and competency tested in matters regarding the handling and use of chemicals on site and firefighting equipment.

A preliminary risk screening of the proposed development in accordance with *State Environment Planning Policy No. 33 – Hazardous and Offensive Development* (SEPP 33) has been undertaken, with results provided below. The quantities of dangerous goods do not exceed the threshold quantities for applying SEPP 33. Therefore, a Preliminary Hazard Analysis (PHA) is not required.

Table 8-12: SEPP 33 Preliminary Risk Screening

Class	Screening Threshold	Description	Site Specific Description	Quantity to be stored	Triggers SEPP 33
Class 1.2	5 tonne	Explosives	None	None	No
Class 1.3	10 tonne	Explosives	None	None	No
Class 2.1	Figure 6 for pressurised if greater than 100kg (excluding LPG)	Flammable Gases	Acetylene gas	50 kg	No
Class 2.2	Not Relevant	Non-flammable, non-toxic gases	Oxygen gas	76 kg	Not relevant
Combustible Liquid C1	Not relevant	Combustible liquid with flashpoint of 150°C or less	Diesel stored in self-bunded tank	13,000L	Not Applicable
Combustible Liquid C2	Not relevant	Combustible liquid with flashpoint exceeding 150°C	None	None	Not Applicable
Class 2.3	5 tonne	Anhydrous ammonia	None	None	No
	1 tonne	Chlorine and sulphur dioxide stored as liquefied gas in contains <100 kg	None	None	No
	2.5 tonne	Chlorine and sulphur dioxide stored as liquefied gas in containers >100 kg	None	None	No
	100 kg	Liquefied gas kept in or on premises	None	None	No
	100 kg	Other toxic gases	None	None	No
Class 3	Assessed by reference to figures 8 & 9 of applying Sepp 33	Flammable liquids PG I, II and III	None	None	No
Class 4.1	5 tonne	Flammable Solids	None	None	No

Table 8-12: SEPP 33 Preliminary Risk Screening

Class	Screening Threshold	Description	Site Specific Description	Quantity to be stored	Triggers SEPP 33
Class 4.2	1 tonne	Substances liable to spontaneous combustion	None	None	No
Class 4.3	1 tonne	Substances which, in contact with water, emit flammable gases	None	None	No
Class 5.1	25 tonne	Ammonium nitrate – high density fertiliser grade	None	None	No
Class 5.1	5 tonne	Oxidising substances	None	None	No
Class 5.1	2.5 tonne	Dry pool chlorine – in containers <30 kg	None	None	No
Class 5.1	1 tonne	Dry pool chlorine – in containers >30 kg	None	None	No
Class 5.1	5 tonne	Any other Class 5.1	None	None	No
Class 5.2	10 tonne	Organic peroxides	None	None	No
Class 6.1 PGI	0.5 tonne	Toxic substances	None	None	No
Class 6.1 PGII & III	2.5 tonne	Toxic substances	None	None	No
Class 6.2	0.5 tonne	Infectious substances	None	None	No
Class 7	All	Radioactive Material	None	None	No
Class 8 PGI	5 tonne	Corrosive substance	Domestic Cleaning Products	10kg	No
Class 8 PGII	25 tonne	Corrosive substance			
Class 8 PGIII	50 tonne	Corrosive substance			

8.6.3 Fire

Fire risk is a key issue for the proposed resource recovery facility. Fire and Rescue NSW were consulted in relation to requirements for fire safety at the site. This section presents an assessment based on these requirements.

The site has existing fire equipment and infrastructure including external fire hydrants and booster pump, hose reels and extinguishers within the building, and fire alarms within the offices. Approval for fire service upgrade of the building including installation of a sprinkler system was obtained under a separate modification application MOD2021/0084. This work has recently been completed. Associated drawings and documentation are provided in Attachment 4 and demonstrate full compliance with relevant NCC standards.

Brigade access would be via the existing driveway from Loftus Road. A 6 metre wide fire access road is accommodated on site.



8.6.3.1 Consultation with Fire and Rescue NSW

As part of the SDD process, consultation with FRNSW was undertaken. The meeting was held over the phone with Brendon Hurley at 10:00am on Thursday 1 October 2020. The project details including the common wall were discussed and the following was agreed:

- The site will comply with the Fire and Rescue NSW – fire safety in waste facilities guideline, with the focus on:
 - ▶ Installation of a sprinkler system;
 - ▶ Upgrade of the hydrant system;
 - ▶ Fire brigade access around the building;
 - ▶ Separation of stored materials; and
 - ▶ Storage water during a fire.
- Provide documents for sprinklers, hydrants, hose reels, brigade access in the application.
- A copy of the BCA assessment and fire consultant certification will be provided with the development application.

The FRNSW SEARs indicated that no requirement for a fire safety study is included, however FRNSW may request one be undertaken at a later stage should information be provided such it is deemed that the development poses unique challenges to the response to and management of an incident.

It should be noted that FRNSW advised that further discussion on this matter may be required following their review of the application. Also of relevance is the FRNSW input into the SEARs where it is noted that FRNSW will not be providing comment at this time and the request that review and comment be given once approvals have been granted. As noted above FRNSW were consulted in the project's preliminary design and will again be consulted following final design at the CC stage.

8.6.3.2 Fire Risk Assessment

8.6.3.2.1 Hazard Identification Charts

In order to identify and characterise the nature of potential fire events, a series of Hazard Identification Charts have been compiled. The compiled charts are provided overleaf. The charts, for the purpose of this study, only assess the potential fire events of the proposed development. Each chart consists of four columns:

Column 1: Functional/Operational Area

The process area of the Site involved with the potential event is listed e.g. Flammable Liquid Store.

Column 2: Possible Initiating Event

The events that are considered to be likely or realistic are listed. Where the possible consequences are similar, the events are listed together and individually numbered.

Column 3: Possible Consequences

The outcomes from an event occurring are listed e.g. Fire, Explosion.

Column 4: Prevention/Protection Measures



The measures designed into the function/operation of the particular area of the site are listed. The measures include for example safeguards, design features, management methods and operator training.



Table 8-13: Event/Consequence Analysis Table

Functional/Operational Area	Possible Initiating Event	Possible Consequences	Prevention/Protection Measures
1. Internal Bin Storage Areas	<ul style="list-style-type: none"> Combustible waste material in subjected to sufficient heat to catch alight. This may occur from exothermally oxidising materials within bins, arson, smoking, electrical shorting of a lithium ion battery placed in with the wastes. 	<ul style="list-style-type: none"> Fire engulfs individual bin and consumes the waste. Fire spreads to the rest bins stored in the area, or the warehouse or adjoining buildings. Fire fighting water is generated which escapes into the stormwater system. 	<ul style="list-style-type: none"> A hot-work permit system. A first response fire crew exists on site. Fire hydrants. The site is able to contain the first 90 minutes of fire fighting water. No smoking is permitted on site except in a designated low risk area. Site has BCA compliant fire services. Secure site Handheld thermal camera to check storage areas. Training of operators to be aware of fire risk wastes.
2. Processing Lines (inside building)	<ul style="list-style-type: none"> Failure of a bearing causes excess heat. Failure of an electrical motor causes a fire. 	<ul style="list-style-type: none"> Fire within the machinery, substantial fuel available. 	<ul style="list-style-type: none"> Operators always present during the process. Building ventilation causes air flow within the machinery that would provide cooling. Preventative maintenance programme. First response fire services available including, hose reels, extinguishers and sprinkler system. Operators trained in use of these services. Routine cleaning of machinery. Oil leakages promptly attended to. Operations under surveillance cameras so release of smoke would be observed.
	<ul style="list-style-type: none"> Oil leakages collect under the machinery and soak combustible materials with oil allowing an exothermic reaction to occur with sufficient heat to cause ignition. Storage of oil soaked rags or cardboard. 	<ul style="list-style-type: none"> Fire external to the machinery sufficient fuel available to cause rapid spread of fire to other combustible materials within the building. 	



Table 8-13: Event/Consequence Analysis Table

Functional/Operational Area	Possible Initiating Event	Possible Consequences	Prevention/Protection Measures
Internal Storage Bunkers	<ul style="list-style-type: none"> Combustible waste material in subjected to sufficient heat to catch alight. This may occur from exothermally oxidising materials within stockpile bunkers, arson, smoking, oil soaked rags or cardboard, lithium ion batteries left in the waste. 	<ul style="list-style-type: none"> Fire engulfs individual bunker and consumes the waste. Fire spreads to the surrounding area. Fire fighting water is generated which escapes into the stormwater system. 	<ul style="list-style-type: none"> First response fire services available including, hose reels, extinguishers and sprinkler system. A hot-work permit system. A first response fire crew exists on site. The site is able to contain the first 90 minutes of firefighting water. No smoking is permitted on site except in a designated low risk area. Site has BCA compliant fire services. Secure site Handheld thermal camera to check storage areas.
3. Diesel fuel	<ul style="list-style-type: none"> Spillage occurs onto a vehicle, hot surface vaporises the fuel and a fire erupts 	<ul style="list-style-type: none"> Fire is unable to be contained and causes rupture of the diesel storage tank, pool fire occurs. 	<ul style="list-style-type: none"> Tank designed and located in accordance with AS1940-2017 Staff trained in dangerous goods storage and handling Hydrocarbon spill kit located near diesel storage Fire services A first response fire crew exists on site.



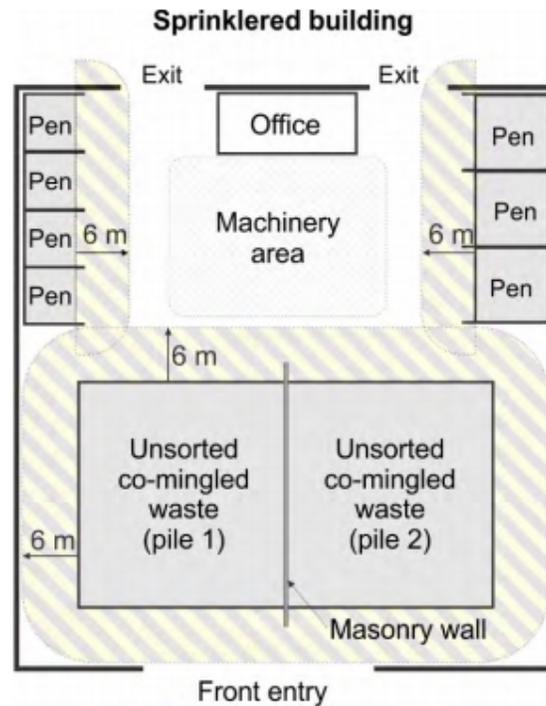
8.6.3.2.2 Fire Safety in Waste Facilities

NSW Fire and Rescue have released a new fire safety guideline, Fire Safety in Waste Facilities, Feb 2020. This guideline specifically relates to the proposed development. The site will comply with the requirements of this guideline including:

Table 8-14: Fire Safety in Waste Facilities - Requirements

Requirement	Comment	Complies Yes/No
Rear of site (<3,000 m ²) for bin storage requires 2 hydrants to flow	Existing facility complies	Yes
Automatic fire sprinkler system required (floor area >1,000 sqm)	This has been newly installed within the building.	Yes
External stockpile segregation	Not applicable, external storage be for empty bins, loose external stockpiles are not applicable. Appropriate access to bin storage areas is provided.	N/A
The internal waste storage is required to have 6 m unobstructed access to the internal storage bunkers and unsorted, comingled waste as per Figure 8-2 below.	Proposed design complies.	Yes
The maximum height of any internal stockpile should not exceed 4 m	Storage bunker walls are 3 m in height. Stockpiles would not exceed the height of bunker walls.	Yes
Note: Fire separating masonry walls (eg bunkers) and automatic fire sprinkler systems may allow larger stockpile sizes and/or shorter separation distances.	The building is sprinklered. Steel walls instead of masonry walls are proposed for storage bunkers. Steel framed structures are known to perform better in similar operations than masonry due to durability of the material. This design will be finalised in the Fire Safety Study in consultation with NSW Fire and Rescue following approval.	Yes Considered an "Acceptable solution"
A separating masonry wall, revetment or pen should extend at least 1 m above the stockpile height.	Stockpiles of combustible materials would be restricted to 1 m below the bunker wall.	Yes
An Operational Plan is required for storage and handling of combustible materials	A draft operational plan has been prepared. Additional information regarding storage and handling of combustible materials to be provided post commissioning in consultation with FRNSW.	Yes

Figure 8-2: Example of unobstructed access around internal stockpiles



The following section details the fire protection equipment required by the NSW Fire Safety in Waste Facilities guidelines, the National Construction Code and best practice.

8.6.3.2.3 Fire prevention and protection strategy

This section outlines the fire protection strategy including fire protection equipment provided at the Site. The fire services upgrade of the building was approved under a separate modification application MOD2021/0084 and details are provided in Attachment 4.

8.6.3.2.3.1 Ventilation

Natural ventilation would be provided in accordance with the BCA. This would be more than adequate for the type of activities being undertaken.

8.6.3.2.3.2 Ignition Sources

There would be a non-smoking policy throughout the site.

8.6.3.2.3.3 Security and Signage

The site would be locked and secure to prevent unauthorised access to the site outside of operating hours. The site has security monitoring.

8.6.3.2.3.4 Provision for Escape

Site operators are trained and practice simulations of emergency evacuation procedures.



8.6.3.2.3.5 Fire Detection

The main system for fire detection would be the staff on the site as they would be able to quickly detect any leaks of materials, via visual or odour recognition, which may lead to an increased fire risk. Once such situations are detected appropriate first response action would be taken. A handheld thermal detection camera will be used to check the waste storage areas.

8.6.3.2.3.5.1 Alarms

The following alarms would be in place:

- Offices
 - ▶ Satisfy the requirements of BCA and AS 3786 *Smoke alarms using scattered light, transmitted light or ionization* and AS 1670 *Fire detection, warning, control and intercom systems – System design, installation and commissioning – Fire* for common areas.

A handheld thermal detection camera will be used to check the waste storage areas.

8.6.3.2.3.6 Fire Protection Equipment

The fire protection consists of automated sprinkler system, fire extinguishers, hose reels and hydrants. Hose reels and hydrants would be fitted with monitors. Conveyors would be fitted with deluge sprinklers.

8.6.3.2.3.6.1 Fire Hydrants

Section E1.3 of the BCA states:

- (a) *A fire hydrant system must be provided to serve a building-*
 - (i) *having a total floor area greater than 500 m²; and*
 - (ii) *where a fire brigade is available to attend a building fire.*

The NSW Fire Safety in Waste Facilities guideline requires 3 hydrants for the building. Hydrants are currently provided for the facility.

8.6.3.2.3.6.2 Fire Hose Reels

Section E1.4 of the BCA states:

- (b) *A fire hose reel system must be provided-*
 - (i) *to serve the whole building where one or more internal fire hydrants are installed;*
or
 - (ii) *where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500 m².*

Hose reels are provided in the warehouse.

8.6.3.2.3.6.3 Sprinkler System

The NSW Fire Safety in Waste Facilities guideline requires an automatic sprinkler system for building compartments with greater than 1000 sqm. Therefore the proposed building will require a sprinkler system. This has been newly installed within the building.

8.6.3.2.3.7 Management Practices

A Fire and Emergency Response Procedure will be implemented for the site. This procedure identifies fire hazards to human health and the environment. The document is comprehensive. It is used during induction of site personnel and contractors.

Training a fire crew with live fire training is recommended.

A procedure to guide the operators to inspect for lithium batteries is warranted. An instruction note needs to be sent to customers warning them of the fire risks caused by the casual disposal of lithium batteries.

8.6.3.2.4 Fire Water Run-off Containment

Section 7.9.1 of the *Fire Safety Guidelines* state;

The waste facility should have effective and automatic means of containing fire water run-off, with primary containment having a net capacity not less than the total hydraulic demand of installed fire safety systems.

The building would be bunded/graded which would contain fire water run-off.

- Sprinklers water = 2899 L/min for 90 min duration this is $2899 \times 90 = 260,910$ L this is 261 m^3
- Hydrant water = 10 L/s x 60 = 600 L/min for 90 min duration $600 \times 90 = 54,000$ L this is 54 m^3 for 2 hydrants this is 108 m^3
- Total water storage requirement is based on the 90min duration = $261 + 108 = 369 \text{ m}^3$

The building is 4,000 sqm and will be bunded to a depth of 125 mm for 500 m^3 . This is more than enough to contain the above water storage requirements with contingency for water displacement from equipment and material storage.

Building bunding required is presented in on Architectural Plan A08 – Fire Water Proposed Bunding Plan.

Any contaminated fire fighting water captured would be removed by a licensed waste contractor for treatment.

8.6.3.3 Assessment of Fire Threat

There is a potential fire risk from diesel use on the site and combustible waste materials. However, the diesel storage is fully compliant with AS1940 and as such, the risk of a fire starting is low. The handling and management of the diesel, if undertaken with care, is also extremely unlikely to start a fire. The malfunctioning of equipment also presents another possible fire risk. However, proper maintenance of the equipment should eliminate any serious risk of fire.



Provisions for mitigating fire risk due to combustible waste materials have been provided.

The Emergency Plan, which will be completed in accordance with AS3745–2010, will need to provide work practice procedures to reduce this risk to a low level. No further assessment is considered warranted.

The following safeguards and recommendations would be adhered to at the site to control potential fire risks:

- Fire detection systems are installed and operated in accordance with AS 1670.1:2004.
- Diesel is to be stored and transferred in accordance with AS1940.
- Fire services at the site are to be maintained in accordance with AS 1851–2012.
- Emergency lighting and exit signage are to be provided in accordance with the BCA and AS 2293–2005.
- Specific on site personnel are to be trained in specific site procedures, emergency procedures and the use of hose reels.
- Strict control of ignition sources to be enforced on site.
- Maintenance and housekeeping practices provided in accordance with AS/NZS 4745:2012.
- At each of the hose reels, a monitor directed at a section of the waste materials stored on the floor of the warehouse.
- For the hydrants the ability to inject foams.
- A hand held thermal imaging device will be used to monitor the waste storage areas.
- Automatic sprinkler system.

8.6.3.4 Bushfire Hazard

The proposed development is not located within bushfire prone land. Therefore, a bushfire assessment is not required.



9. SOCIAL IMPACTS AND SAFEGUARDS

This section addresses the most significant social impacts that could result from the proposed development, which are human health and traffic issues. Visual impacts and heritage are also discussed briefly.

9.1 HUMAN HEALTH

Potential health impacts from the proposed development have been assessed with reference to the *Health Impact Assessment Guidelines* (enHealth, 2001). Identified issues concerning human health are related to the following operational aspects: generation of inhalable and respirable dust (including silica dust), potential receipt of asbestos waste within incoming loads, high internal noise levels and harmful consequences of a potential fire or chemical spill incident occurring on site.

9.1.1 Generation of Dust

The generation of particulate matter in the form of inhalable and/or respirable dust (including silica dust) can cause health impacts to workers who are exposed to the airborne contaminants, either at high levels or for prolonged periods of time. Potential health effects include irritation to upper and lower respiratory tract and detrimental impacts to pulmonary function. Control practices that will be in place to minimise the risk of exposure to employees include a water misting system to suppress dust at high risk areas and the use of appropriate PPE, as well as workplace housekeeping practices.

Potential health impacts associated with external release of dust are considered to be low based on the results from the Air Quality Impact Assessment (Appendix 1), which show that levels of particulate matter at nearest sensitive receptors are expected to be below the Approved Methods environmental criteria which is well below the occupational exposure limits.

9.1.2 Asbestos Waste

The proposed development would receive C&D and C&I waste (general solid waste non-putrescible), however on the rare occasion other waste types may enter the subject site inadvertently. For example: in the case of asbestos containing material being found within the loads accepted at the proposed facility.

Asbestos can cause asbestosis, lung cancer and mesothelioma. Asbestos is a risk when asbestos fibres become airborne. Therefore it is critical the site's EMP include an *incoming waste procedure*, developed to confirm the type of C&D wastes arriving on site and to deal with any unexpected or non-conforming wastes (e.g. hazardous wastes like asbestos) mixed with accepted waste types. An *incoming waste procedure* is provided in the Waste Management Report (Appendix 7). If found during inspection at the weighbridge, the entire load would be rejected and immediately leave the site. If the suspect material is found while unloading, it would need to be segregated from other material using temporary barricades. Inspection by suitably qualified person and possible laboratory testing undertaken to determine the nature of the material and any action required. The *incoming waste procedure* would need to be implemented from the first load accepted at the facility. The staff would need to be trained in this and all other environmental procedures in accordance with Draft Protocol for managing asbestos during



resource recovery of construction and demolition waste” (NSW EPA, 2014) and any other training requirements listed in the EMP.

9.1.3 Generation of Noise

High internal noise levels can potentially cause health impacts (e.g. hearing loss) to workers who are exposed to it on a daily basis. Control practices that will be in place to minimise the risk of exposure to employees include the use of appropriate PPE and undertaking systematic equipment maintenance.

Potential health impacts associated with external environmental noise are considered to be low based on the results from the Noise Impact Assessment (Appendix 2), which show that noise impacts at nearest sensitive receptors are expected to comply with the relevant environmental criteria, which is well below the occupational exposure limits.

9.1.4 Fire and Chemical Spill Risk

The main concerns to human health resulting from a potential fire on site are death, burns as well as inhalation of smoke and other air pollutants. Fire related issues are addressed in detail in Section 8.6.3. Where appropriate, control measures have been recommended. With adequate fire services and equipment in place the risk of a fire occurring on site is considered to be low.

Potential adverse impacts to health could also result from unintended human contact with hazardous chemicals, upon their accidental release within the building and/or externally to the site, through their release into the stormwater system. The possibility of such an event occurring is considered to be low due to the minor quantities and nature of chemicals to be stored and the safeguards proposed to reduce the risk of any material spill. All chemicals will be safely stored in accordance with the relevant Australian Standard. Bunding for storage of diesel and spill clean-up equipment would be available on site to contain and clean up potential chemical spills should these occur. Only minor quantities of chemicals would be stored – diesel, lubricants, grease, cleaning. Therefore, the potential health impacts from the accidental release of or exposure to hazardous chemicals are considered to be minor for on-site workers and further insignificant for the local community.

9.1.5 Employee Health and Safety

All employees would undergo appropriate training as part of site induction and be provided with appropriate Personal Protective Equipment (PPE) for their role, such as ear plugs (if required), high visibility clothing and safety boots. The employer would ensure the operation is conducted as approved and appropriate resources are available for work safety. The proposed development would be required to comply with the following Acts and Regulations relating to health and safety:

- Work Health & Safety Act 2011; and
- Work Health & Safety Regulation 2017.

Employees would be trained in the appropriate safety procedures applicable to their role including use of firefighting equipment.

9.2 VISUAL IMPACTS

Figure 9-1 below shows the existing view of the site from Loftus Road. The subject site is not visually prominent and is not identified as having scenic or landscape values. It contains an industrial building which is typical of the surrounding area. There are no proposed changes to the existing building or landscaping. Two weighbridges would be installed on the existing driveway. A car parking area would be established at the rear of the site and empty bins would be stored at the rear of the building along the eastern side. This will not result in significant changes to the site appearance from Loftus Road and therefore visual impacts will be negligible.

Figure 9-1: Existing view of site from Loftus Road



9.3 HERITAGE

The subject land was found not to be affected by an Interim Heritage Order under the provisions of the *Heritage Act 1977*. No Aboriginal Places or European heritage locations have been identified or uncovered on the subject site or in its vicinity.

The site is also not listed as being a heritage item or containing items under the Holroyd LEP 2013. The nearest heritage items to the site were identified in Section 6.4 and include “Linnwood” 1.1 km north-east and Fairfield Public School 1.2 km south-west of the property boundary.



An application for exemption from preparing an Aboriginal cultural heritage impact assessment report (ACHAR) was provided as part of the Scoping Report. The application noted the following:

- The project area is located over 600 metres from fresh water and as water is necessary for survival, it is unlikely that the project area would have been used for anything more than hunting and gathering. This is supported by previous assessments that have identified proximity to water was one major factor in past Aboriginal land use and site location.
- In terms of impacts to the archaeological record and the need for an ACHAR, the project area has been significantly altered through the completed excavation and fill works across the entire subject site associated with the existing building and concreted areas. Such works remove the topsoils (A horizon) and at least the upper B horizon, where artefacts are found and as such the likelihood of any cultural materials remaining under the current project area is minimal to nil.
- As the proposed development will be maintained within the already highly disturbed footprint, a CHA will not identify any sites in the project area and as such an exception is sought.

Supporting evidence is provided for submission to Heritage NSW as Appendix 9.

9.4 ROAD, TRAFFIC AND TRANSPORT

This section provides details regarding road, traffic, transport, access and parking as a result of the proposed development.

9.4.1 Traffic and Parking Impact Assessment

A Traffic and Parking Impact Assessment for the proposed development was undertaken by Stanbury Traffic Planning and is provided in Appendix 3. Cumberland Council were consulted during the assessment with regards to driveway works and safety issues. Based on the assessment, there are no traffic or parking related issues that should prevent approval of the proposed use of the subject site. A summary of the outcomes of this assessment are provided in the following sub-sections.

9.4.1.1 Existing Transport Conditions

The surrounding road network consists of:

- Loftus Road;
- Pine Road;
- Dursley Road;
- Fairfield Road; and
- Fairfield Street.

Fairfield Road links The Horsley Drive to the south and Woodpark Road to the north. Fairfield street links the Horsley Drive in the west with Woodville Road in the east.

Traffic surveys were undertaken on Saturday 12th and Wednesday 16th June 2021 on the following intersections:



- Pine Road / Loftus Road;
- Military Road / Byron Road;
- Pine Road / Fairfield Street;
- Fairfield Street (underpass) / Fairfield Street; and
- Fairfield road / Dursley Road.

Peak hours were determined from the surveys as:

- Weekday AM – 7:45am to 8:45am;
- Weekday PM – 3:00pm to 4:00pm; and
- Saturday Midday – 12:00pm to 1:00pm.

Intersection operation was analysed using the SIDRA program with the following findings:

- Military Road / Byron Road and Pine Road / Fairfield Street intersections currently operate well with minimal queues and delays on all approaches in both the AM and PM peak hours.
- Pine Road / Fairfield Street, Fairfield Street (underpass) / Fairfield Street and Fairfield road / Dursley Road intersections currently operate with acceptable delays in both the AM and PM peak hours.

Nearest public trains and buses are within 1km walking distance of the site.

9.4.1.2 Truck Fleet

Cobra Waste Solutions owns a total of 15 trucks associated with the new resource recovery facility. These trucks would be used to deliver and pick up skip bins and include:

- Six (6) Hooklift Trucks, each 8.7 metres in length;
- Nine (9) Skip Loader Trucks, 5 large trucks x 8 metres and 4 small trucks x 6.5 metres in length.

A semi trailer would remove non-recyclable material generated through the process. Re-fuelling of the diesel tank would be undertaken by an 8 metre refuelling truck approximately once a week.

9.4.1.3 Truck Movements

Access and egress to the site is via the driveway from Loftus Road. Truck deliveries and pick ups will be restricted to between the hours of 6:00am and 6:00pm.

The largest truck that will enter the site is a 20 m long semi trailer. Truck movements associated with the proposed development are summarised below:

Incoming Trucks:

- Skip loader trucks (6 to 8 m long) for the incoming skip bin waste loads and delivery of skip bins;
- Hooklift trucks (9 m long) for larger incoming skip bin waste loads and delivery of skip bins;
- Approximately 8 trucks per hour would be associated with incoming waste.



Outgoing Trucks:

- Semi trailers / walking floor (20 m long) for the pick up of waste loads that cannot be recycled to landfill. This will be undertaken by a contractor and require on average 3 loads per day over a 12 hour period.
- Hooklift trucks would transport recovered materials out of the site and require 5-6 truck loads out per hour.

Overall, the proposed development would result in a total of 168 truck movements per day (84 trucks in and 84 trucks out). A summary of projected daily traffic generation is provided in Table 9-1. Peak hour movements are shaded for convenience.

Table 9-1: Summary of Projected Traffic Generation (Source: Stanbury Traffic Planning)

Hour Starting	Trucks In	Trucks Out	Staff In	Staff Out ¹	Total
5:00	0	0	18	0	18
6:00	4	4	0	2	10
7:00	8	8	5	0	21
8:00	8	8	0	0	16
9:00	8	8	0	0	16
10:00	8	8	0	0	16
11:00	8	8	0	0	16
12:00	8	8	0	0	16
13:00	8	8	11	0	27
14:00	8	8	0	18	34
15:00	8	8	0	0	16
16:00	4	4	0	5	13
17:00	4	4	0	0	8
TOTAL	84	84	34	25	227

1. Afternoon shift staff would leave at the completion of their shift at approximately 22:00

9.4.1.3.1 Truck Scheduling and Weighbridge Operation

The facility intends to implement a truck booking system which is a computerised program called “Waste Edge”. This system allows for bookings to be made for delivery and pick up of skip bins and waste loads and enables control of the timing of truck movements into and out of the site.

An allocator would be dedicated to manage truck scheduling and the program to ensure:

- Trucks do not turn up without being scheduled;
- There is room on-site for them to deliver; and
- The weighbridge can be managed to contain vehicle queues inside the site.

A double weighbridge is proposed to provide weighing upon entry and upon exit of the site. Both weighbridges can accommodate a 20m semi-trailer.



9.4.1.4 Operational Traffic Impacts

SIDRA was used to model the impact of additional traffic on the surrounding road network. Results are summarised as follows:

- Military Road / Byron Road and Pine Road / Fairfield Street intersections are expected to see minimal change as a result of the proposed development and remain at Level of Service A in both the AM and PM peak hours.
- Pine Road / Fairfield Street, Fairfield Street (underpass) / Fairfield Street and Fairfield Road / Dursley Road intersections are overall expected to see minimal change as a result of the proposed development and remain at Level of Service b in both the AM and pm peak hours.

Overall, the proposed development is not expected to result in any significant impacts on the safety and efficiency of the surrounding road network.

9.4.1.5 On-Site Parking

Car parking requirements are set out in the Holroyd Development Control Plan, 2013 and the Draft Cumberland DCP.

The Holroyd DCP requires that minimum car parking spaces be provided generally in accordance with Table 3.1.

There is no specific guideline for use of the site as a resource recovery facility. The car space parking provision adopted is for “Warehouses (including amenities)”. The parking rate is equivalent to one car space per 300 m² GFA plus 1 space per 40 m² GFA of offices.

Similarly, the Cumberland DCP provides car parking rates in Table 1 of Part G. The car space provision for commercial business and office is 1 space per 40 m² GFA and Warehouses 1 space per 300 m² GFA.

The gross floor area for the main building was calculated to be a total area of 4,142 m² and the office is 419 m², total floor area of 4,561 m². Table 9-2 shows the number of car parking spaces provided using an equivalent car parking rate.

Table 9-2: Car Parking Requirements

Use	Standard	GFA (m ²)	Required Spaces	Complies
Resource recovery facility equivalent parking rate	1 space per per 300 m ² GFA plus 1 space per 40 m ² GFA of offices	4,142 m ² 419 m ²	13.8 10.5	Yes
Required number of car spaces (rounded up)			25	



The site plan shows there will be 34 car parking spaces provided on site. Therefore, the proposed development complies with the DCP. Additionally, this number of car spaces caters for the expected number of employees per shift.

The proposed car parking areas have been located clear of the medium flood risk area and Easement F2 as requested by Cumberland City Council.

Heavy vehicle parking is expected to be required by up to 5 trucks. The remainder of the truck fleet would park at the existing St Marys facility. Parking for trucks would only be required after 6:00pm. A truck parking area is provided along the southern boundary of the site with capacity for up to 5 hooklift trucks. This parking area is located outside the medium flood risk area easement.

9.4.1.6 Site Access

The existing site access is from Loftus Road via a 10 metre wide sealed driveway. This will be widened by extending the orders of the entry to accommodate truck turning and would include alterations to the existing gates. The proposed widening would result in a driveway width of 12.6 m at the property boundary. The proposed driveway works will be restricted to inside the site and will not affect any of the parking or reduce the kerbside parking length.

Swept path plans provided in Appendix 5 of the Traffic Report demonstrate the site access arrangements are suitable to accommodate heavy vehicle entry and exit movements of the largest truck (a 20 metre truck) is achievable. Trucks would enter via the existing driveway, drive over the weighbridge and reverse into one of the roller doors at the back the building. Trucks would then leave the building in a forward direction, drive over the weighbridge and exit the site onto Loftus Road.

The first roller door on the western side of the back of the building would be accessed by semi-trailers removing material from the site. The second roller door on the eastern side would provide access to hooklift and skip loader trucks that would be delivering material to site. It is expected that one quarter of all trucks movements would be via the western (first) door and three quarters via the eastern (second) door.

9.4.1.7 Conclusions

Based on the traffic assessment, the following conclusions were made:

- *The existing site access arrangements are sufficiently capable of accommodating the largest vehicles expected to service the site in a safe and efficient manner;*
- *Loftus Road has consistent horizontal and vertical geometry and can provide sufficient sight distance from the site driveway for exiting vehicles in accordance with AS2890.1 and AS2890.2;*
- *The proposed off-street passenger vehicle parking provision complies with the specific operational requirements of the proposed site use and the relevant requirements of CDCP 2021;*
- *One visitor bicycle parking space is recommended which will be documented once the specific product is selected at the detailed design stage of this project. It is considered that this could reasonably be managed via a condition of consent;*



- *The proposed off street heavy vehicle servicing and parking provision is capable of accommodating the specific operational requirements of the proposed site use;*
- *The internal passenger and heavy vehicle circulation arrangements are capable of providing for safe and efficient internal manoeuvring, with respect to the specific operational requirements of the use;*
- *To manage the reversing of heavy vehicles safely, it is recommended that a staff member on-site ensure that pedestrians are kept clear of reversing vehicles. Procedures for managing the safe reversing of vehicles on-site should be included in a site operational management plan;*
- *The immediately adjoining road network currently operates with a satisfactory level of service during peak periods;*
- *The proposed site has been projected to generate up to 21 peak hour vehicle trips on a weekday AM with 16 during the weekday PM peak hour to and from the subject site;*
- *The abovementioned traffic generating ability of the proposed use is consistent with a standard industrial use of the existing site infrastructure; and*
- *The adjoining road network is capable of accommodating the traffic projected to be generated by the subject development.*

There are no traffic or parking related issues that should prevent approval of the subject use of the site.



10. CUMULATIVE IMPACTS AND SAFEGUARDS

This section provides an assessment of the potential cumulative impacts that may arise as a result of the operations from the proposed development, concurrently or sequentially with other projects in the region.

Cumulative impacts are incremental environmental impacts that are caused by past, present or future activities that, when combined, may have further cumulative effect. In fact, the environmental impacts of any single project upon a receiver or resource may not be significant when considered in isolation; however, the potential impacts may increase when individual effects are considered in combination, either with the same project or together with other projects.

The potential cumulative impacts that could arise from the operations of the proposed development are assessed in the following subsections.

10.1 AIR QUALITY

Minimising dust impacts are essential at any waste recovery facility. Odour was not considered at this facility due to the lack of odours from C&D and C&I waste. The cumulative impact of the dust was assessed in the Air Quality Impact Assessment (Appendix 1). The maximum impacts for annual TSP and PM₁₀ emissions at all sensitive receptors are predicted to comply with the *Approved Methods* for the criteria annual averaging period.

The maximum predicted impacts for PM₁₀ and PM_{2.5} for the 24-hour period and PM_{2.5} for the annual period are predicted to exceed the *Approved Methods* for the criteria due to elevated background concentrations.

In cases of elevated background concentrations, the NSW EPA requires a demonstration that no additional exceedances of the impact assessment criteria will occur as a result of the proposed site activities. Contemporaneous addition of the predicted daily increments of PM₁₀ and PM_{2.5} with daily measured background levels for 2017 showed no additional days of exceedance.

10.2 NOISE AND VIBRATION

Operational noise is a critical environmental issue in any area with surrounding residential receivers. The existing background noise levels were used in determining the project criteria for the noise impact assessment. The cumulative impact of the development was assessed in the road traffic noise study included in the Noise Impact Assessment (Appendix 2). All relevant noise criteria were satisfied at nearest residential receivers in all time periods.

10.3 SURFACE WATERS

A Stormwater Assessment Report (Appendix 6) has been undertaken for the proposed development. Potential impacts to water from the proposed development include sediment/contaminant runoff into stormwater and chemical storage and use. Additionally, groundwater and groundwater dependent ecosystems may be impacted by contaminants seeping into groundwater.



Existing stormwater infrastructure on site includes stormwater pits in external hardstand areas and downpipes for roof water. Stormwater pits and drainage lines direct surface waters southward, away from the development and activity area into an existing drainage swale on the adjacent property that discharges to Prospect Creek.

Minor upgrades to stormwater infrastructure will include the installation of a new 4.6 metre wide swale at the rear of the property which would collect stormwater from the rear hardstand area and connect to the existing swale on the adjacent property. An “SPEL Stormceptor” stormwater treatment device will be installed in the new pit to reduce pollutant discharge.

A risk assessment was undertaken and considered proposed activities, potential pollutants, pathways to stormwater, mitigation measures and safeguards to be put in place. The risk assessment found that with preventative measures and adequate controls in place, the risk of contamination to stormwater as a result of site activities was found to be low.

10.4 WASTE MANAGEMENT

A major incident or recurring incidents involving the storage and management of waste products could have potential cumulative impacts if considered in the context of the surrounding area, which has the potential to deal with large volumes of waste generation. Incidents include accidental spillages that have the potential to enter the surrounding environment causing land and water pollution.

A number of safeguards and management measures would continue to be implemented at the site in order to prevent accidental release of any waste. With these procedures and safeguards in place, the contribution of the site to cumulative impacts from the incorrect handling and management of waste would be insignificant.

10.5 HAZARDS AND RISK

Hazards and risk associated with the proposed development are related to the potential for fires, spillage of chemicals and release of particulates into the surrounding environment.

Limited hazardous chemicals are required for the proposed facility and dangerous goods of minor quantities only are stored and used at the site and notification to SafeWork NSW is not required as manifest quantities are not exceeded. There are safeguards established at the site to reduce the risk of fires as well as the risk of release of chemicals and particulates, such as the storage of chemicals according to relevant standards including bunding, provision of spill kits and appropriate staff training in emergency response.

Cumulative impacts are not expected due to the current safeguards and procedures in place. These would be maintained.

10.6 TRAFFIC AND TRANSPORT

Nearby projects identified on the Major Projects NSW website and Cumberland Council website were considered within the Traffic and Parking Impact Assessment prepared by Stanbury Traffic Planning in Appendix 3. This provides a cumulative assessment of traffic impact. Findings of the assessment indicate that cumulative impacts are not expected.



11. ECOLOGICALLY SUSTAINABLE DEVELOPMENT

The original concept of sustainable development is defined as “development that meets the need of the present generation without compromising the ability of future generations to meet their own needs”. Ecological sustainability requires a combination of good planning, and effective and environmentally sound approach to design, operations and management. The principles of ESD involves a cluster of elements and principles, the following comprise of the most important to consider during a project’s life:

- Principle of sustainable use
- Principle of integration
- Precautionary principle
- Inter-generational and intra-generational equity
- Conservation of biological diversity and ecological integrity
- Internalisation of external environmental costs

11.1 PRINCIPLE OF SUSTAINABLE USE

The concept of sustainability applies not only to the development but to the environment too. The Australian National Strategy for Ecologically Sustainable Development defines ESD as “development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends’. Natural resources should be used in a manner which is sustainable, prudent, rational wise and appropriate.

11.2 PRINCIPLE OF INTEGRATION

ESD requires the effective integration of economic, social and environmental considerations in the decision-making process. Environmental considerations should be integrated into economic, social and other development plans, programs and projects and development needs are to be taken into account in applying environmental objectives.

11.3 PRECAUTIONARY PRINCIPLE

If threats of serious or irreversible environmental damage exist, lack of full scientific evidence should not be used as a reason for postponing measures to prevent environmental degradation.

In the application of the precautionary principle, public and private decisions should be guide by:

- Careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and;
- An assessment of the risk weighted consequences of various options.

It is not necessary that serious of irreversible damage to have occurred, it is the threat of such damage that is required. The environmental damage threatened must attain the threshold of being serious or irreversible.

The lack of full scientific uncertainty is in relation to the nature and scope of the threat of environmental damage. The degree of scientific uncertainty that needs to exist in order to trigger



application of the precautionary principle varies depending on the magnitude of environmental damage used in the formulation of the first condition precedent of the precautionary principle.

The activation of the precautionary principle results in the taking of measures to prevent environmental damage without having to wait until the reality and seriousness of the threats of environmental damage become fully known. This is the concept of preventative anticipation.

11.4 INTER-GENERATIONAL AND INTRA-GENERATIONAL EQUITY

Inter-generational equity requires the present generation to ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.

Intra-generational equity involves considerations of equity within the present generation. The people within the present generation should have equal rights to benefit from the use of natural resources and from the enjoyment of a clean and healthy environment.

11.5 CONSERVATION OF BIOLOGICAL DIVERSITY AND ECOLOGICAL INTEGRITY

ESD mandates that the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making, including in the formulation, adoption and implementation of any economic, social and other development plan, program or project.

Biological diversity means the diversity of life and comprises:

- Genetic diversity (the variety of genes in any population)
- Species diversity (the variety of species)
- Ecosystem diversity (the variety of communities and ecosystems).

11.6 INTERNALISATION OF EXTERNAL ENVIRONMENTAL COSTS

Internalisation of environmental costs can be undertaken in a number of ways:

- Environmental factors should be included in the valuation of assets and services
- The polluter pays principle should be adopted, i.e. those who generate pollution and waste should bear the costs of containment, avoidance of abatement.
- The users of good and services should pay prices based on the full life cycle of the costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste .
- Environmental goals, having being established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

11.7 ESD WITHIN THE PROJECT

The above principles have been incorporated into the overall design of the project and into the management of operations on site. The EIS outlines safeguards that would be implemented on site so that the proposed operations would cause minimal harm to the environment and that



resources would be sustained to ensure availability to future generations, through reducing the environmental impacts on the surrounding community.

The main environmental safeguards to be implemented in order to minimise environmental harm, in line with ESD principles, are as follows:

- Restrict external vehicle movements to: 6am-6pm;
- Roller shutter doors to be closed 6pm-6am;
- Fast acting roller shutter doors to be installed and programmed to be closed when not in use;
- Dust emitting activities limited to inside the building;
- Dust suppression water sprays used within building
- Stormwater pollution control, including spill kits, sealed surfaces, pollution control devices on stormwater pits;
- Fire protection services including a building sprinkler system and pump house;
- Storage and handling of hazardous chemicals including hardstand/bunded area integrity management and maintenance of dangerous goods storage areas;
- Waste management and stringent procedures to manage the incoming and outgoing waste; and
- Environmental Management Plan (EMP).

In addition to these environmental safeguards, it should be noted that it is the intention of the site is to recycle materials, rather than sending waste to landfill. This will have a positive effect on the environment, and will significantly reduce demand for landfill in the area.

Furthermore, the proposed development would not have any foreseeable negative impacts on socio-economic aspects. Instead, a positive contribution from the increased operations on site would be the creation of jobs, with 40 to 50 full time permanent jobs and up to 100 indirect jobs and 30 construction employment opportunities being provided. Increased operations are also to focus heavily on supplying the local markets. As a result, the proposal could have positive economic “spin-off” effects in the local region, by enhancing social productivity while not undermining ecological systems. This aspect would be in accordance with the inter-generational equity principle of ESD.

In order to monitor the sustainable performance of a development, various sustainability indicators can be used.

Examples of these indicators are outlined in the table below and have been addressed in relation to the subject site and its considerations for ESD and sustainable practices. The site’s EMP will be used (and be continually updated) in order to maintain the principles of ESD and monitor the sustainability indicators mentioned in the table.



Table 11-1: Sustainability Indicators

Indicator category	Comments and Description
Community	<ul style="list-style-type: none"> • Increase in employment opportunities; • Strengthening of local economy; • Level of knowledge based investment increased; • No net loss of heritage or other features, buildings, places of high community importance; and • No loss of community integrity.
Ecosystems	<ul style="list-style-type: none"> • No net reduction in richness or abundance of flora and fauna species in aquatic or terrestrial environments; • No net reduction in the existing landscaping of the site; • No net increase of pests or disease threats to the health of the ecosystem; and • Reduction of hazards which are threats to the health of the ecosystem (fire, pollution, etc.).
Soils	<ul style="list-style-type: none"> • No net topsoil erosion; • No increase in area of land affected by salinisation; and • No reduction in soil pH below certain levels.
Water	<ul style="list-style-type: none"> • Reduction of freshwater use per unit of production; • No net increase in levels of acidification or toxic substances, heavy metals, nutrient and sediment levels; and • No net reduction in quality of water bodies as aquatic habitats.
Air	<ul style="list-style-type: none"> • No net reduction in air quality.
Energy	<ul style="list-style-type: none"> • Programs to reduce the use of fossil fuels for transportation and energy consumption.



12. MITIGATION MEASURES AND MANAGEMENT

This section provides a summary of the mitigation measures required to ensure that the surrounding natural and built environment is safeguarded from potential impacts of the proposed development. An overview of the site management plans to be used on site is also provided.

12.1 SUMMARY OF CONTROLS AND MITIGATION MEASURES

Table 12-1 presents a summary of the potential impacts of the proposed site activities discussed in Sections 8 and 9, and presents a summary of mitigation measures that have been recommended to provide a sufficient level of protection, to both the built and natural surrounding environment.

Table 12-1: Summary of Potential Impacts and Mitigation Measures

Potential Impacts	Recommended Mitigation Measures
Air	
Generation of particulate emissions exceeding compliance levels, and resulting in impacts to air quality and complaints from the community.	<ul style="list-style-type: none"> • All waste processing operations to be undertaken within the existing warehouse. • All waste storage would be within the building (with the exception of empty skip bins). • All truck loads to be covered. • Automatic closing roller shutter doors. • Roller shutter doors closed between 6:00pm and 6:00am. • Water misting system inside the building for dust suppression. Water sprayers to focus on: <ul style="list-style-type: none"> ▶ Waste Storage Bunkers ▶ Key points along the process line
Noise	
Generation of noise by use of equipment on site and vehicle movements exceeding compliance levels and resulting in impacts to acoustic amenity and complaints from the community.	<p>Operational Noise</p> <ul style="list-style-type: none"> • Restrict truck movements to: 6am-6pm; • Roller shutter doors to be closed 6pm-6am; and • Fast acting roller shutter doors to be installed and programmed to be closed when not in use.



Table 12-1: Summary of Potential Impacts and Mitigation Measures

Potential Impacts	Recommended Mitigation Measures
Water	
<p>Contamination of stormwater run-off and consequent impacts on nearby surface waters.</p> <p>Flooding impacts</p> <p>Release of contaminated fire fighting water</p>	<ul style="list-style-type: none"> • All waste processing operations to be undertaken within the existing warehouse. • All waste storage would be within the building (with the exception of empty skip bins). • All truck loads to be covered. • Bunded diesel tank and refuelling area; • Spill kits to be provided adjacent to diesel tank and chemical storage areas; • Bunded building for containment of fire-fighting water; • Installation of a 4.6m wide swale drain along the southern boundary to cater for 1% AEP flow from upstream catchment as per Civil Works & Stormwater Management Plans; • Swale to drain to GSIP pit and SPEL Stormsack filter with non-return valve; and • Discharge of stormwater from swale to existing swale and Prospect Creek.
Waste Management	
<p>Potential environmental and off-site impacts associated with excessive generation of waste and potential release of waste to surrounding environment.</p>	<ul style="list-style-type: none"> • All waste processing operations to be undertaken within the existing warehouse. • All waste storage would be in designated bunkers and bins within the building (with the exception of empty skip bins). • All truck loads to be covered. • Private licensed waste contractor for collection of non-recyclable waste destined for landfill; • Two weighbridges for the measurement and recording of waste loads. • Incoming waste inspection procedure to ensure: <ul style="list-style-type: none"> ▶ Waste is inspected prior to acceptance at the site ▶ Non-conforming waste is not accepted ▶ Waste is recorded in accordance with EPA requirements ▶ Quality control ▶ Management of waste associated with resource recovery exemptions and orders.



Table 12-1: Summary of Potential Impacts and Mitigation Measures

Potential Impacts	Recommended Mitigation Measures
Hazards and Risk	
<p>Incident involving the potential for a spill or fire.</p>	<ul style="list-style-type: none"> • Chemical storage in accordance with relevant Australian Standards; • Control of ignition sources, including “no smoking” policy; • Adequate provision for escape; • Adequate fire services including fire sprinkler system, fire hydrant design; • Design of site to allow fire brigade access; • Bunded diesel tank and refuelling area; • Spill kits to be provided adjacent to diesel tank and chemical storage areas; • Bunded building for containment of fire-fighting water; • Incoming waste inspection procedure; • Emergency response training.
Human Health	
<p>Impacts stemming from other aspects including air quality, noise and hazards and risk: airborne tissue fibres, high internal noise levels and harmful consequences of a potential fire or chemical spill incident.</p>	<ul style="list-style-type: none"> • Use of Personal Protective Equipment; • Regular workplace inspection and high standard of housekeeping; • Regular equipment maintenance; • Safeguards and control measures implemented for Air Quality control; • Safeguards and control measures implemented for management of Hazards and Risks; and • Safeguards and control measures recommended for Noise control.
Traffic and transport	
	<ul style="list-style-type: none"> • Use of “Waste Edge” System for management of truck movements; • Staff to include “Allocator” to oversee truck scheduling, on-site traffic management and pedestrian safety; • Widening of existing driveway access to Loftus Road to accommodate truck turning; • Establishment of 34 on site car parking spaces and 5 truck parking spaces; • All truck loads to be covered; • Installation of two weighbridges.



12.2 SITE MANAGEMENT PLANS

Site management plans need to be developed to ensure the safety of individuals on the site, especially in relation to workplace health and safety, as well as minimising the impact to the environment. These plans include:

- Operational Plan of Management (OPM);
- Emergency Plan (EP);
- Pollution Incident Response Management Plan (PIRMP); and
- Environmental Management Plan (EMP).

Details of the purpose and contents of these plans are provided in the following sections.

12.2.1 Operational Plan of Management

A draft operational plan of management (Appendix 5) is provided with the application. This would be finalised as the development becomes operational.

12.2.2 Emergency Plan

An emergency plan is required and should be prepared with the following guidelines and standards:

- NSW Rural Fire Service Guidelines for the Preparation of Emergency/Evacuation Plans;
- AS 3745–2010 *Planning for Emergencies in Facilities*;
- AS/NZS 1596:2014 *The storage and handling of LP Gas*;
- AS 4332–2004 *The storage and handling of gases in cylinders and*
- AS 1940-2017 *The storage and handling of flammable and combustible liquids*

The aims of the plan are: to provide a clear understanding of how to handle and react to any emergency situation that may occur at the site in the form of effective control structures, procedures and directives; to prevent or minimise the impact of an emergency and pollution incident on human life, the community and surrounding environment; and to facilitate a return to *normal* or *safe* operations as soon as possible.

The procedures contained in the plan should be designed to protect life and where possible prevent or minimise damage to the equipment, site and installations at the site and facilitate a return to normal operations by providing effective utilisation of the safety features, systems and/or equipment installed at the site. The procedures would be updated as continually improving guidelines to support site management and handling of unanticipated situations.

Designated roles are established for individuals in the plan, and take on responsibilities in order to ensure the safety of all individuals who may have been on the site. The Chief Warden of the site is the most prominent role, and liaises with the emergency services to coordinate the emergency response in accordance with the EP.

An Incident Reporting and Investigation procedure should be included in the plan to address the following aspects and actions:



- If the incident poses a risk to human health or the environment, report the incident immediately, otherwise report incident within 24 hours of the occurrence of the incident;
- Undertake an incident investigation especially if multiple incidents occur or if the incident results in serious injury/death or property damage; and
- Monitor and review incidents to determine follow-up actions, prevent the recurrence of the incident and ensure that follow-up actions are implemented.

12.2.3 Pollution Incident Response Management Plan

Holders of an EPL under the POEO Act 1997 are required to prepare and implement Pollution Incident Response Management Plans (PIRMP) for each licensed activity.

A Pollution Incident Response Management Plan could be incorporated into the site's Emergency Plan for ease of use, resulting in an "Emergency and Pollution Incident Response Management Plan".

A PIRMP would be prepared in accordance with the following guideline:

- Guideline: Pollution Incident Response Management Plans (NSW EPA, 2020)

The aims of the plan are: to provide a clear understanding of how to handle and react to any pollution situation that may occur at the site in the form of effective control structures, procedures and directives; to prevent or minimise the impact of a pollution incident on human life, the community and surrounding environment.

The plan would include:

- Legal obligations of the licensee and staff;
- Contact details of responsible persons;
- Staff training;
- Procedure for actions to be taken immediately after a pollution incident has occurred;
- Notification procedure to ensure all relevant people and authorities are notified and kept informed throughout the incident;
- Action and communication procedures to ensure incidents are effectively and safely dealt with;
- Inventory of pollutants on the premises;
- Safety equipment used to minimise risks or contain or control a pollution incident;
- Detailed maps showing location of the premises, location of any potential pollutants and stormwater drains on the premises and the surrounding areas that may be affected;
- Testing and revision of the PIRMP.



12.2.4 Environmental Management Plan

The proposed operations will require an EMP. This will address the following elements that need to be controlled on the site and would include:

- Legal and regulatory requirements;
- Site description including environmental characteristics and general infrastructure;
- Operational conditions and controls;
- Environmental management activities associated with particular aspects and impacts in the form of a risk assessment;
- Reporting, staffing and training requirements;
- Environmental monitoring and review; and
- Environmental procedures including but not limited to:
 - ▶ Dust management;
 - ▶ Noise management;
 - ▶ Stormwater management;
 - ▶ Waste Management;
 - ▶ On-site Traffic Management; and
 - ▶ Regular Workplace Inspection.

The EMP would adopt the framework suggested by the ISO 14001 Standard. This would maximise consistency and simplicity in the administration and implementation of the EMP procedures. Specific procedures would be developed to manage the identified environmental aspects and impacts of site activities.

13. STATEMENT OF COMMITMENTS

Cobra Waste Solutions commits to the following course of action during the site development and operations of the proposed resource recovery facility at 30 Loftus Road, Yennora:

- Cobra Waste Solutions will abide by all legal requirements, licence conditions and approvals pertaining to the site.
- Cobra Waste Solutions will ensure all external areas are kept tidy and free of items and debris to facilitate movement of vehicles on site and minimise potential pollution.
- Cobra Waste Solutions will implement and maintain the following safeguards and mitigation measures at the site, as detailed in this EIS.
 - ▶ Install fast acting automatic closing roller shutter doors;
 - ▶ Install a water misting system focussing on waste storage bunkers and key points along the process line;
 - ▶ Install a 4.6 metre wide swale along the southern boundary of the site in accordance with Civil Works and Stormwater Management Plans;
 - ▶ Install a self-bunded diesel tank and bunded refuelling area;
 - ▶ Install two weighbridges as per plans;
 - ▶ Construct widening of the access driveway as per plans;
 - ▶ Install a gate in the perimeter fence to allow fire brigade access around the building;
 - ▶ Ensure all erosion and sediment controls are implemented during construction activities;
 - ▶ Undertake all waste processing operations within the building;
 - ▶ Ensure all waste material is stored within designated bunkers and bins within the building;
 - ▶ Ensure all truck loads are covered when entering and exiting the site;
 - ▶ Restrict truck access to the site between the hours of 6:00am to 6:00pm;
 - ▶ Ensure roller doors are closed between 6:00pm to 6:00am;
 - ▶ Ensure appropriate spill kits are easily accessible within proximity to the diesel and chemical storage areas;
 - ▶ Ensure all chemicals are stored in accordance with Australian Standards;
 - ▶ Implement an incoming waste procedure;
 - ▶ Implement a truck scheduling program;
 - ▶ Ensure all mitigation measures including bunding and stormwater pit protection devices are regularly maintained and adequately working at all times;
 - ▶ Good housekeeping must be maintained for all operational and storage areas at the site;
 - ▶ Company owned trucks, must be properly maintained in order to reduce noise.
 - ▶ All processing equipment should be regularly inspected and maintained in accordance with manufacturer's specifications.
 - ▶ All staff must wear PPE relevant to their role.
 - ▶ Ensure NSW EPA waste record keeping and reporting requirements are adhered to.
- Cobra Waste Solutions will implement an Operational Plan of Management Plan;
- Cobra Waste Solutions will implement an Environmental Management Plan and ensure it incorporates the commitments, safeguards, mitigation measures and recommendations documented in this EIS.
- Cobra Waste Solutions will implement a site-specific Emergency Plan.
- Cobra Waste Solutions will implement a Pollution Incident Response Management Plan.
- Cobra Waste Solutions will ensure all employees are aware of the management plans listed above and trained in appropriate elements as required by their role.



14. LIST OF APPROVALS AND LICENCES

A list of licences, approvals and permits required for the proposed development are shown in the following table in **bold**.

Table 14-1: Required licences, approvals and permits

Type	Relevant Legislation	Required?	Agency
LICENCES			
Environment Protection Licence	Clause 34 and 42 of Schedule 1 of the Protection of the Environment Operations Act 1997	Yes	NSW EPA
Surface Water Licence	Water Act 1912	No	Office of Water
Groundwater Licence	Water Act 1912	No	Office of Water
Controlled Activity Approval	Water Management Act 2000	No	Office of Water
PERMITS			
Permits under the Fisheries Management Act	Fisheries Management Act 1994	No	DPI Fishing and Aquaculture
Aboriginal Heritage Impact Permit	National Parks & Wildlife Act 1974	No	OEH
Permits under the Heritage Act 1977	Heritage Act 1977	No	OEH
APPROVALS			
Development Approval	Clause 23 of Schedule 1 of the State Environmental Planning Policy (State and Regional Development) 2011	Yes	DPIE
Alter or erect improvements within a mine subsidence district	Mine Subsidence Compensation Act 1961	No	Mine Subsidence Board
Consent for works and structures in a public road	Roads Act 1993	No	RMS
Sub-division or development of bush fire prone land	Rural Fires Act 1997	No	Commissioner of the NSW Rural Fire Service



15. JUSTIFICATION AND CONCLUDING REMARKS

15.1 PROJECT JUSTIFICATION

The NSW Waste Avoidance and Resource Recovery Strategy 2014-21 is a key policy tool under the WARR Act. The proposed development supports the goals of the strategy:

- Increase recycling – by 2021-22 increase recycling rates for construction and demolition waste from 75% to 80%, and for commercial and industrial waste from 57% to 70%.

Comment: The proposal would establish a facility to enable recovery of C&D and C&I wastes thereby supporting an increase in the recycling rates for these wastes. The facility would implement a technologically advanced waste recycling system that would enable high recovery rates of materials resulting in less waste being sent to landfill.

- Divert more waste from landfill – by 2021-22 increase the waste diverted from landfill from 63% to 75%.

Comment: Establishing the facility would enable more wastes to be diverted from landfill as discussed above.

- Reduce illegal dumping.

Comment: The proposal supports the reduction in illegal dumping by providing a facility that accepts unwanted wastes.

The National Waste Policy 2018 is an Australian Government initiative that aims to “better support our economy, protect the health of our communities and reduce environmental impacts if we harness the value of materials we dispose of and return them to productive use”. The policy provides a framework for collective action for businesses, governments, communities and individuals until 2030. The proposal is consistent with the policy as it would be active in applying the principles of the circular economy, in particular:

- Improve resource recovery – including materials collection systems and processes for recycling and the quality of recycled material we produce;
- Improve information to support innovation, guide investment and enable informed consumer decisions.

Comment: The process would utilise best practice technologies to ensure maximum recovery of waste with up to 90% recovery expected.

The proposal in general supports the Federal Government’s target in the National Waste Policy to ban the export of waste by enabling waste to be processed in Sydney, thereby increasing jobs for Australians and supporting the move for Australia to deal with its own waste.



15.1.1 Market Demand

With the growing number of NSW Government Infrastructure projects located in Western Sydney and the Metropolitan area the demand for recycling facilities to deal with waste generated by the construction industry is continuing to increase. Waste generated from construction and demolition (C&D) activities historically ends up in landfill. Increasingly, businesses are seeing waste as a potential resource which has resulted in a growth of recycling facilities to repurpose waste C&D in NSW.

This combined with the push to keep manufacturing within Australia, to buy Australian made goods, as well as the Australian government recently banning the export of unprocessed waste overseas via the *Recycling and Waste Reduction Act, 2020* has created a demand to reconfiguring local infrastructure to reprocess and remanufacture recyclables within Australia. To support this ban, the government needs to provide incentives to enable facilities such as the proposed development to be established.

Cobra Waste Solutions wishes to capitalise on this need by expanding their recycling business to include a new resource recovery facility that incorporates technologically advanced systems for the processing and separation of waste into recovered materials.

The proposed site at Yennora is centrally located in Sydney and well positioned to accept waste from current and future infrastructure projects and manufacturing sites.

Furthermore, the amount of waste generated in Australia in 2018-19 increased by 10% from two years earlier, only half of which was recycled (theconversation.com, December 2020). The proposed development would provide a facility to facilitate an increase in the recycling of waste which is obviously in need.

15.1.2 Suitability of the Site

The justifications for selecting the subject site and for implementing the proposed development are listed as follows:

- The proposed site is available now and the lease has been signed;
- The proposed site is within industrial zoned land and is already developed for industrial use with a large building and sealed surfaces;
- Minimal site changes are required prior to commencement of activities;
- There are no existing site constraints such as bushfire, flooding, contamination, ecology or heritage;
- Surrounding land uses are existing industries with residential receptors being located at significant separation distances;
- The proposed site has ample room available to undertake all resource recovery operations and storage of waste within the existing building and for on-site car parking spaces and truck manoeuvring externally;



- The site is centrally located to accept wastes from prominent Sydney locations;
- The development is a permitted use under the Holroyd LEP and under the SEPP (infrastructure) 2007;
- The development is a beneficial use which would fulfil the principles of ecologically sustainable development and is to be encouraged;
- Transport routes are readily available; and
- The proposed development will have extensive environmental safeguards to provide assurance in regards to the expected degree of environmental impacts.

15.1.3 Permissibility

The proposed land use is permissible under both the Holroyd LEP and the SEPP (infrastructure) 2007.

The land zoning for the subject land is described as IN1 – General Industrial under the provisions of the *Holroyd Local Environmental Plan 2013*, which applies to the subject site.

The proposed development is considered permitted with consent as it falls under the definition of “general industries”. The following definitions are of relevance:

***resource recovery facility** means a building or place used for the recovery of resources from waste, including works or activities such as separating and sorting, processing or treating the waste, composting, temporary storage, transfer or sale of recovered resources, energy generation from gases and water treatment, but not including re-manufacture or disposal of the material by landfill or incineration.*

Note.

*Resource recovery facilities are a type of **waste or resource management facility**—see the definition of that term in this Dictionary.*

***Industry** means any of the following-*

- g) **General industry,***
- h) Heavy industry,*
- i) Light industry,*
- But does not include*
- j) Rural industry, or*
- k) Extractive industry or*
- l) Mining*

***General Industry** means a building or place (other than a heavy industry or light industry) that is used to carry out an industrial activity. -*

***Industrial activity** means the manufacturing, production, assembling, altering, formulating, repairing, renovating, ornamenting, finishing, cleaning, washing, dismantling, transforming, processing, recycling, adapting or servicing of, or the research*



and development of, any goods, substances, food, products or articles for commercial purposes, and includes any storage or transportation associated with any such activity. -

Under the land use table of Part 2 of the Holroyd LEP, the following uses under (3) are permitted with consent and uses under (4) are prohibited.

3 Permitted with consent

*Depots; Freight transport facilities; Garden centres; **General industries**; Hardware and building supplies; Industrial training facilities; Kiosks; Light industries; Liquid fuel depots; Neighbourhood shops; Oyster aquaculture; Places of public worship; Roads; Take away food and drink premises; Tank-based aquaculture; Warehouse or distribution centres; Any other development not specified in item 2 or 4.*

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Boat launching ramps; Boat sheds; Camping grounds; Car parks; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Eco-tourist facilities; Educational establishments; Entertainment facilities; Environmental facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Function centres; Health services facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home businesses; Home industries; Home occupations; Home occupations (sex services); Industries; Information and education facilities; Jetties; Livestock processing industries; Marinas; Mooring pens; Moorings; Pond-based aquaculture Recreation facilities (major); Registered clubs; Research stations; Residential accommodation; Restricted premises; Sawmill or log processing works; Sex services premises; Stock and sale yards; Tourist and visitor accommodation; Veterinary hospitals; Water recreation structures; Wharf or boating facilities

The proposed use is consistent with the definition of “general industry” and is permissible with consent in the zone. Furthermore, the proposed use is not covered by any of the categories in the prohibited development schedule for this Zone.

In addition, resource recovery facilities are permitted with consent under Clause 121 of Division 23, Part 3, of the *State Environmental Planning Policy (SEPP) (Infrastructure) 2007*, as reported below.

121 Development permitted with consent

(1) Development for the purpose of waste or resource management facilities, other than development referred to in subclause (2), may be carried out by any person with consent on land in a prescribed zone.

Where:

prescribed zone means any of the following land use zones or a land use zone that is equivalent to any of those zones:

- (a) RU1 Primary Production,*
- (b) RU2 Rural Landscape,*
- (c) IN1 General Industrial,*



- (d) IN3 Heavy Industrial,
- (e) SP1 Special Activities,
- (f) SP2 Infrastructure

waste or resource management facility means a waste or resource transfer station, a resource recovery facility or a waste disposal facility.

resource recovery facility means a facility for the recovery of resources from waste, including such works or activities as separating and sorting, processing or treating the waste, composting, temporary storage, transfer or sale of recovered resources, energy generation from waste gases and water treatment, but not including re-manufacture of material or goods or disposal of the material by landfill or incineration.

waste or resource transfer station means a facility for the collection and transfer of waste material or resources, including the receipt, sorting, compacting, temporary storage and distribution of waste or resources and the loading or unloading of waste or resources onto or from road or rail transport.

The subject land is within a IN1 zone thus is a 'prescribed zone' within the terms of clause 121(1)(c) and the intended use is as a 'Resource Recovery Facility' as defined above, being for the '...separating and sorting, processing or treating the waste...'. Therefore, the proposed development is permissible under the iSEPP on the subject land.

15.2 CONCLUDING REMARKS

The environmental assessment process has enabled the potential impacts of the proposed development of a resource recovery facility to be evaluated, and control strategies to be devised in order to ensure compliance with regulatory standards.

The development has been designed to minimise environmental impacts with operations to be undertaken within an enclosed building and additional safeguards to be put in place and therefore request is made that approval be granted.

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APPENDICES

EIS Appendix 8: Stormwater Management Drawings

ATTACHMENTS

EIS Attachment 2: Consultation Written Responses
