

Kooragang Recycling Facility

Operational Environmental Management Plan

Prepared for Boral Recycling Pty Ltd

December 2025

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19 December 2025

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1 Introduction

1.1 Purpose and objectives

This Operational Environmental Management Plan (OEMP) for the Kooragang recycling facility (the facility) has been developed to meet the requirements of Conditions C5–C7 (Schedule C) of development consent SSD 7038. The objective of the OEMP is to establish a framework for environmental management in accordance with the consent, as well as to meet the requirements of Boral’s Health, Safety, Environment and Quality (HSEQ) management system. This OEMP covers Stage 1 of the development and applies to a receipt and processing capacity at the facility of up to 350,000 tonnes per annum (tpa) of general solid waste (non-putrescible) and storage of up to 100,000 tonnes (t) of general solid waste (non-putrescible) at any one time.

All employees and subcontractors will be educated in relation to their responsibilities in effectively managing all environmental impacts whilst operating (Stage 1).

1.2 Description of facility

Boral’s recycling facility is located at 1/24 Egret Street, Kooragang Island. The Site is located within Lot 12 DP 1032146, approximately 5 kilometers (km) north northwest of the Newcastle Central Business District.

Operations under SSD 7038 involve the staged expansion and increase in the processing capacity of an existing resources recovery facility to 350,000 t per year of general solid waste (non-putrescible) with a maximum storage capacity of 144,000 t at any one time to provide for an increase of resource recovery. It is noted that this OEMP covers Stage 1 only (storage capacity of 100,000 t at any one time). Stage 2 operation allows for storage capacity of up to 144,000 t at any one time and is not covered by this OEMP.

1.3 Operating hours

The operating hours of the recycling facility are shown in Table 1.1.

Table 1.1 Hours of operation

Activity	Day	Hours
Stage 1 operation	Monday to Saturday	24 hours
	Sunday	6:00 am to 6:00 pm Maintenance only

1.4 Approval and commencement

Operation of the facility will be in accordance with the OEMP and will not commence until the OEMP has been approved by the Planning Secretary.

1.5 Availability of OEMP

The Site manager or Environmental Business Partner are responsible for distribution of the OEMP to relevant personnel. Copies of the OEMP are issued to the personnel listed in Table 1.2 below.

Table 1.2 Distribution of the OEMP

Position
General Manager Recycling
Recycling Operations Manager NSW/ACT
Site Manager
Site Supervisors
Senior Environment Business Partner
Planning and Development Manager

A copy of the OEMP is available in the site office.

1.6 Other relevant policies, documents and guidelines

Other Boral HSEQ policies, documents and guidelines which are referenced in the OEMP include:

- Kooragang Recycling Emergency Response Plan (V1 February 2025 Boral)
- Kooragang Recycling Pollution Incident Response Management Plan (V14 June 2025 Boral)
- GRP-HSEQ-1-01 Management System Framework and Operational Control
- GRP-HSEQ-1-02 HSEQ Policy
- POL-HSEQ-02 Environment Policy
- GRP-HSEQ-1-03, Hazard Identification and Risk Management Standard
- GRP-HSEQ-1-04 Legal and Other Requirements
- GRP-HSEQ-1-05 Objective Targets and Improvement Plans
- GRP-HSEQ-2-01 Organisational Roles, and Responsibilities and Resources
- GRP-HSEQ-MP-1-05 Communication and Consultation Model Protocol
- GRP-HSEQ-2-02-F02 HSE Alert Template
- GRP-HSEQ-2-02-F03 Quality Alert Template
- GRP-HSEQ-2-03 Training Competency and Awareness
- GRP-HSEQ-2-09 Emergency Preparedness and Response Standard
- GRP-HSEQ-2-10 Crisis Management Standard
- GRP-HSEQ-3-01 Monitoring and Review Standard
- GP-HSEQ-3-02 Incident Reporting Investigation and Action Management

- GRP-HSEQ-3-03 Performance Assessments and Audits Procedure
- GRP-HSEQ-4-05 First Aid Standard
- GRP-HSEQ-8-01 Environmental Aspects and Impacts Procedure
- GRP-HSEQ-8-02 Water Management Element
- GRP-HSEQ-8-03 Land Management Procedure
- GRP-HSEQ-8-04 Waste Management Element
- GRP-HSEQ-8-05 Noise Management Element
- GRP-HSEQ-8-06 Air Management Element.

2 Regulatory Requirements

2.1 Development consent

The requirements for the OEMP are stated under Conditions C1 and C5–C7 of development consent SSD 7038. Information required for inclusion in the OEMP is listed in Table 2.1.

Table 2.1 SSD7038 – OEMP requirements

Condition	Detail required	Location in OEMP
C5	The Applicant must prepare an Operational Environmental Management Plan (OEMP) in accordance with the requirements of condition C1 and to the satisfaction of the Planning Secretary.	
C1	Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:	
(a)	Details of:	
(i)	the relevant statutory requirements (including any relevant approval, licence or lease conditions)	Chapter 2
(ii)	any relevant limits or performance measures and criteria	Chapter 5
(iii)	the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures	Chapter 5
(b)	a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria	Chapter 5
(c)	a program to monitor and report on the: <ul style="list-style-type: none"> (i) impacts and environmental performance of the development (ii) effectiveness of the management measures set out pursuant to paragraph (b) above 	Chapter 5
(d)	a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible	Section 5.6
(e)	a program to investigate and implement ways to improve the environmental performance of the development over time	Section 9.3
(f)	a protocol for managing and reporting any:	
(i)	incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria)	Chapter 7
(ii)	complaint	Section 6.3
(iii)	failure to comply with statutory requirements	Chapter 7
(g)	a protocol for periodic review of the plan.	Section 9.2
	Note: the Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans	
Part C – Environmental Management, Reporting and Auditing		
C5	The Applicant must prepare an Operational Environmental Management Plan (OEMP) in accordance with the requirements of condition C1 and to the satisfaction of the Planning Secretary.	This plan

Condition	Detail required	Location in OEMP
C6	As part of the OEMP required under condition CS of this consent, the Applicant must include the following:	
(a)	describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development	Chapter 4
(b)	describe the procedures that would be implemented to:	
(i)	keep the local community and relevant agencies informed about the operation and environmental performance of the development	Section 6.1
(ii)	receive, handle, respond to, and record complaints	Section 6.2 and Section 6.3
(iii)	resolve any disputes that may arise	Section 6.3
(iv)	respond to any non-compliance	Chapter 7
(v)	respond to emergencies	Chapter 7 and Chapter 8
(c)	include the following environmental management plans:	
(i)	Waste Management Plan (see condition B3)	Appendix A
(ii)	Operational Traffic Management Plan (see condition B33)	Appendix B
(iii)	Air Quality Management Plan (see condition B38).	Appendix C
C7	The Applicant must:	
(a)	not commence operation until the OEMP is approved by the Planning Secretary	Section 1.4
(b)	operate the development in accordance with the OEMP approved by the Planning Secretary (and as revised and approved by the Planning Secretary from time to time).	Section 1.4

2.2 Environment protection licence

Under the NSW *Protection of the Environment Operations Act 1997* (POEO Act) the site is a scheduled premises and is licensed for resource recovery and waste storage. Environment protection licence (EPL) 11968 has been granted for the site. As this document is amended from time to time the most recent version can be found via the NSW EPA public register <http://www.epa.nsw.gov.au/prpoeoapp/>. A hard copy of the EPL is held on site.

The site's EPL provides environmental management, monitoring and reporting criteria, including specific controls for air quality, water, waste and noise.

2.3 Resource Recovery Order and Exemptions

All products sold by the facility are required to meet the appropriate Resource Recovery Orders and Exemptions under Part 9, Clause 93 of the NSW *Protection of the Environment Operations (Waste) Regulation 2014*. These Orders impose the requirements that must be met by suppliers of resource recovered materials.

3 Strategic framework for environmental management

3.1 Statutory requirements

The facility's environmental performance criteria are defined in the development consent SSD 7038 and EPL 11968. All environmental monitoring and management will be carried out in accordance with the requirements of the development consent and the EPL.

3.2 Boral HSEQ management system

Boral has adopted a standardised approach to documenting its Health and Safety, Environment and Quality Management System (HSEQ MS) to ensure best practice in its core operating activities is in place and measured.

Boral has a HSEQ MS to:

- Assist company employees and contractors to identify and understand their responsibilities in meeting their HSEQ obligations.
- Provide the primary requirements for implementation of a common HSEQ MS.
- Establish the implementation guidelines that sit between relevant legislative, regulatory and Industry standard requirements, and the businesses functional and/or line of business operating procedures.
- Provide a single point of reference for company compliance to Australian standards, and to various accreditation bodies.

A full description of the Boral HSEQ MS can be found in GRP-HSEQ-1-01 Management System Framework and Operational Control. Several Boral sites operating under the Boral HSEQ MS are certified under the ISO14001 standards for Environmental Management Systems.

Boral is committed to the protection and minimisation of impact upon the environment and the communities in which it operates. In order to achieve this, Boral's activities will be executed according to its Environmental Policy. The procedure: GRP-HSEQ-1-02 HSEQ Policy discusses in detail the development and review of HSEQ Policies.

Boral Group level objective requirements can be found in GRP-HSEQ-1-05 Objective Targets and Improvement Plans procedure. Environmental objectives are communicated to persons working under Boral control and have the ability to influence the achievement of environmental compliance on site.

The environment elements within the HSEQ define the minimum standard required for environment management and provide operational controls required to manage environmental risk. The elements are discussed in the following HSEQ documents:

- GRP-HSEQ-8-02 Water Management
- GRP-HSEQ-8-03 Land Management
- GRP-HSEQ-8-04 Waste Management
- GRP-HSEQ-8-05 Noise Management
- GRP-HSEQ-8-06 Air Management.

These HSEQ documents and how they relate to this OEMP are described below.

3.2.1 Water management

GRP-HSEQ-8-02 Water Management provides the minimum mandatory requirements for water management so that activities that may impact on water resources are considered with measures put in place to comply with water usage and discharges on all internal and external requirements. The minimum mandatory requirements under this guideline are:

- All sites shall comply with applicable licences, permits, guidelines and standards for water quality.
- All sites shall identify clean and dirty water flows and shall segregate clean water flows from dirty water flows.
- Recycling and reusing waste water shall be carried out wherever possible to reduce the consumption of potable water.
- All sites shall minimise any offsite discharge – any discharge shall be controlled and monitored.

This OEMP has been prepared to meet Boral's water management requirements under this guideline.

3.2.2 Land management

The HSEQ MS Land Management Procedure *GRP-HSEQ-8-03* has been developed to outline land management practices and to ensure that operations are carried out within relevant regulatory requirements relating to contamination, remediation and rehabilitation. The minimum mandatory requirements under this guideline are:

- All Boral businesses shall maintain a Contaminated Land Register that identifies any contamination, assesses the level of risk to human health and the environment, and the status of recommended remediation and/or control measures.
- All Boral businesses shall undertake land management practices and reviews in cases of significant change of land use or changes of ownership.
- Vegetation clearing shall be carried out in a manner that ensures minimal disturbance to the surrounding environment with obtained internal approval that ensures legislative requirements are identified and met.
- All operations shall ensure final end use requirements are identified and met.

This OEMP has been prepared to meet Boral's land management requirements under this guideline.

3.2.3 Waste management

The HSEQ MS Waste Management Procedure *GRP-HSEQ-8-04* outlines standard waste management practices to monitor and measure waste materials Boral sites produce, reuse, recycle, reduce, and dispose of, and to ensure those actions comply with both licensing and regulatory requirements. The minimum mandatory requirements under this guideline are:

- A Waste Register shall be maintained at all sites.
- Sites shall actively facilitate resource efficiency through reuse or recycling of waste materials.
- Materials not suitable for reuse or recycling shall be directed to a waste or resource recovery facility, which is lawfully permitted to accept such material.

- A Subject Matter Expert (SME) shall be consulted before any material that is not already defined in procedures is moved or disposed of.

Section 5.1 and Appendix A of this OEMP have been prepared to meet Boral's requirements for waste management under this guideline.

3.2.4 Noise management

Environmental noise (including vibration) is kept to acceptable levels for neighbours and the community. *GRP-HSEQ-8-05 Noise Management* outlines the protocol and minimum standards for noise management. The minimum mandatory requirements under this guideline are:

- Regulatory requirements shall be met.
- Monitoring of boundary noise (and vibration) shall be conducted where required.
- Noise (and Vibration) Management Plans shall be prepared and implemented where operations are at risk of non-compliance with regulatory limits or disturbance of local stakeholders.
- Community complaints are to be investigated and mitigating measures adopted to ensure noise and vibration levels are acceptable to the local community and/or regulatory authorities.

This OEMP has been prepared to meet Boral's requirements for noise management under this guideline.

3.2.5 Air management

Air quality resulting from the site's operations and/or maintenance is managed to minimise its impact on the amenity of the local environment, and to prevent adverse environmental and/or health impacts. Boral HSEQ procedure *GRP-HSEQ-8-06 Air Management* element provides air management practices for all Boral sites. The minimum mandatory requirements under this guideline are:

- Air quality shall be managed at all sites, documenting operations and maintenance of pollution control equipment.
- All emissions to air (point source and fugitive) shall meet regulatory requirements and where required, applicable air quality data shall be reported to relevant regulatory agencies.
- All complaints, incidents and breaches shall be reported, documented, investigated and appropriately actioned.

Section 5.3 and Appendix C of this OEMP have been prepared to meet Boral's requirements for air management under this guideline.

3.3 Hazards and risk

3.3.1 Hazard identification and risk management

The Boral HSEQ MS procedure *GRP-HSEQ-1-03, Hazard Identification and Risk Management* outlines the risk management protocol and framework for management of risk within Boral. The risk assessment process for the environment for a site is captured within the site specific 'Aspects and Impacts Register'.

3.3.2 Environmental aspects and impacts

Risk management applies to every decision that could affect the environmental objectives and outcomes of the site, from the construction method selected to the treatment of issues.

An aspects and impacts register has been developed for the site in accordance with Boral's GRP-HSEQ-8-01 Environmental Aspects and Impacts Procedure and using risk management procedures outlined within HSEQ-1-03 Hazard and Risk Identification and Risk Management. The purpose of the aspects and impacts register is to identify and assess the operations and activities that can interact with the environment, and ensure these impacts are identified, reviewed and appropriately managed. The minimum mandatory requirements under Boral's GRP-HSEQ-8-01 Environmental Aspects and Impacts procedure are:

- An initial aspect identification shall be carried out by a Site Manager and/or Supervisor together with a person of competent environmental experience.
- Risks shall be adequately assessed against the established Company Risk Matrix.
- Aspects identified during the assessment shall be documented in an Environmental Aspects and Impacts Register.
- 'Medium' or 'High' risks shall be considered in setting Business Unit environmental action plans.
- The Environmental Aspect and Impacts Register shall be reviewed at a frequency as required (minimum of three years or after changes to processes).

The aspects and impacts register has been used to identify and prioritise environmental management measures outlined throughout this OEMP.

4 Roles and responsibilities

4.1 Environmental roles and responsibility

The facility has established roles and responsibilities for personnel to implement the requirements of this OEMP. Personnel are supported by an organisational structure that provides appropriate levels of support and authority for the effective execution of roles, including environmental management. The organisational structure relevant to the site is located on the Boral Intranet and can be found at Org Manager. The HSEQ element GRP-HSEQ-2-01 Organisational Roles, and Responsibilities and Resources provides the framework for identifying and developing the HSEQ roles and responsibilities. Key roles and responsibilities for the site are summarised in Table 4.1.

Table 4.1 Environmental roles and responsibilities

Role	Responsibility	Authority
Recycling Operations Manager NSW/ACT	<ul style="list-style-type: none"> Approve the OEMP and any revisions which are incorporated. Delegate environmental management responsibilities to personnel. 	<ul style="list-style-type: none"> To suspend site work if health and safety of personnel and/or environment is endangered. To suspend an individual from activities for disregarding the OEMP following consultation with the Site Manager.
Site Manager - Recycling	<ul style="list-style-type: none"> Implement the OEMP at the site including having relevant resources, and developing site specific components (such as the aspects and impacts register). Undertake the required environmental reporting including EPP, Regulatory Reporting, Compliance Declaration, filling incidents forms and maintaining records. Lead continuous environmental improvement including providing training, managing incidents and issues as required. Issue clearances for work where required. Co-ordinate with personnel on matters in relation to site operations. Document and act upon complaints. Ensure all personnel possess the required skills and are appropriately trained for the type of work that they are undertaking. 	<ul style="list-style-type: none"> To direct personnel to change work practices if they are deemed to be hazardous to the environment and/or health and safety of personnel. To temporarily suspend site work if health and safety of personnel and/or environment is endangered, pending further consideration with the Operations Manager. To temporarily suspend an individual from activities for disregarding the OEMP.
Environment Business Partner	<ul style="list-style-type: none"> Support the site manager and site staff with development and implementation of the OEMP. Assist the site manager with environmental training, managing environmental incidents and issues. Undertake audits as required. Review the site environmental documentation as required. Assist with developing site EPP and Environment Limits Poster. 	

Role	Responsibility	Authority
Site supervisor	<ul style="list-style-type: none"> • Liaise with the site manager in relation to the requirements of the OEMP. • Ensure that work activities are undertaken in a manner consistent with the OEMP. • Implement environmental management measures outlined in the OEMP. 	<ul style="list-style-type: none"> • To report activities in which the environment and/or health and safety of site personnel is at risk.
Weighbridge operator	<ul style="list-style-type: none"> • Liaise with the site manager in relation to the requirements of the OEMP. • Ensure that materials are managed in a manner consistent with the OEMP. 	<ul style="list-style-type: none"> • To report on materials management activities, and notify management of instances in which the activities cause or have potential to cause risk to the environment.
All site personnel	<ul style="list-style-type: none"> • Reporting all incidents, near misses and hazards. • Comply with all environmental policies, procedures and instructions. • Participate in environmental training, meetings and toolboxes. 	

5 Environmental performance

The management procedures described in this section are site specific and are employed to ensure that environmental impacts are controlled to acceptable levels according to the development consent.

5.1 Waste management

A Waste Management Plan (WMP) has been prepared for the site in accordance with Condition C6 of the development consent SSD 6525. The WMP is provided in Appendix A.

5.1.1 Performance criteria

Performance criteria for waste management relate to the volumes and stored quantities and type of waste permitted, as specified in the development consent SSD 7038 and EPL 11968. Relevant criteria are presented in Table 5.1.

Table 5.1 Volume and storage of waste

Aspect	Criterion
Volume of waste permitted on the site at any one time ¹	100,000 t
Volume of waste permitted to be received or processed per year	350,000 t
Maximum stockpile height	15 m above ground level

Notes: 1. Until Stage 2 construction is complete, following which 144,000 t of waste may be stored at one time.

The types of waste permitted to be received are shown in Table 5.2.

Table 5.2 Types of waste permitted under EPL 11968

Waste	Description	Activity permitted	Other limits
General solid waste (non-putrescible)	Excavated Natural Material that meets the chemical and physical contamination requirements of "The excavated natural material order 2014".	Resource recovery and waste storage	N/A
General solid waste (non-putrescible)	Glass that meets the chemical and physical contamination requirements of "The recovered glass sand order 2014".	Resource recovery and waste storage	N/A
General solid waste (non-putrescible)	Building and demolition waste, asphalt waste, concrete waste from concrete batching plants, virgin excavated natural material, and soils (meeting the CT1 levels for general solid waste in Table 1 of the EPA's Waste Classification Guidelines 2014).	Resource recovery and waste storage	N/A
General solid waste (non-putrescible)	Blast Furnace Slag that meets the chemical and physical contamination requirements of "The blast furnace slag order 2014".	Resource recovery and waste storage	N/A

Waste	Description	Activity permitted	Other limits
General solid waste (non-putrescible)	Power Station Fly ash that meets the chemical and physical contamination requirements of "The coal ash order 2014".	Resource recovery and waste storage	N/A
General solid waste (non-putrescible)	Basic Oxygen Steel Slag that meets the chemical and physical contamination requirements of "The steel furnace slag order 2017".	Resource recovery and waste storage	N/A

5.1.2 Monitoring and management

Construction and demolition (C&D) waste materials, as well as recovered aggregate, are accepted at the facility. The objectives of the WMP are to ensure materials are consistent with the permitted wastes under development consent SSD 7038 and the EPL, and to prevent contaminated materials entering the facility.

Waste at the facility is tracked at various points in the process. These points are outlined in Table 5.3 below. Further detail can be found in the Waste Management Plan in Appendix A.

Table 5.3 Waste monitoring

Stage	Description	Information recorded
Inspection point 1	<ul style="list-style-type: none"> Load material and source identified and inspected. If any suspect or unpermitted waste is identified the load is rejected and details recorded in the Rejected Load Register. 	<ul style="list-style-type: none"> Source and material identified. Customer details noted. Weight noted.
Inspection point 2	<ul style="list-style-type: none"> Communication with the weighbridge operator. Load is tipped and visually inspected. Load is turned and visually inspected again. If any suspect or unpermitted waste is identified the load is rejected and details recorded in the Rejected Load Register. 	<ul style="list-style-type: none"> Material type. Truck/trailer registration. Acceptance status.
Storage area	<ul style="list-style-type: none"> Waste stored in a separate storage area. Clearly identified as per the Inspection Area maps. 	<ul style="list-style-type: none"> Stockpile area delineation. Waste type.
Rejected loads	<ul style="list-style-type: none"> Loads rejected under Standard 1.2 of the Minimum Standards. Reloaded and removed from premises. Details recorded in the Rejected Load Register. 	<ul style="list-style-type: none"> The date and time in which the load of waste was rejected. The registration of the vehicle(s) and any accompanying trailers transporting the rejected load of waste both to and from the facility. The type of waste(s) in the rejected load of waste. The reason the load of waste was rejected.

5.2 Traffic

An Operational Traffic Management plan (OTMP) has been prepared for the site in accordance with Condition C6 of the development consent. The OTMP is provided in Appendix B. Traffic management related to site operations can be found in Chapter 5 of the OTMP.

5.3 Air quality

An Air Quality Management plan (AQMP) has been prepared for the site in accordance with Condition C6 of the development consent. The AQMP is provided in Appendix C and is summarised in this section.

5.3.1 Performance criteria

Air quality resulting from the facility operations and/or maintenance is managed to minimise its impact on the amenity of the local environment, and to prevent adverse environmental and/or health impacts. Boral HSEQ procedure *GRP-HSEQ-8-06 Air Management* element provides air management practices for all Boral sites. The minimum mandatory requirements under this guideline are:

- Air quality shall be managed at all sites, documenting operations and maintenance of pollution control equipment.
- All emissions to air (point source and fugitive) shall meet regulatory requirements and where required, applicable air quality data shall be reported to relevant regulatory agencies.
- All complaints, incidents and breaches shall be reported, documented, investigated and appropriately actioned.

5.3.2 Management and mitigation measures

Air quality resulting from the facility operations and/or maintenance is managed to minimise its impact on the amenity of the local environment, and to prevent adverse environmental and/or health impacts. Boral HSEQ procedure *GRP-HSEQ-8-06 Air Management* element provides air management practices for all Boral sites. The minimum mandatory requirements under this guideline are:

- Air quality shall be managed at all sites, documenting operations and maintenance of pollution control equipment.
- All emissions to air (point source and fugitive) shall meet regulatory requirements and where required, applicable air quality data shall be reported to relevant regulatory agencies.
- All complaints, incidents and breaches shall be reported, documented, investigated and appropriately actioned.

The management measures implemented at the facility are summarised in Table 5.4 below. The performance of all on-site mitigation measure technology will be routinely checked and serviced to maintain ongoing performance.

Table 5.4 Emission source mitigation measures

Emission source category	Mitigation measures in place at the facility
Wheel generated dust – unpaved roads	<ul style="list-style-type: none">• Wet suppression of haul roads is undertaken by the application of water via water cannons located throughout the site on a regular basis.• Travel speeds along all unpaved roads within the facility are limited to 15 km/hr.• Primary unsealed roads will be routinely maintained to minimise surface silt content and dust generation potential.

Emission source category	Mitigation measures in place at the facility
Wheel generated dust – paved roads	<ul style="list-style-type: none"> All paved surfaces are routinely swept. The facility has a road sweeper that attends site regularly and as requested. Wet suppression of internal haul roads is undertaken by the application of water via water cannons located throughout the site on a regular basis. Travel speeds along all paved roads within the facility are limited to 10 km/hr. All trucks leaving site must pass through a wheel wash facility prior to exiting to minimise tracking of material onto public roads.
Material handling (truck unloading, handling by mobile plant, loading to trucks)	<ul style="list-style-type: none"> The use of water sprays in the crushing and screening plant and at material stockpiles aids to increase the moisture content of product material and reduce the dust generation potential of material loaded to stockpiles and dispatched to market. Minimise the fall distance of material from plant (excavator, front end loader, etc.) to load point (truck, stockpile, etc). Reduce or cease material handling activities under dry, windy conditions with excessive visual dust generation.
Material processing (crushing, screening, conveying)	<ul style="list-style-type: none"> Water sprays are fitted at the crushing and screening plant. Water sprays are fitted to the conveyor transfer points and product stockpile loadout. Water cannons are used on crushing and screening areas to manage dust generation by wind from raw feed stockpiles. Conveyor belts and transfer points will be routinely cleaned of overspill.
Wind erosion of stockpiles and exposed surfaces	<ul style="list-style-type: none"> Water sprays are installed in the material stockpiling area. Water cannons are used on crushing and screening areas to manage dust generation by wind from raw feed stockpiles. Stockpile heights are limited to 15 m.

5.3.3 Monitoring environmental performance

EPL 11968 contains no emission load limits, air quality criteria, air emission limits or air quality monitoring requirements, however EPL 11968 does require meteorological monitoring as outlined below.

M4.1 At the point(s) identified below, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1 of the table below, using the corresponding sampling method, units of measure, averaging period and sampling frequency, specified opposite in the Columns 2, 3, 4 and 5 respectively.

Point 1:

Parameter	Sampling method	Units of measure	Averaging period	Frequency
Wind speed at 10 metres	AM-2 & AM-4	Metres per second	-	Continuous
Wind Direction at 10 metres	AM-2 & AM-4	Degrees	-	Continuous
Temperature at 10 metres	AM-2 & AM-4	Degrees Celsius	-	Continuous

M4.2 The licensee must ensure that the meteorological station on the premises complies with the requirements in the latest version of the *Approved Methods of Sampling of Air Pollutants in New South Wales*

Facility personnel are responsible for monitoring the performance of onsite air quality (dust and odour) mitigation measures on a day-to-day basis. Monitoring is incorporated into the day-to-day running of the facility as outlined in Table 5.5 below. Further detail can be found in the Air Quality Management Plan in Appendix C.

Table 5.5 Air monitoring

Monitoring task	Management	Responsibility
Regular monitoring of odour levels in the facility	<ul style="list-style-type: none"> Cleaning of the waste storage/processing areas. Removal of residual waste. Use of portable odour neutralising sprays when appropriate. 	Site Manager – Recycling Site Supervisor
Regular visual monitoring of the dust levels at the facility	<ul style="list-style-type: none"> Vehicle speed movements. Restricting operations during periods of strong wind. Utilising spray and cannon systems when required for receipt, stockpiling and processing activities. Watering of the pavement to reduce dust when appropriate. 	Site Manager – Recycling Site Supervisor
Regular visual monitoring of the roads at entry and exit of the facility	<ul style="list-style-type: none"> Street sweeping of hardstand/roads when required. 	Site Manager – Recycling Site Supervisor
Regular monitoring of wheel wash water and sediment levels	<ul style="list-style-type: none"> Maintain effectiveness of wheel wash by ensure adequate water levels and the removal of sedimentation when necessary. 	Site Manager – Recycling Site Supervisor
Meteorological monitoring	<ul style="list-style-type: none"> To inform appropriate management measures for the weather conditions. 	Site Manager – Recycling

5.4 Water

The following water management measures will be employed at the site during operation:

- Water proposed to be reused onsite will be tested and compared against the public health risk management criteria (DEC, 2006) and the adopted Ecological Groundwater Investigation Levels criteria. If the water quality exceed these criteria, water of a suitable quality will be added for dilution. Untreated water exceeding criteria will not be reused onsite.

5.4.1 Surface water

A Surface Water Mitigation and Monitoring Plan (SWMMP) has been prepared for the site to address Consent Condition B15 and EPL 11968 for Stage 1. It applies the outcomes of the Surface Water Discharge Characterisation Assessment (SWDCA) and details a suite of measures to improve surface water quality at the facility.

To enable improved water quality, Boral will reconstruct and modify the water management system to significantly improve the capture and containment of stormwater runoff from the yard, which is known to have poor water quality. These works will allow stormwater runoff from the yard to be captured in the stormwater storages. Water captured in the storages will be used for onsite dust suppression (dry weather only), product conditioning and concrete production to restore capacity after rainfall. The works will be constructed in a staged manner to allow for the continued operation of the facility, and will be complete prior to Stage 1 operation, in accordance with Consent Condition B16(b). An implementation schedule and monitoring and validation plan is provided in the SWMMP.

The storm water system will be maintained to allow sufficient free storage capacity to capture a design rainfall event. The amount of material build-up will be assessed on a monthly basis and deposited material will be cleaned out as required.

Chapter 6 of the SWMMP describes a monitoring and validation plan, which includes monitoring the performance of the new pavement, surface water overflows and local groundwater. The monitoring data will be used to validate the performance of the new pavement and water management system against the specifications and expected outcomes that are reported in the SWMMP.

Surface water monitoring is proposed to record overflows (both quantity and quality), water use rates in the yard and water export rates to the adjoining concrete plant. The surface water monitoring plan is described in Table 5.6.

Table 5.6 Surface water monitoring plan

Aspect	Approach
Monitoring of water use	Cumulate flow meters will be installed at the yard and concrete plant use points. The meter readings will be recorded monthly and will be reported in the annual water management review.
Monitoring of overflows	<p>Recording overflows</p> <p>Site overflows will be monitored daily based on site observations and basin levels. A record of overflows will be maintained on site and will be reported in the annual water management review.</p> <p>Water quality monitoring</p> <p>System overflows will occur once the storages are full and once commenced, may occur intermittently for several days. Water quality monitoring will be undertaken daily during any overflow event up to two samples per overflow event. The timing of the sample collection will be established based on site observations and forecast rainfall, with an objective to collect the initial sample shortly after overflows commence and the second sample near the end of the overflow event. Higher frequency sampling (i.e. every day that overflows occur) is not considered to be beneficial as the SWDCA demonstrated that the site water quality has consistent trends and there are no water quality targets proposed in this SWMMP.</p> <p>Samples will be collected from within the concrete basin, near the overflow location.</p> <p>The water quality monitoring will include analysis of pH, electrical conductivity, oxidised nitrogen, total nitrogen, aluminium, copper, chromium². All analysis will be undertaken using calibrated field instruments (pH and electrical conductivity only) and/or by a NATA accredited laboratory. The proposed analytes were selected as they significantly exceeded DGVs in most surface water samples collected during the SWDCA and are therefore considered to be the most suitable indicators of surface water quality.</p>
Plan commencement	The surface water monitoring plan will commence once the construction of the new water management system is completed.
Reporting	Results will be reported in the annual water management review and as required by the EPL. The annual water management review will include recommendations to address any identified issues.

Notes: 1. All metals samples will be field filtered using a 0.45 µm filter.
 2. Chromium is known to exist in surface water primarily as Cr(VI). It is proposed that total Cr speciation analysis is undertaken and it is assumed that 100% of Cr is Cr (VI). This approach will provide a conservative assessment of potential water quality risks associated with Cr.

5.4.2 Groundwater

In accordance with Condition B19 of SSD 7038, a Groundwater Monitoring Program will be prepared within three months of the commencement of Stage 1 operations.

This OEMP will be revised when the Groundwater Monitoring Plan has been approved by the Planning Secretary.

No groundwater will be used at the site until:

- Appropriate licences have been obtained.
- A Process Water Management plan has been prepared to manage the safe use of groundwater in the process water circuit. The plan will consider aspects such as water spray aerosol size, exposure pathways, dosages and mitigation measures.
- The findings of the Groundwater Monitoring Plan have determined the groundwater is fit for purpose.
- Written approval has been granted by the Planning Secretary.

5.5 Other environmental measures

5.5.1 Noise

The following noise management measures will be employed at the site during operation:

- Plant and haulage vehicles will be turned off when not in use (i.e. trucks should not be left idling if not operational).
- Plant, vehicles and construction equipment will be properly maintained to reduce the potential of excessive noise emissions and comply with Regulatory requirements.
- Reversing of vehicles will be limited where practicable.
- Investigate any complaints received relating to noise at the site and report them to the Senior Environment Business Partner NSW/ACT for further consideration towards any mitigation measures that may be required.

5.5.2 Aboriginal and historic heritage

In the event that any Aboriginal cultural object(s) or human remains are uncovered on site all works on site are to be ceased. The NSW Police, the Aboriginal Community and the OEH are to be notified. Works shall not resume in the designated area until consent in writing from the NSW Police and/or the OEH has been obtained.

5.5.3 Visual amenity

The site is situated within the heavy industrial landscape of Kooragang Island. The visual elements of the Project are in keeping with the existing visual character of the site and Island generally.

Stockpiles will be kept to a maximum height of 15 m above ground level.

5.5.4 Security

Site security is important to implementing environmental management measures. The recycling facility is bounded by security fencing and is monitored through CCTV cameras around the site entrance and also via security patrols at night when there is no staff on site. Weekly inspections of site security controls are undertaken and any security issues are reported to the Site Manager.

Condition B56 of development consent SSD 7038 requires the following security measures are implemented for the site:

- All signage and fencing must be erected in accordance with the development plans included in the EIS.
- The Applicant must maintain a fenceline at the boundary of the Origin Energy site as shown in the plans in Appendix 1 of the consent.

5.6 Contingency Plan

Condition C1 (e) requires a contingency plan to be implemented on site to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts assessment criteria as quickly as possible.

As part of the contingency planning, an Aspects and Impacts Register has been developed for the site in accordance with Boral's GRP-HSEQ-8-01 Environmental Aspects and Impacts Procedure and aligned with the risk management framework outlined in HSEQ-1-03 Hazard and Risk Identification and Risk Management. This register is designed to systematically identify and assess site operations and activities that may interact with the environment. Its purpose is to ensure that potential or unpredicted environmental impacts are recognised, regularly reviewed, and effectively managed to minimise risk and enable prompt response in the event of an incident. Additional details about the Aspects and Impacts Register are outlined in Section 3.3.2.

6 Communication

6.1 Communication and consultation

Communication both internally and externally allows Boral to provide and obtain information relevant to environmental compliance, including information related to its significant environmental aspects, environmental performance, compliance obligations and recommendations for continual improvement. Regarding complaints or negative information received from external sources it is imperative that a prompt and clear answer is provided by the site. Communication shall be conducted in accordance with GRP-HSEQ-MP-1-05 Communication and Consultation Model Protocol with an emphasis that all communication adheres to the following points:

- transparent
- appropriate
- truthful
- factual
- include all relevant information
- be understandable by interested parties.

6.2 Reporting

The site reports on its environmental performance annually in accordance with EPL 11968 and development consent SSD 7038. The EPL annual anniversary date is 16 September, with the annual return due to the EPA within 60 days.

In accordance with Condition C1 of the development consent, a protocol for periodic review of the plan is required. An annual review of the OEMP is proposed and will:

- Describe the development that was carried out in the previous calendar year, and the development that is proposed to be carried out over the next year.
- Include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against the:
 - Relevant statutory requirements, limits or performance measures/criteria.
 - Requirements of any plan or program required under this consent.
 - The monitoring results of previous years.
 - The relevant predictions in the EIS.
- Identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance.
- Identify any trends in the monitoring data over the life of the development.
- Monitor and report on the impacts and environmental performance of the development, and the effectiveness of the management measures set out in this plans.

- Describe what measures will be implemented over the next year to improve the environmental performance of the development.
- First annual review will be completed by 31 March 2026 and will cover the period from 1 January 2025 to 31 December 2025, then annually thereafter.

6.3 Complaints and dispute resolution procedure

It is the responsibility of the site manager to document and act upon complaints received in relation to the facility's operation. A complaints register shall be maintained to enable:

- Complaints/concerns received regarding the facility to be documented.
- An appropriate response to complaints is initiated (this may include changing management practices/monitoring procedures or adopting new practices/monitoring procedures).

Complaints must be reported to the site manager within 24 hours of receipt. The site manager will log the complaint into the Safety Management System (SEQuence) and retain a copy on site within the site Environment Management System (EMS) folder. All complaints will be acknowledged within 24 hours of receipt by the site manager, where reasonably practical.

The person recording the complaint should provide the manager with the following information:

- date of the complaint
- name of the person making the complaint
- telephone number of the person making the complaint
- reason for the complaint
- actions taken in response to the complaint.

Upon being informed of a complaint the manager must:

- determine whether any further response actions are required
- determine whether changes to site management procedures/monitoring programs are required
- report the complaint in the EPA Annual Return.

As per Condition C22 Access to Information, the complaints register will be updated monthly (as required) on Boral's website.

7 Incident and non compliance response

Incidents and non-conformances are managed in accordance with Boral's GP-HSEQ-3-02 Incident Reporting Investigation and Action Management procedure. This section summarises the key sections of the HSEQ procedure.

7.1 Definition of incident

HSEQ incidents include, but are not limited to:

- injury to workers
- damage to plant or property
- near miss events (including dangerous incidents)
- quality (product or service) issues
- environmental non-conformances.

All incidents must be reported immediately to the Supervisor of the area where the incident occurred.

In accordance with Condition C11 of development consent SSD 7038, immediately after Boral becomes aware of an incident, the Department will be notified in writing to compliance@planning.nsw.gov.au. The notification must identify the facility and set out the location and nature of the incident.

7.2 Non-compliance and actions

A non-compliance is defined in SSD 7038 Development Consent as an:

occurrence, set of circumstances or development that is in breach of this consent.

Potential non-compliances with the CoA, this OEMP and Sub-Plans can be identified by anyone and are to be reported to the Supervisor as a potential non-compliance. The Supervisor must report non-compliances and potential non-compliances to Boral immediately.

Non-compliances will be investigated to determine the root cause and any corrective and/or preventative actions arising from the investigation. This investigation will be documented in a Non-Compliance Report prepared by, or for, the Supervisor and will include any corrective and/or preventative actions.

In accordance with Condition C12, the Department must be notified via the Major Projects website within seven days after Boral becomes aware of any non-compliance.

As per Condition C13, the notification must identify the development and the application number for it, set out the condition that the development is non-compliant with, the way in which it does not comply, the reasons for the non-compliance (if known), and what actions have been, or will be, undertaken to address the non-compliance.

Note that under Condition C14, a non-compliance which has been notified as an environmental incident does not need to also be notified as a non-compliance.

7.3 Procedure

These minimum mandatory requirements shall be implemented for all incident responses:

- All incidents shall be reported immediately to a Supervisor, and shall be recorded as defined.
- Defined actions shall be taken to respond to any incident (i.e. manage the incident).
- All internal and external reporting, and notification requirements shall be met.
- All HSEQ incidents shall be investigated to the defined risk level and actions identified, communicated and implemented to prevent recurrence.

During the induction process, visitors, contractors or other workers will be advised of who to contact if an incident (near miss or non-conformance) occurs or is suspected while they are visiting or engaged in work directed by the Company.

7.4 Initial response to incidents

The first priority in response to an incident is to ensure that all affected persons are attended to and any person(s) requiring first aid or medical treatment are provided with that treatment as soon as possible.

Any first aid injuries shall be managed in accordance with GRP-HSEQ-4-05 First Aid Standard.

Areas subject to an incident investigation must be made safe and barricaded off (e.g. tape or other barrier) to preserve material relevant to any investigation.

The need to secure the scene may be under the direction of WHS or Environmental Authorities for serious incidents, with various conditions applied.

7.5 Incident reporting

The Operations Manager and/or Site Manager (or delegate) must ensure that all relevant persons are informed of an incident within any prescribed or defined timeframes. A One Point Lesson document has been prepared for reporting significant environmental incidents at the facility.

7.5.1 Internal

Contact details for the relevant personnel are displayed on the site HSEQ notice board. Internal incident notification is incident specific. Detailed incident notification details are provided in GRP-HSEQ-3-02-A02 Incident Management Chart.

7.5.2 External

The relevant Operations Manager or Site Manager, in consultation with the relevant HSE Advisor, must notify the Business Unit or General Manager if the regulator or other external agenda is to be notified of an incident.

Refer to the GRP-HSEQ-2-09 Emergency Preparedness and Response Standard and the associated forms for any additional contact and procedural information.

7.6 Incident investigation

All incidents shall be investigated to a level commensurate with the risk. The purpose of all investigations is to identify:

- The cause or causes of an incident or non-conformance.
- Any preventive and/or corrective actions that once implemented are to eliminate recurrence of the incident or reduce the likelihood of a recurrence as far as reasonably practicable.

Responsibility for investigating incidents rests with the relevant Site Manager. The level of investigation depends on the type and severity of the incident or non-conformance. In general, higher risk incidents attract greater resources and formality in the investigation process, which includes specialist skills and methods. An investigation is to be carried out by a competent person or persons as soon as reasonably practicable after a notice of an incident or non-conformance has been received.

The findings of an investigation are to be recorded in Boral's Incident recording platform.

7.7 Corrective actions

Following an investigation, the incident investigator should consider corrective actions. Corrective actions deal with responding to the result of an incident. Preventive actions aim to prevent recurrences of similar events. Once the root cause(s) and contributory factors of an incident or non-conformance are established, corrective and/or preventive actions should be identified and implemented in response and to stop the incident or non-conformance from happening again.

Controls are to be selected from the Hierarchy of Controls and according to the GRP-HSEQ-1-03 Hazard Identification and Risk Management Standard. An investigator must consult with employees and other workers before finalising any corrective or preventive actions that may impact on operational controls in the workplace.

Furthermore, corrective and preventive actions must be assigned and prioritised (in order of most to least important) with an agreed time set to close them out. All corrective and preventive actions are to be recorded in Boral's Incident recording platform.

7.8 Closing incidents

Any nominated corrective or preventive action is to be verified for completion and effectiveness before an issue can be closed out, by the responsible manager.

Boral's Incident recording platform allows actions to be assigned and verified as completed as part of the reporting process.

Once an action is complete, the nominated employee is to send the issue to a nominated management representative to be verified and signed off. This will be defined in the database or through the assigned action in an incident spreadsheet.

When a non-conformance is corrected, the issue can be closed out by a nominated or required management representative.

Issue close outs are tracked in accordance with the GRP-HSEQ-3-01 Monitoring and Review Standard and by the Business Unit's Health and Safety Business Partner and/or Quality Manager. Any follow up requirements are initiated as they are identified.

7.9 Incident alerts

Incidents that may have broader consequences across the business should be communicated to the business using the HSEQ-2-02-F02 HSE Alert template or the HSEQ-2-02-F03 Quality Alert template, as appropriate.

Before distributing HSE and Quality Alerts, the appropriate Health and Safety Business Partner or Quality Manager must approve them. All personal details of any injured person or party directly involved in a serious non-conformance must be kept confidential.

7.10 Incident response roles and responsibilities

Table 7.1 describes the roles and responsibilities for Boral personnel responsible for implementing the incident response procedure.

Table 7.1 Incident and non-compliance roles and responsibilities

Role	Responsibility
Site Manager – Recycling	<ul style="list-style-type: none"> Ensure all incidents are investigated and apply resources as needed. Notify external regulator agencies (e.g. regulators, insurers) when an incident occurs and when required. <hr/> <ul style="list-style-type: none"> Assist in the HSE and Quality incident response and investigation process, as required. Communicate any necessary change(s) from corrective and preventive actions to the relevant authorising manager responsible for the procedure(s) within the Company HSEQ Management System.
Health and Safety Business Partner	<ul style="list-style-type: none"> Take part in the incident response and investigation process, as appropriate. Recommend action on incident data and trends, as relevant.
Environmental Business Partner	<ul style="list-style-type: none"> Take part in the environmental incident response and investigation process, as appropriate. Recommend action on incident, as required.
Person identifying incident	<ul style="list-style-type: none"> Take immediate action — immediately notify one-up manager (notify Site Manager as a minimum).
Incident scene/senior manager	<ul style="list-style-type: none"> Contact Emergency Services (ambulance, fire brigade or police), when required. Preserve the incident scene. Coordinate help where needed at the incident scene.
Incident team leader	<ul style="list-style-type: none"> Assess the risk. Decide and set up a structured approach to link data and activities on non-conformances. Initiate formal incident investigation using the approved Company template. Recommend final remedial, corrective and preventive actions to the Regional General Manager. Communicate critical issue and findings to other businesses (as appropriate).
Employees	<ul style="list-style-type: none"> Report all incidents to the manager or supervisor as soon as they occur. Complete the relevant sections in the Incident and Investigation Form as soon as possible.

8 Emergency response

An Emergency Response Plan (ERP, v1 February 2025 Boral) and a Pollution Incident Response Management Plan (PIRMP, v14 June 2025 Boral) have been prepared for the site. A copy will be available at the site and the PIRMP is available on the Boral website. This section summarises the key sections of the ERP.

8.1 Emergency response policy

All emergency situations must be managed in accordance with the GRP-HSEQ-2-09 Emergency Preparedness and Response Standard, and as required the GRP-HSEQ-2-10 Crisis Management Standard.

In the event of an injury, fuel spillage or other incident, the Boral Recycling Emergency Response Plan (ERP) and Pollution Incident Response Management Plan (PIRMP) should be adopted.

Where emergency services are involved, company personnel shall act in accordance with their directions and requests, including preserving areas for investigation.

Any incident which may potentially harm the environment must be notified to the EPA. On site employees must be aware of the EPA License conditions.

Area Wardens must ensure that the ERP and PIRMP are kept in a prominent position and that all personnel are made aware of the contents. All personnel must make themselves aware of the location of all emergency alarms, exits and fire appliances within or near their work area and location of the external Safe Assembly Areas.

8.2 Procedure

In the event of an emergency the process to follow shall include:

- move people in immediate danger to safety, and ensure their continued safety and care
- if safe to do so, provide assistance to injured persons
- shut down or switch off appliances. LEAVE LIGHTS ON
- report details to the Area Warden or Chief Warden immediately
- restrict access to the area
- care for injured personnel
- await instructions from the Area Warden or Chief Warden
- stand by to provide assistance, and await further instructions
- evacuation.

Detailed instructions for responses to specific emergency scenarios are provided in the ERP.

8.3 Evacuation

In an emergency, an evacuation may be initiated in order to ensure the safety of personnel. The Chief Warden is responsible for determining if an evacuation is necessary and sounding a siren or other suitable warning system (i.e. two-way radio/CB radio) to alert all employees and visitors of the evacuation.

During an evacuation, all personnel must assemble at the designated Assembly Points and remain with their Area Warden at all times.

The stages of evacuation are:

- Stage 1 – Immediate – move away from immediate danger.
- Stage 2 – Total – total evacuation of the premises.

Factors which must be considered to determine evacuation stages and priorities are:

- Location and extent of the emergency.
- The proximity of flammable gases, liquids and other flammable materials or suspect item (in the case of a bomb threat).
- If there has been a toxic emission, evacuation must be kept away from direction of emission and wind.
- Whether it is safe to try to extinguish the fire or block off smoke, or whether the initial attack on the fire looks like it will be successful.
- The nature and type of any injuries sustained by people in the danger area and whether those present are capable of evacuating all people in danger.
- The nearest safe exit route.

In an evacuation the Area Warden responsible for each respective area will complete the evacuation checklist provided in the ERP.

Entry or re-entry to the site following an evacuation is strictly forbidden until authorised by the Officer-in-Charge of the attending emergency authority. If no emergency authority is in attendance, entry or re-entry is forbidden until the Chief Warden gives the all clear and the Site/Operations Manager authorises re-entry.

9 Training and review

9.1 Training competency and awareness

Training and inductions, including basic environmental awareness are provided to site staff and subcontractor staff as shown in Table 9.1 below. Training records will be maintained, and readily available in either hard copy and/or electric copy, as verification that personnel have received the appropriate training, and are competent to fulfil their roles.

The Boral HSEQ Elements, GRP-HSEQ-2-03 Training Competency and Awareness outlines the procedures and minimum mandatory requirements to ensure an effective system is in place to manage training and competency of workers.

Table 9.1 Training requirements

Requirement	Who	When	Facilitated
Boral Group online induction (includes basic environmental awareness)	Self-facilitated online by employee and embedded contractors	At commencement of employment, and three yearly thereafter	Online
Regional Facilitated Induction	Regional HSE Team	Commencement of employment with some components three yearly	Regional based induction – contact HSE team
Site/Business Unit Induction	Everyone - employees, contractors and visitors	Before commencing work on site, and yearly thereafter	By site staff
Environmental Awareness Training	For Supervisors and Managers	At commencement of employment in a supervisor role	Online
Asbestos Awareness Training	For All Employees	Initial training, and then yearly thereafter	Contractor

Notes: All levels of induction incorporate basic environmental awareness and all site inductions include an over view of site specific environmental aspects and legal obligations.

9.2 Monitoring and review

The Boral *GRP-HSEQ-3-01 Monitoring and Review* standard describes the obligations of all Boral sites to monitor and record the key performance characteristics of their operations, which have or may have a significant impact on the environment.

The review of this OEMP will be undertaken, at a minimum of every 3 years, or where there are significant changes to legislation. Reviews are to be conducted by the Environmental Manager in consultation with the Site Manager to ensure suitability and adequacy of the Operational Environmental Management Plan and associated compliances tools.

In accordance with Condition C8 of development consent SSD 7038 this OEMP is to be reviewed (and if necessary revised) within three months of submission of:

- a Compliance Report
- an Incident Report
- an Independent Audit

- the issue of a direction of the Planning Secretary, or
- any modification to the consent.

9.3 Performance assessments and audits

In accordance with Condition C1 of development consent SSD 7038 an annual review of the site’s environmental performance will be prepared and submitted to DPHI (see Section 6.2).

The site inspection and audit program is in accordance with GRP-HSEQ-3-03 Performance Assessments and Audits procedure and SSD 7038. All records of inspections will be maintained electronically and/or in hard copy on site, audits are saved within the site’s electronic system and/or SEQUENCE. Table 9.2 summarises the inspection, self-assurance and audit program for the site.

Table 9.2 Inspection, self-assurance and audit program

Type	Frequency	Responsibility	Criteria
EPP checklist	Monthly	Site manager	Checking off activity based environment actions from compliance obligations.
Environment Inspection	As per site monthly inspection schedule.	Site manager	Check off compliance requirements from legislations, housekeeping, HSEQ-MS minimum standards and identify areas of improvement.
Compliance and EMS audit	As per regional audit schedule.	Environment Business Partner	Environmental Compliance Audit against regulatory documents and EMS related elements from the Boral HSEQ MS.
Compliance Monitoring and Reporting Program	Submitted to the Department as per the agreed timeframes with NSW Planning and in accordance with the Development Consent.	Environment Business Partner	Conditions C15–C17 of SSD 7038.
Independent audit program	Submitted to the Department as per the agreed timeframes with NSW Planning and in accordance with the Development Consent.	Regional Environmental Manager	Conditions C18–C21 of SSD 7038.

Appendix A

Waste Management Plan

Kooragang Recycling Facility

Waste Management Plan

Prepared for Boral Recycling Pty Ltd

December 2025

Kooragang Recycling Facility

Waste Management Plan

Boral Recycling Pty Ltd

E240898 RP3

December 2025

Version	Date	Prepared by	Reviewed by	Comments
1	23 January 2025	Nadia Eisenlohr	Verity Blair	Draft for client
2	13 March 25	Nadia Eisenlohr	Verity Blair	Updated based on client comments
3	25 March 2025	Nadia Eisenlohr	Verity Blair	Final
4	10 September 2025	Zainab Ahmed	Nadia Eisenlohr	Updated to address DPHI comments
5	19 Decemeber 2025	Zainab Ahmed	Verity Blair	Updated to address DPHI comments

Approved by



Verity Blair

Associate Director

19 Decemeber 2025

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This report has been prepared in accordance with the brief provided by Boral Recycling Pty Ltd and, in its preparation, EMM has relied upon the information collected at the times and under the conditions specified in this report. All findings, conclusions or recommendations contained in this report are based on those aforementioned circumstances. This report is to only be used for the purpose for which it has been provided. Except as permitted by the *Copyright Act 1968* (Cth) and only to the extent incapable of exclusion, any other use (including use or reproduction of this report for resale or other commercial purposes) is prohibited without EMM's prior written consent. Except where expressly agreed to by EMM in writing, and to the extent permitted by law, EMM will have no liability (and assumes no duty of care) to any person in relation to this document, other than to Boral Recycling Pty Ltd (and subject to the terms of EMM's agreement with Boral Recycling Pty Ltd).

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1 Introduction

1.1 Purpose and objectives

This waste management plan (WMP) has been prepared for Boral's Kooragang recycling facility, to provide site specific guidance about the waste management and monitoring systems used onsite. The objectives of this WMP are to:

- provide detailed information about site specific waste management
- satisfy the conditions of the site's development consent SSD 7038
- satisfy the conditions of the site's environment protection licence (EPL) 11968.

This WMP is a sub-plan of the Operational Environmental Management Plan, which covers Stage 1 of the development and applies to a receipt and processing capacity at the facility of up to 350,000 tonnes (t) of general solid waste (non-putrescible) per annum (tpa) and storage of up to 100,000 t of general solid waste (non-putrescible) at any one time.

1.2 Description of facility

Boral's recycling facility is located at 1/24 Egret Street, Kooragang Island. The Site is located within Lot 12 DP 1032146, approximately 5 kilometres (km) north northwest of the Newcastle Central Business District.

Operations under SSD 7038 involve the staged expansion and increase in the processing capacity of an existing resources recovery facility to 350,000 t per year of general solid waste (non-putrescible) with a maximum storage capacity of 144,000 t at any one time to provide for an increase of resource recovery. Stage 1 operation allows for storage capacity of up to 100,000 t at any one time. Stage 2 operation allows for storage of up to 144,000 t at any one time.

1.3 Approval and commencement

Operation of the facility will be in accordance with the WMP and will not commence until the WMP has been approved by the Planning Secretary. Waste management will be in accordance with the most recent version of the WMP as approved by the Planning Secretary.

1.4 Boral HSEQ Management System

As described in the OEMP, Boral has adopted a standardised approach to documenting its Health and Safety, Environment and Quality Management System (HSEQ MS) to ensure best practice in its core operating activities is in place and measured.

The HSEQ MS Waste Management Procedure *GRP-HSEQ-8-04* outlines standard waste management practices to monitor and measure waste materials Boral sites produce, reuse, recycle, reduce, and dispose of, and to ensure those actions comply with both licensing and regulatory requirements. The minimum mandatory requirements under this guideline are:

- A Waste Register shall be maintained at all sites.
- Sites shall actively facilitate resource efficiency through reuse or recycling of waste materials.
- Materials not suitable for reuse or recycling shall be directed to a waste or resource recovery facility, which is lawfully permitted to accept such material.

- A Subject Matter Expert (SME) shall be consulted before any material that is not already defined in procedures is moved or disposed of.

These requirements for waste management have been incorporated into this WMP.

2 Regulatory requirements

2.1 Development consent

The requirements for the WMP are stated under Conditions B3 and C5–C7 of development consent SSD 7038. A Waste Monitoring Program has been developed (Appendix A of this plan) in accordance with Condition B5. Information required for inclusion in the WMP is listed in Table 2.1.

Table 2.1 SSD7038 – Waste Management Plan requirements

Condition	Detail required	Location in WMP
Waste Management Plan		
B3 Prior to the commencement of Stage 1 operations, the Applicant must prepare a Waste Management Plan (WMP) for the development, to the satisfaction of the Planning Secretary. The WMP must form part of the OEMP, as required by condition C5 and be prepared in accordance with condition C1. The WMP must:		
(a)	detail the type and quantity of waste to be generated during construction and operation of the development	Chapter 3
(b)	describe the handling, storage and disposal of all waste streams generated on site, consistent with the POEO Act, the <i>Protection of the Environment Operations (Waste) Regulation, 2014</i> (Waste Regulation) and the EPA's <i>Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014)</i>	Section 2.4 and Section 2.5 Section 4.1
(c)	include details of the waste stockpile limits in the raw feed and finished product storage areas	Section 4.2.1
(d)	include procedures for ensuring no build-up of waste will occur in the raw feed waste stockpile area during unexpected machinery breakdown	Section 4.3
(e)	detail the materials to be reused or recycled, either on or off-site	Section 4.4.1
(f)	detail the requirements for non-conforming waste handling and removal.	Section 4.4.2
B4 The Applicant must:		
(i)	not commence operations until the WMP is approved by the Planning Secretary	Section 1.3
(ii)	implement the most recent version of the WMP approved by the Planning Secretary.	Section 1.3
Waste Monitoring Plan		
B5 From the commencement of Stage 1 operations, the Applicant must implement a Waste Monitoring Program for the development. The program must:		
(a)	be prepared by a suitably qualified and experienced person(s) prior to the commencement of operation	This assessment has been prepared by Nadia Eisenlohr (Senior Environmental Consultant at EMM) and reviewed by Verity Blair (Associate Director at EMM) both of whom are suitably qualified and experienced.
(b)	include suitable provision to monitor the: <ul style="list-style-type: none"> (i) quantity, type and source of waste received on site (ii) quantity, type and quality of the outputs produced on site 	Chapter 5

Condition	Detail required	Location in WMP
(c)	ensure that:	Chapter 5
	(i) all waste that is controlled under a tracking system has the appropriate documentation prior to acceptance at the site	
	(ii) staff receive adequate training in order to be able to recognise and handle any hazardous or other prohibited waste including asbestos.	Chapter 6

2.2 Environment Protection Licence

Under the NSW *Protection of the Environment Operations Act 1997* (POEO Act) the site is a scheduled premises and is licensed for resource recovery and waste storage. Environment protection licence (EPL) 11968 has been granted for the site. As this document is amended from time to time the most recent version can be found via the NSW EPA public register <http://www.epa.nsw.gov.au/prpoeoapp/>. A hard copy of the EPL is held on site.

The site's EPL provides specific controls for waste management detailed in Table 2.2.

Table 2.2 EPL 11968 – Waste Management requirements

Condition	Detail required	Location in WMP																				
Waste																						
L2.1	<p>The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.</p> <p>Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.</p> <p>Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.</p> <p>This condition does not limit any other conditions in this licence.</p> <table border="1"> <thead> <tr> <th>Code</th> <th>Waste</th> <th>Description</th> <th>Activity</th> <th>Other Limits</th> </tr> </thead> <tbody> <tr> <td>NA</td> <td>General solid waste (non-putrescible)</td> <td>Excavated Natural Material that meets the chemical and physical contamination requirements of "The excavated natural material order 2014".</td> <td>Resource recovery Waste storage</td> <td></td> </tr> <tr> <td>NA</td> <td>General solid waste (non-putrescible)</td> <td>Glass that meets the chemical and physical contamination requirements of "The recovered glass sand order 2014".</td> <td>Resource recovery Waste storage</td> <td></td> </tr> <tr> <td>NA</td> <td>General solid waste (non-putrescible)</td> <td>Building and demolition waste, asphalt waste, concrete waste from concrete batching plants, virgin excavated natural material, and soils (meeting the CT1 levels for general solid waste in Table 1 of the EPA's Waste Classification Guidelines 2014).</td> <td>Resource recovery Waste storage</td> <td></td> </tr> </tbody> </table>	Code	Waste	Description	Activity	Other Limits	NA	General solid waste (non-putrescible)	Excavated Natural Material that meets the chemical and physical contamination requirements of "The excavated natural material order 2014".	Resource recovery Waste storage		NA	General solid waste (non-putrescible)	Glass that meets the chemical and physical contamination requirements of "The recovered glass sand order 2014".	Resource recovery Waste storage		NA	General solid waste (non-putrescible)	Building and demolition waste, asphalt waste, concrete waste from concrete batching plants, virgin excavated natural material, and soils (meeting the CT1 levels for general solid waste in Table 1 of the EPA's Waste Classification Guidelines 2014).	Resource recovery Waste storage		Chapter 3
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Condition	Detail required	Location in WMP
NA	General solid waste (non-putrescible) Blast Furnace Slag that meets the chemical and physical contamination requirements of "The blast furnace slag order 2014".	Resource recovery Waste storage
NA	General solid waste (non-putrescible) Power Station Fly ash that meets the chemical and physical contamination requirements of "The coal ash order 2014".	Resource recovery Waste storage
NA	General solid waste (non-putrescible) Basic Oxygen Steel Slag that meets the chemical and physical Contamination requirements of "The steel furnace slag order 2017".	Resource recovery Waste storage
<p>Note: Waste received at the premises that meets the chemical and physical contamination requirements of any of the above Resource Recovery Orders are classified as general solid waste.</p>		
L2.2	The premises may accept up to 130,000 t of general solid waste (non-putrescible) per annum (until Stage 1 Operations are commenced and the licence is varied accordingly).	Chapter 3
<p>Authorised amount</p>		
L2.3	Notwithstanding any limit specified in the above table, the licensee shall not exceed the authorised amount specified in this licence. Where the authorised amount is less than the total of all wastes listed above, the authorised amount will take precedent.	Chapter 3
L2.4	The authorised amount of waste permitted on the premises cannot exceed 100,000 t at any one time.	Chapter 3
L2.5	Stockpiles of processed and/or unprocessed waste at the premises must not be more than 15 metres (m) in height when measured from the finished ground level of the site.	Chapter 3, Section 4.2.1
<p>Monitoring records</p>		
M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	Chapter 5
M1.2	All records required to be kept by this licence must be: <ul style="list-style-type: none"> a) in a legible form, or in a form that can readily be reduced to a legible form b) kept for at least 4 years after the monitoring or event to which they relate took place c) produced in a legible form to any authorised officer of the EPA who asks to see them. 	Chapter 5
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: <ul style="list-style-type: none"> a) the date(s) on which the sample was taken b) the time(s) at which the sample was collected c) the point at which the sample was taken d) the name of the person who collected the sample. 	Chapter 5

2.3 Resource Recovery Order and Exemptions

All products sold by the facility are required to meet the appropriate Resource Recovery Orders and Exemptions under Part 9, Clause 93 of the NSW *Protection of the Environment Operations (Waste) Regulation 2014*. These Orders impose the requirements that must be met by suppliers of resource recovered materials.

2.4 Protection of Environment Operation Act 1997 (POEO Act)

The POEO Act 1997 and POEO Amendment Act 2011 are administered by the NSW Environment Protection Authority (NSW EPA) to enable the NSW Government to establish instruments for setting environmental standards, goals, protocols and guidelines. They outline the regulatory requirements for lawful disposal of waste generated during the demolition, construction and operational phases of a development, as well as the system for licensing waste transport and disposal.

All material to be removed from the site, including associated activities such as classification, are to be undertaken in strict accordance with the requirements of the POEO Act. Such requirements include:

- ensuring waste is classified appropriately and in accordance with relevant guidelines
- waste materials are disposed of at appropriately licensed facilities
- other materials are removed to facilities lawfully able to accept such materials.

2.4.1 Protection of Environment Operation (Waste) Regulation 2014

Facility operates under Protection of the Environment Operations Act 1997 (POEO Act) and Protection of the Environment Operations (Waste) Regulation 2014 (Waste Regs) as a resource recovery and waste storage facility with conditions through EPL 11968. EPLs are a central means to control the localised, cumulative and acute impacts of pollution in NSW and aim to, amongst other things:

- Ensure the community has access to relevant and meaningful information about pollution
- Rationalise, simplify and strengthen the regulatory framework for environment protection
- Promote pollution prevention and cleaner production
- Reduce to harmless levels the discharge of substances likely to cause harm to the environment
- Reduce the use of materials and increase the re-use or recycling of materials.

The site's EPL provides specific controls for waste management detailed in Table 2.2.

2.5 Waste Classification Guidelines 2014

The site also takes into account the NSW EPA Waste Classification Guidelines that assists waste generators to effectively manage, treat and dispose of waste to ensure the environmental and human health risks associated with waste are managed appropriately and in accordance with the POEO Act 1997 and its associated regulations.

All wastes generated and proposed to be disposed offsite will be assessed, pre-classified or classified, and managed in accordance with the NSW EPA (2014) Waste Classification Guidelines, Part 1: Classifying Waste.

Further details of how waste will be handled, stored and disposed of on site has been detailed in Section 4.

3 Waste types and quantities

Upon commencing Stage 1 Operations, the site's processing capacity is limited to 350,000 t per annum, under EPL 11968 and development consent SSD 7038. A Construction Management Plan has been prepared for the facility to ensure that all environmental aspects associated with construction activities are appropriately managed. No construction waste is expected to be generated during Stage 1 operations, as the facility is already established and the primary change involves an increase in production limits rather than new construction works. Once Stage 2 construction and subsequent operations proceed, the Operational Environmental Management Plan will be revised to incorporate the associated environmental requirements, including the management of construction-related waste and any additional controls necessary to maintain compliance and environmental performance.

As per the development consent SSD 7038 the volumes and stored quantities and type of waste permitted are presented in Table 3.1 and Table 3.2.

Table 3.1 Volume and storage of waste

Aspect	Criterion
Volume of waste permitted on the site at any one time ¹	100,000 t
Volume of waste permitted to be received or processed per year	350,000 t
Maximum stockpile height	15 m above ground level

Notes: 1. Until Stage 2 construction is complete, following which 144,000 t of waste may be stored at one time.

The types of waste permitted to be received are shown in Table 3.2.

Table 3.2 Types of waste permitted under EPL 11968

Waste	Description	Activity permitted	Other limits
General solid waste (non-putrescible)	Excavated Natural Material that meets the chemical and physical contamination requirements of "The excavated natural material order 2014".	Resource recovery and waste storage	N/A
General solid waste (non-putrescible)	Glass that meets the chemical and physical contamination requirements of "The recovered glass sand order 2014".	Resource recovery and waste storage	N/A
General solid waste (non-putrescible)	Building and demolition waste, asphalt waste, concrete waste from concrete batching plants, virgin excavated natural material, and soils (meeting the CT1 levels for general solid waste in Table 1 of the EPA's Waste Classification Guidelines 2014).	Resource recovery and waste storage	N/A
General solid waste (non-putrescible)	Blast Furnace Slag that meets the chemical and physical contamination requirements of "The blast furnace slag order 2014".	Resource recovery and waste storage	N/A
General solid waste (non-putrescible)	Power Station Fly ash that meets the chemical and physical contamination requirements of "The coal ash order 2014".	Resource recovery and waste storage	N/A
General solid waste (non-putrescible)	Basic Oxygen Steel Slag that meets the chemical and physical contamination requirements of "The steel furnace slag order 2017".	Resource recovery and waste storage	N/A

4 Waste collection, handling and disposal

Construction and demolition (C&D) waste materials, as well as recovered aggregate, are accepted at the facility. Procedures to manage the type of waste entering the facility are outlined in this section. The objectives are to ensure materials are consistent with the permitted wastes under development consent SSD 7038 and the EPL, and to prevent contaminated materials entering the facility. The Inspection and Receivals Protocol guides the waste handling and storage procedures on site. It has been summarised in the sections below and is included in Appendix A.

4.1 Waste handling procedure

Upon arrival at the site, all material delivery trucks report to Inspection Point 1 (the weighbridge or office as per maps in the Inspection and Receivals Protocol). Any overloaded delivery trucks must adhere to the Safe Tipping Protocol for Overloads. Once a truck has entered site, the procedure outlined in Table 4.1 is followed.

Table 4.1 Recycling plant receipt procedure

Stage	Description
Inspection point 1 – Initial Inspection	<ul style="list-style-type: none"> All Customers delivering C&D materials are identified and their details noted. All C&D loads are inspected using an elevated inspection point, or a camera where an elevated point is not available, classified and weighed prior to tipping. Where any suspected asbestos containing material (ACM) (or any suspect or unpermitted waste) is identified during this initial inspection the load is immediately rejected. Loads rejected at the initial inspection are directed off-site and the details noted in the “Rejected Loads Register”, as per Standard 1.4 of the <i>Minimum Standards for managing waste in NSW</i> (the Minimum Standards). Upon initial success at Inspection Point 1, details of the load are recorded in the system. The driver is then directed to proceed with the load of waste directly to Inspection Point 2.
Inspection point 2 – At the raw feed dedicated stockpile areas	<ul style="list-style-type: none"> The Spotter communicates with the weighbridge prior to tipping, this is proof the load has been inspected and weighed by the weighbridge Receivals Clerk. Once the entire load is tipped in the designated Inspection Point 2, the surface area of the load is then visually inspected by person or camera. Should any suspected ACM be identified during this inspection, the entire load is rejected as per 1.2 of the Minimum Standards. Should any other unpermitted material be identified during this inspection, the load is immediately isolated, and the waste removed, or the entire load is rejected as per Standard 1.2 of the Minimum Standards. The load is then manually or mechanically turned, and the newly available surface area is visually inspected for any suspected ACM. Again, should any suspected ACM be identified during this inspection, the entire load is rejected as per 1.2 of the Minimum Standards. Should any other unpermitted material be identified during this second part of the inspection, the load is again immediately isolated, and the waste removed, or the entire load is rejected as per Standard 1.2 of the Minimum Standards. At any time during this process, each load of waste is not to come into contact with any other load of waste on the tip and inspection area, waste storage area or other working areas as detailed in Standard 1.2 of the Minimum Standards.

4.2 Waste storage

All construction waste received at the C&D waste facility that has been inspected and sorted in accordance with Standards 1 and 2, is stored in accordance with the following requirements:

- Waste shall be stored in a separate storage area that is clearly identified as per the Inspection Area map in Figure 4.1.
- Maps shall clearly identify Inspection Areas 1 and 2 and shall be placed in the Weighbridge, the daily toolbox meeting room or other areas as determined by the site manager.
- If waste is being stored outside of an enclosed bay, each stockpile of waste must be clearly delineated and separated from stockpiles of processed material by a minimum of three metres from the base of the stockpile.
- Separate stockpiles containing the same listed waste type may touch at the base and are exempt from the three-metre separation requirement.

Construction waste that has been inspected and sorted in accordance with Standards 1 and 2 is then processed and tested in accordance with the Recovered Aggregate Order (2014) to meet the Minimum Standards. To avoid contamination, once the waste has been processed it must be stored separately and must not be mixed with any other unprocessed construction waste at the C&D waste facility unless the other waste has been inspected and sorted at the C&D waste facility in accordance with Standards 1 and 2.

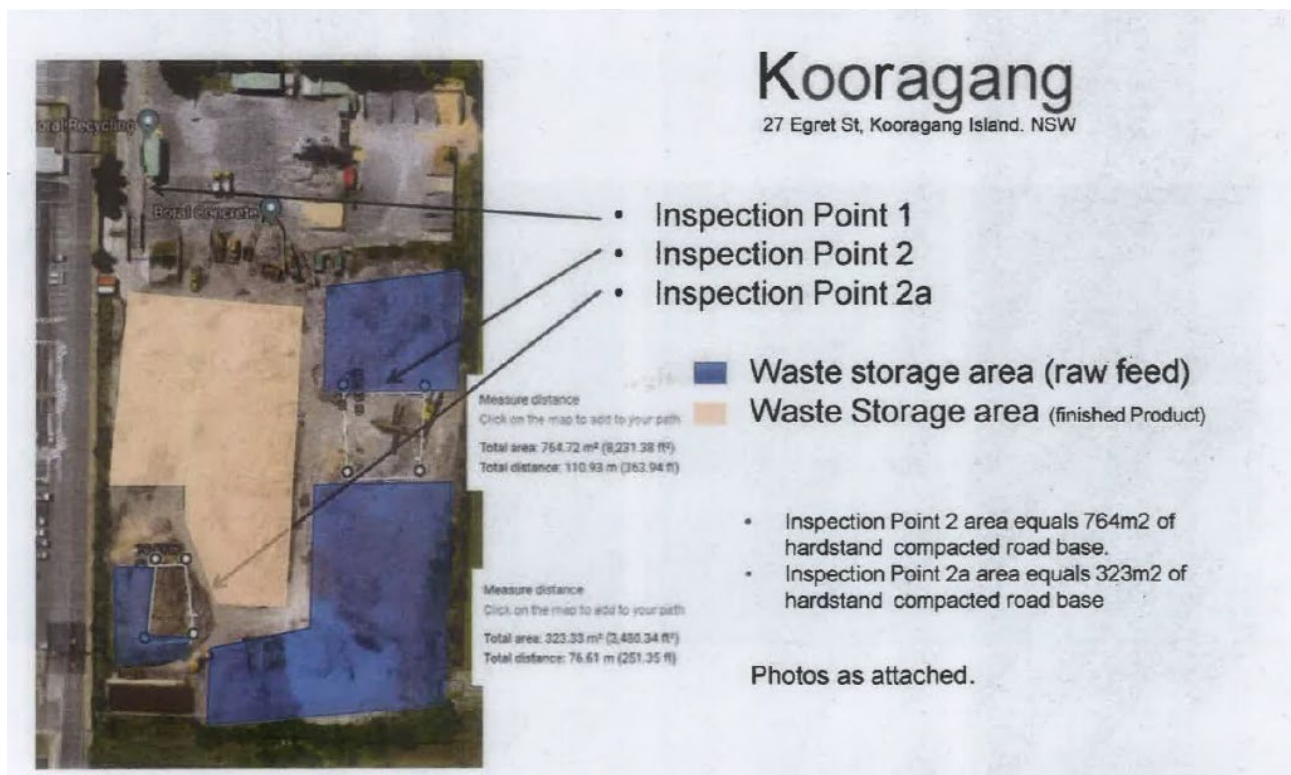


Figure 4.1 Kooragang site layout including inspection and storage areas

4.2.1 Approximate stockpile areas

The location of raw feed and finished product storage areas has been identified in Figure 4.2. The raw feed storage area covers approximately 0.71 ha, and the finished storage area covers approximately 0.42 ha. In accordance with Condition A9 no more than 100,000 t of waste will be stored at any one time until Stage 2 construction is complete and the Planning Secretary has approved the commencement of Stage 2 operations.

Stockpiles of processed and/or unprocessed waste on site will not be more than 15 m in height when measured from the finished ground level of the site.



Figure 4.2 Location of product and waste stockpile area

4.3 Contingency

Boral utilise a contracted crushing unit to process the raw product delivered to site. The breakdown of the crushing unit would be the only equipment which could potentially cause a build up of raw product in the receivals area of the site. A breakdown of the crushing unit is typically repaired within 24 hours of the breakdown, however, if the breakdown is significant and the machine cannot be repaired for an extended period, a replacement crushing unit will be provided to manage the production of the site. This will be delivered within the week, thus limiting the potential to overfill the site. In the event of unexpected machinery breakdown during a time where the waste receival area is filled to capacity, Boral will manage waste intake until supplementary machinery arrives on site and production is resumed.

4.4 Waste disposal

4.4.1 Reuse and recycling

Recycled saleable products from the site include:

- unbound base (UBB) (20 millimetres (mm))
- densely graded base 20 (DGB20) (20 mm)
- 20 mm recycled aggregate
- 10 mm recycled aggregate
- pipe bedding (8 mm)
- recycled 20 mm road base
- steel recovered from the incoming loads
- stabilised road bases.

Products are sampled and tested to determine compliance to the POEO (Waste) Regulation 2014 – Resource Recovery Orders and Exemptions.

Product testing must adhere to an Inspection and Test Plan (ITP) which is provided in the Inspection and Receipts Protocol (Appendix A).

The quantity and type of inbound and outbound products are recorded at the weighbridge and tracked through the Quarry Reporting System (QRS). This is Boral's auditable system used for tracking and reconciling product volume and movement updated daily and directly linked to weighbridge management system. Boral may use some of the products produced from the process in reshaping or regrading the floor of the site in areas in need of repair. All other materials produced from the processing of C&D waste would be sold or removed from site for recycling.

4.4.2 Non-conforming waste handling and removal

Where the load is rejected under Standard 1.2 of the Minimum Standards, the entire load is immediately reloaded onto the vehicle in which it arrived or onto another vehicle with the appropriate license. The rejected load is removed from the Boral C&D waste facility within one working day and details recorded in the Rejected Load Register as required by Standard 1.4 of the Minimum Standards. The rejected loads register must be made available for inspection to an authorised officer of the EPA if requested. The rejected loads register must record the following details for each load of waste rejected from the C&D waste facility:

- The date and time in which the load of waste was rejected.
- The registration of the vehicle(s) and any accompanying trailers transporting the rejected load of waste both to and from the facility.
- The type of waste(s) in the rejected load of waste.
- The reason the load of waste was rejected.

Where the load has been rejected and removed, the Inspections Area is to be inspected by a suitably trained Boral employee to ensure no further contaminants are visible prior to next load being set down. Verbal approval is then given that the area is free from contamination, isolations can be removed and work can continue.

The types of other waste generated on site, average quantities of waste and corresponding waste disposal services are summarised in Table 4.2.

Table 4.2 **Outgoing waste products and disposal services**

Waste type	Method of disposal	Disposal facility
General Rubbish (plastic, timber etc)	5–10 t/month	Cleanaway
Steel	30–70 t/month	Infrabuild – Hexham
Copper	<5 t/month	Infrabuild – Hexham
Waste Water: (water from dams unable to be managed on-site)	Variable/6–12 months	Cleanaway
Oily rags		Removed by contractors undertaking servicing of the vehicles
Oil Absorbent Materials	Spill Kit Bins	Cleanaway

5 Waste monitoring program

Waste monitoring at Boral's Kooragang recycling facility is carried out in accordance with the Minimum Standards for managing construction waste in NSW. Monitoring points, information recorded, and responsibilities are listed in Table 5.1. More detail is contained in the Inspections and Receivals Protocol in Appendix A.

Table 5.1 Monitoring program

Stage	Description	Reporting	Information recorded	Responsibility
Inspection point 1	<ul style="list-style-type: none"> Load material and source identified and inspected. 	<ul style="list-style-type: none"> Inspection point 1 – load details recorded in the system. 	<ul style="list-style-type: none"> Source and material identified. Customer details noted. Weight noted. 	Weighbridge/Office Receivals Clerk
Inspection point 2	<ul style="list-style-type: none"> Communication with the weighbridge operator. Load is tipped and visually inspected. Load is turned and visually inspected again. 	<ul style="list-style-type: none"> Load details maintained by Boral. 	<ul style="list-style-type: none"> Material type. Truck/trailer registration. Acceptance status. 	Working On Foot Spotter
Storage area	<ul style="list-style-type: none"> Waste stored in a separate storage area. Clearly identified as per the Inspection Area maps. 	<ul style="list-style-type: none"> Inspection Area Maps. 	<ul style="list-style-type: none"> Stockpile area delineation. Waste type. 	Site manager Site Supervisor
Rejected loads	<ul style="list-style-type: none"> Load rejected under Standard 1.2 of the Minimum Standards. Reloaded and removed from premises. Details recorded in the Rejected Load Register. 	<ul style="list-style-type: none"> Rejected Loads Register. 	<ul style="list-style-type: none"> The date and time in which the load of waste was rejected. The registration of the vehicle(s) and any accompanying trailers transporting the rejected load of waste both to and from the facility. The type of waste(s) in the rejected load of waste. The reason the load of waste was rejected. 	Weighbridge/Office Receivals Clerk

5.1 Auditing

Boral will undertake a three-tiered auditing regime at the Kooragang recycling facility. This regime involves the following steps:

- The Task Observation against the Inspections Receivals Protocol will be carried out by Boral Recycling staff once every month (refer to Appendix 4 of the Inspections and Receivals Protocol in Appendix A). The audit will be part of the EAM (Electronic Asset Maintenance) system.
- A formal audit will be carried out by a suitably experienced representative of the Boral Recycling management team with assistance from Boral Health, Safety & Environment (HSE) representative at least once per year (refer to Appendix 5 of the Inspections and Receivals Protocol in Appendix A).
- A suitably qualified consultant hygienist will be engaged to carry out at least one audit every two years per recycling resource recovery facility.

6 Training and review

6.1 Training competency and awareness

All Boral employees undertaking any tasks involved in meeting the requirements of the Minimum Standards, including the management and supervision, must be trained on:

- requirements of the POEO Act and its regulations
- the requirements of the Environmental Protection License for the site
- requirements of these Standards.

Training and inductions, including basic environmental awareness are provided to site staff and subcontractor staff as shown in Table 6.1 below. Training records will be maintained, and readily available in either hard copy and/or electric copy, as verification that personnel have received the appropriate training, and are competent to fulfil their roles.

The Boral HSEQ Elements, GRP-HSEQ-2-03 Training Competency and Awareness outlines the procedures and minimum mandatory requirements to ensure an effective system in place to manage training and competency of workers.

Boral training records will be kept in accordance with the Training Attendance Record.

Table 6.1 Training requirements

Requirement	Who	When	Facilitated
Boral Group online induction (includes basic environmental awareness).	Self-facilitated online by employee and embedded contractors.	At commencement of employment, and three yearly thereafter.	Online.
Regional Facilitated Induction.	Regional HSE Team.	Commencement of employment with some components three yearly.	Regional based induction – contact HSE team.
Site/Business Unit Induction.	Everyone – employees, contractors and visitors.	Before commencing work on site, and yearly thereafter.	By site staff.
Environmental Awareness Training.	For Supervisors and Managers.	At commencement of employment in a supervisor role.	Online.
Asbestos Awareness Training.	For All Employees.	Initial training, and then yearly thereafter.	By Accredited Training Consultant.

Notes: All levels of induction incorporate basic environmental awareness and all site inductions include an over view of site specific environmental aspects and legal obligations.

6.2 Asbestos awareness training

All Boral Recycling personnel and Embedded Contractors receive asbestos awareness training delivered by a qualified third-party occupational hygienist.

- Initial training and then refresher training every 12 months.

Through a review of Customer performance records (e.g. Rejected Loads Register, Sales and Receival Daily Reports, etc.) Boral Recycling may engage with customers to take part in a customer awareness package covering the requirements of the Minimum Standards and Asbestos Awareness.

In addition to staff and customer awareness training examples of restricted and prohibited wastes will be displayed at the weighbridge.

6.3 Review of WMP

In accordance with Condition C8 of development consent SSD 7038 this WMP is to be reviewed (and if necessary revised) within three months of submission of:

- a compliance Report
- an incident report
- an independent Audit
- the issue of a direction of the Planning Secretary, or
- any modification to the consent.

Appendix A

Boral Recycling Inspection and Receivals Protocol

Boral Recycling

Inspection and Receivals Protocol

This protocol covers the Inspections and Receivals actions at Widemere and Kooragang Boral Recycling Facilities

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Definitions

ACM	Asbestos-containing materials
Asbestos	Fibrous form of mineral silicates belonging to the serpentine and amphibole groups of rock-forming minerals, including actinolite, amosite (brown asbestos), anthophyllite, chrysotile (white asbestos), crocidolite (blue asbestos), termolite, or any mixture containing one or more of the mineral silicates belonging to these groups
Contamination	Any unwanted substance found in waste materials
C&D materials	Construction and demolition materials received at the recycling facility
C&D waste facility	Construction and demolition waste facility within the meaning of clause 90B of the Waste Regulation
Customers	Any person or business entity delivering C&D waste materials to a Boral Recycling facility.
Embedded Contractors	Contractors that regularly interact with Boral Recycling directly engaged workforce and are under direct supervision by management and are directly involved in activities that may involve asbestos.
EPA	New South Wales Environment Protection Authority
Friable Asbestos	ACM that, when dry, is (or may become) crumbled, pulverised or reduced to powder by hand
Inspection Point 1	A weighbridge that is verified in accordance with Clause 36(3)(f) of the Waste Regulation
Inspection Point 2	A dedicated area located on a C&D waste facility after Inspection point 1 that is solely used for tipping, spreading, turning and inspecting each load of construction waste as required by Standard 1.2. This area must: <ul style="list-style-type: none"> - Have a combined minimum surface area of 100 square metres and large enough for each load to be tipped, spread, turned and inspected as required by Standard 1.2



	<ul style="list-style-type: none"> - Be clearly delineated from waste storage areas and other areas at the C&D waste facility - Be a hardstand constructed from material that is: clearly distinguishable from any waste being tipped; and capable of withstanding tipping, spreading and scraping waste, the load and frequency of incoming vehicles and machinery used at the C&D waste facility
Listed waste type	Waste types listed in Attachment A of the Standards for managing construction waste in NSW (Appendix 8)
Minimum Standards	Minimum Standards for managing construction waste in NSW set out by the EPA
Non-friable Asbestos	ACM that is not friable and reinforced with a bonding compound
PPE	Personal Protective Equipment – the equipment worn by workers to reduce their exposure to hazards and may include respirators, hard hats, safety boots, glasses, ear protection, overalls and the like
Recovered Fines Specifications	The requirements for recovering fines set out in the Recovered <i>Fines Alternative Daily Cover Specifications</i> made for the purpose of clause 12 (7)(c) of the Waste regulation
Rejected Load Register	Hard copy or electronic document held on-site at a C&D waste facility that records the details of each load of waste rejected from the facility in accordance with the Standards
Resource Recovery Order	An order made under clause 93 of the Waste Regulation which generators and processors must comply with in order to lawfully supply the waste for land application, use as fuel or in connection with a process of thermal treatment
Sorting	The separation of waste into individual waste types, waste which meets the requirements of a resource recovery order, or waste which meets the requirements of the recovered fines specifications
Suspect Material	Any load of waste material determined by suitably experienced Boral Recycling site representatives as ‘suspected’ to contain asbestos-containing materials (or any



	<p>other fibrous materials) whether or not physical evidence of the same can be identified through visual inspection. In the event that a suspect load is identified, it will be treated as contaminated and rejected immediately. The final decision on classifying a load of waste as 'suspect' will remain with Boral Recycling site management.</p>
Trained Personnel	<p>Any person employed, contracted, engaged, or permitted to perform, manage or supervise tasks or duties at the C&D waste facility who has completed training under Standard 1.3</p>
Unpermitted Waste	<p>Waste not permitted by the C&D waste facility's environment protection licence to be received at the C&D waste facility</p>
Vehicle	<p>Includes a motor vehicle, trailer and any combination thereof</p>
Waste Separation Facility	<p>Any facility where waste streams are received, sorted and separated prior to the C&D waste being loaded and transported to a Boral Recycling Facility for further processing</p>
Waste Storage Area (Inspection Point 3)	<p>A dedicated space with clearly labelled or signposted stockpile areas (free-standing stockpile areas or enclosed bays) as required by Standard 4 of the Minimum Standards</p>
Working on Foot	<p>Refers to the Working on Foot (WOF) Program that has been developed to provide standardised and mandatory controls across all Boral Recycling operations for the receipt of C&D materials</p>



1.0 Inspection and Reveal Protocol for Construction and Demolition Materials

1.1 Health, Safety and Environment

Boral Recycling aims to achieve excellence in all areas in our business with “zero” harm to our people, contractors, the environment, and the community.

At Boral Recycling,

Health and safety is non-negotiable

The health and safety of one’s self and others comes before production.

Boral Recycling is a processor and employer with a responsibility to ensure we meet industry best practice in relation to the processing of construction and demolition materials.

1.2 The core elements of the protocol are:

- All Boral Recycling personnel and Embedded Contractors receive both asbestos awareness training and bonded-asbestos handling training as well as training required by the Standards for managing construction waste in NSW.
- All C&D materials received are inspected at least twice to minimise the risk of contamination from suspect ACM before it is incorporated into bulk stockpiles.
- All C&D material received is inspected and logged when complete.
- The system is audited internally and externally.
- Both internal and external Quality Control testing schedule for saleable products is in place.

1.3 This protocol covers:

- Asbestos awareness and bonded-asbestos handling training
- Protocol set out by the Standards for Managing Construction Waste in NSW
- Demolition site and waste separation facility inspections, monitoring and communication of handling enhancements to Customers
- Recycling site reveal inspections and material re-handling procedures for rejected or suspect loads
- Quality Control Protocol
- Auditing of the protocol



1.4 Asbestos Awareness and Minimum Standards for managing Construction Waste in NSW Training

All Boral employees undertaking any tasks involved in meeting the requirements of the Minimum Standards, including the management and supervision, must be trained on

- Requirements of the POEO Act and its regulations
- The requirements of the Environmental Protection License for the site
- Requirements of these Standards

Boral training records will be kept in accordance with the Training Attendance Record (Appendix 6).

All Boral Recycling personnel and Embedded Contractors receive asbestos awareness training delivered by a qualified third-party occupational hygienist.

- Initial training and then refresher training every twelve (12) months.

Through a review of Customer performance records (e.g. Rejected Loads Register, Sales & Receival Daily Reports, etc) Boral Recycling may engage with customers to take part in a Customer awareness package covering the requirements of the Minimum Standards and Asbestos Awareness.

Boral Recycling retains the services of occupational hygiene contractors, to advise us on matters relating to the safe handling of potential hazardous material in C&D waste:

- Hibbs and Associates Pty Ltd

1.5 Rejected Loads Register

All Boral C&D waste facilities must keep and maintain a Rejected Loads Register (Appendix 1). The rejected loads register must be made available for inspection to an authorised officer of the EPA if requested. The rejected loads register must record the following details for each load of waste rejected from the C&D waste facility:

- The date and time in which the load of waste was rejected;
- The registration of the vehicle(s) and any accompanying trailers transporting the rejected load of waste both to and from the facility;
- The type of waste(s) in the rejected load of waste; and
- The reason the load of waste was rejected



1.6 Demolition and Material Source Sites and Customer Awareness

Boral Recycling recognises that if C&D materials are to be sustainably recycled, handling processes at all demolition sites and waste separation facilities need to be enhanced with the risk of suspect ACM managed at source by our Customers.

In response to this Boral Recycling retains Receivables Account Managers who will endeavour to communicate this Boral Recycling Inspection and Receiving Protocol to our Customers prior to entering any Boral Recycling site and as part of their ongoing Customer management program.

The Receivables Account Manager visually inspects and monitors demolition sites and waste separation facilities, when appropriate, for compliance in relation to C&D material separation, preparation, and handling.

Where practical, clearance certificates are obtained for sites where asbestos has been identified and clearance certificates are required, or when it is otherwise deemed necessary by Boral Recycling Account Manager. A copy of the clearance certificate is retained at the Boral Recycling site.

Where appropriate, a customer awareness package will also be supplied to Boral customers detailing the Boral Recycling Inspection and Receiving Protocol, Asbestos Awareness and the requirements of the Minimum Standards.

1.7 Recycling Plant Receiving

Upon arrival at the site, all C&D material delivery trucks report to Inspection Point 1 (the weighbridge or office as per maps in Appendix 9). Any overloaded delivery trucks must adhere to the Safe Tipping Protocol for Overloads (located in the Widemere Safety 'SWMS, SOP's and Risk Assessment Folder').

Once a C&D Truck has entered site, the procedure is then:

1.7.1 Inspection Point 1 (Initial Inspection at the weighbridge/office):

- All Customers delivering C&D materials are identified and their details noted.
- All C&D loads are inspected using an elevated inspection point, or a camera where an elevated point is not available, classified and weighed prior to tipping. Where



any suspected ACM (or any suspect or unpermitted waste) is identified during this initial inspection the load is immediately rejected.

- Loads rejected at the initial inspection are directed off-site and the details noted in the “Rejected Loads Register”, as per Standard 1.4 of the Minimum Standards for managing waste in NSW.
- Upon initial success at Inspection Point 1, a docket is produced for the load, recording the details for the load. A docket is only printed for a load when the load has been accepted by the recycling facility.
- The driver is then directed to proceed with the load of waste directly to Inspection Point 2.

1.7.2 Inspection Point 2 (At the raw feed dedicated stockpile areas):

For all loads excluding those with previous exemptions (ie. Concrete washout and agitator waste as per Listed Waste Types in the Minimum standards, see Appendix 8):

- The WOF Spotter checks the docket prior to tipping, this is proof the load has been inspected and weighed by the weighbridge Receivals Clerk.
- Once the entire load is tipped in the designated Inspection Point 2 the surface area of the load is then visually inspected by person or camera.
- Should any suspected ACM be identified during this inspection, the entire load is rejected as per 1.2 of the Minimum Standards.
- Should any other unpermitted material be identified during this inspection, the load is immediately isolated, and the waste removed, or the entire load is rejected as per Standard 1.2 of the Minimum Standards.
- The load is then manually or mechanically turned, and the newly available surface area is visually inspected for any suspected ACM.
- Again, should any suspected ACM be identified during this inspection, the entire load is rejected as per 1.2 of the Minimum Standards.
- Should any other unpermitted material be identified during this second part of the inspection, the load is again immediately isolated, and the waste removed, or the entire load is rejected as per Standard 1.2 of the Minimum Standards.
- At any time during this process, each load of waste is not to come into contact with any other load of waste on the tip and inspection area, waste storage area or other working areas as detailed in Standard 1.2 of the Minimum Standards.



- For all loads that pass the second point of inspection, the WOF Spotter will complete the “Inspection Point 2 Load Register” to signify that the second inspection has been completed, the material has been accepted and is suitable for inclusion into the Waste Storage Area (Inspection Point 3).
- A copy of the docket is then held by Boral Recycling for future reference.
- Where the load is rejected under Standard 1.2 of the Minimum Standards, ensure the entire load is immediately reloaded onto the vehicle in which it arrived or onto another vehicle with the appropriate license. Ensure that the rejected load is removed from the Boral C&D waste facility within one working day and immediately record the details in the C&D waste facility’s Rejected Load Register as required by Standard 1.4 of the Minimum Standards.
- Where the load has been rejected and removed, the Inspections Area is to be inspected by a suitably trained Boral employee to ensure no further contaminants are visible prior to next load being set down. Verbal approval is then given that the area is free from contamination, isolations can be removed and work can continue.
- Appropriate PPE will be worn at all times whilst performing this work.
- Ensure that all waste that may be lawfully received at the C&D waste facility proceeds to be sorted and stored in accordance with Standards 2,3 and 4 of the Minimum Standards.

1.7.3 Waste Storage Area (Inspection Point 3)

All construction waste received at the C&D waste facility that has been inspected and sorted in accordance with Standards 1 and 2, is stored in accordance with the following requirements:

- Waste shall be stored in a separate storage area that is clearly identified as per the Inspection Area maps included in Appendix 9.
- Maps shall clearly identify Inspection Areas 1,2 and 3 and shall be placed in the Weighbridge, the daily toolbox meeting room or other areas as determined by the site manager.
- If waste is being stored outside of an enclosed bay, each stockpile of waste must be clearly delineated and separated from stockpiles of processed material by a minimum of three-metres from the base of the stockpile.
- Separate stockpiles containing the same listed waste type may touch at the base and are exempt from the three-metre separation requirement.



1.7.4 Mixing of Waste

Construction waste that has been inspected and sorted in accordance with Standards 1 and 2 is then processed and tested in accordance with the Recovered Aggregate Order (2014) to meet the Minimum Standards. To avoid contamination, once the waste has been processed it must be stored separately and must not be mixed with any other unprocessed construction waste at the C&D waste facility unless the other waste has been inspected and sorted at the C&D waste facility in accordance with Standards 1 and 2.

1.8 Auditing of the Protocol

Key to the effectiveness and usefulness of this protocol is for all stakeholders to have confidence that its process is being adhered to.

To ensure compliance, the following three-tiered auditing regime will be followed:

- The Task Observation against the Inspections Receivals Protocol will be carried out by Boral Recycling staff once every month (refer to Appendix 4). The audit will be part of the EAM (Electronic Asset Maintenance) system.
- A formal audit will be carried out by a suitably experienced representative of the Boral Recycling management team with assistance from Boral Health, Safety & Environment (HSE) representative at least once per year (refer to Appendix 5).
- A suitably qualified consultant hygienist will be engaged to carry out at least one audit every two years per recycling resource recovery facility.

1.9 Responsibilities and Accountabilities

This protocol applies to all construction and demolition material that is received at Boral Recycling NSW/ACT resource recovery facilities complying with the Minimum Standards for managing construction waste in NSW (EPA).

1.9.1 The Recycling Manager is responsible for:

- Initiating and implementing this procedure.
- In conjunction with Receiving Account Managers through review of Customer performance, deliver a Customer Awareness Package that incorporates the relevant requirements of the Minimum Standards and Asbestos Awareness.

1.9.2 The Recycling Operations Manager is responsible for:

- Monitoring the ongoing operation of the procedure to assess its efficiency.
- Initiating staff training in the receival protocol and Minimum Standards.
- Ensuring the auditing process is complied with.

1.9.3 The Site Manager and Supervisor is responsible for:

- Implementing the protocol.
- Monitoring the ongoing operation of the procedure to assess its efficiency.
- Implementation of staff training including inductions.
- Implementing the site-based auditing process.
- Inspecting and maintaining the Waste Storage Area (Inspection Point 3)
 - Ensuring that waste is stored in accordance with 1.7.3 of this protocol.
 - Immediately moving any waste, which meets the requirements of a resource recovery order, found in an incorrect storage area to the correct storage area.
 - Recording observations, including each incidence of waste being identified in the wrong storage area, along with the date, time, the role and name of trained personnel carrying out the inspection.
 - These records must be kept in the C&D waste facility for a period of three years from the date of inspection in accordance with Standard 4.2.1.
- Completing a daily checklist detailing the responsibilities that must be carried out in the inspection.

1.9.4 The Supervisor Leading Hand is responsible for:

- Ensuring onsite compliance with the Inspections and Receivals Protocol
- Monitoring the ongoing operation of the Protocol and assess its efficiency

1.9.5 The Receivals Account Manager is responsible for:

- Where appropriate, visually monitoring demolition sites and waste separation facilities, for compliance with industry best practices in material preparation, separation and handling.
- Inspecting demolition sites, where appropriate, to assess the suitability for recycling and to advise Customers on what C&D waste is accepted at Boral Recycling sites.



- Where possible, obtaining clearance certificates where asbestos has been identified within a Customer's demolition site.
- Communicating to Customers feedback on the quality of material received at the recycling plant, including rejected loads.
- Review Rejected and Overloaded load registers for non-conformance and opportunities to engage Customers for continuous improvement.
- Deliver the Customer Awareness Package outlining the inspection and receivals protocol and the Minimum Standards.

1.9.6 The Weighbridge/Office Receivals Clerk at Inspection Point 1 is responsible for:

- Interviewing delivery drivers in accordance with the specified procedure to identify the truck registration, customer, product, and source of the material being delivered and noting this information.
- Visually inspecting, classifying, and weighing each load for compliance as it arrives on the weighbridge/site.
- Rejecting loads that contain suspect ACM or other unpermitted waste at the initial inspection and noting details of Customer in the "Rejected Loads Register".
- In the event of an overloaded vehicle, completing the Overloads Register and following the procedures set out in the "Safe Tipping Protocol".
- Issuing a docket for each load detailing material type and classification and issuing it to the driver.
- Directing all conforming loads to the dedicated unloading area.

1.9.7 The "WOF Spotter" at Inspection Point 2 is responsible for:

- Communicating with the driver to direct the load to the dedicated unloading area.
- Checking the docket from the driver to confirm the load has been initially inspected at the weighbridge.
- Instructing the driver to tip the load and conduct a second inspection for potential contamination.
- Ensuring the load is inspected in accordance with 1.7.2 of this protocol.
- Where a WOF Spotter identifies material containing suspected ACM in the load, following the Method for Handling Suspected Contaminated Materials (see Section 4.0 of the Inspections and Receivals Protocol).



- When the load has been inspected and accepted, a WOF Spotter will complete the Inspection Point 2 Register to signify that the load has been accepted and can be moved to Inspection Point 3 (Waste Storage Area, Raw Feed).
- Complete the Inspection Point 2 Register and delivering it to the weighbridge.

1.9.8 The Plant Operator is responsible for:

- All plant operators on site, having received formal and ongoing asbestos awareness training, will maintain vigilance for and report (to their supervisor) the presence of suspected ACM at any given location across the recycling process.
- Assisting with turning the loads for inspection at Inspection Point 2.
- Maintaining the Waste Storage Area (Inspection Point 3).

It is important that these steps are completed:

- Prior to incorporating recently inspected material into Waste Storage Area (Raw Feed).
- Prior to and whilst pulverising material in preparation for feeding the plant and
- Prior to and during feeding the plant.



2.0 Receivals and Operations Process

2.1 Widemere Process



Step 1 – Inspection Point 1



Step 2 – Inspection Point 2



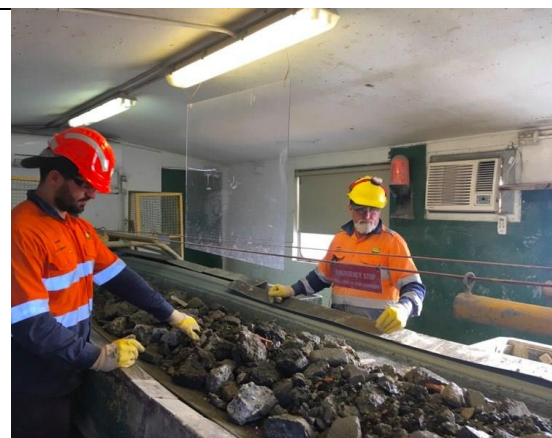
Step 3 – Inspection Point 3 (Waste Storage Area – Raw Feed)



Step 4 – C&D Raw Feed processed



Step 5 – Processed Raw feed loaded into crushing plant



Step 6 – Picking Station





Step 7 – Processed material (saleable product)









Step 8 - Inspection Point 3 (Waste Storage Area – Finished product)



Step 9 – Loading of saleable product Loader



2.2 Kooragang Process

	
<p>Step 1- Inspection Point 1</p>	<p>Step 2- Inspection Point 2</p>
	
<p>Step 3 - Inspection Point 3 (Waste Storage Area – Raw Feed)</p>	<p>Step 4– C&D Raw Feed processing</p>
	
<p>Step 5- Processed Raw feed loaded into crushing plant</p>	<p>Step 6- Processed material (saleable product)</p>





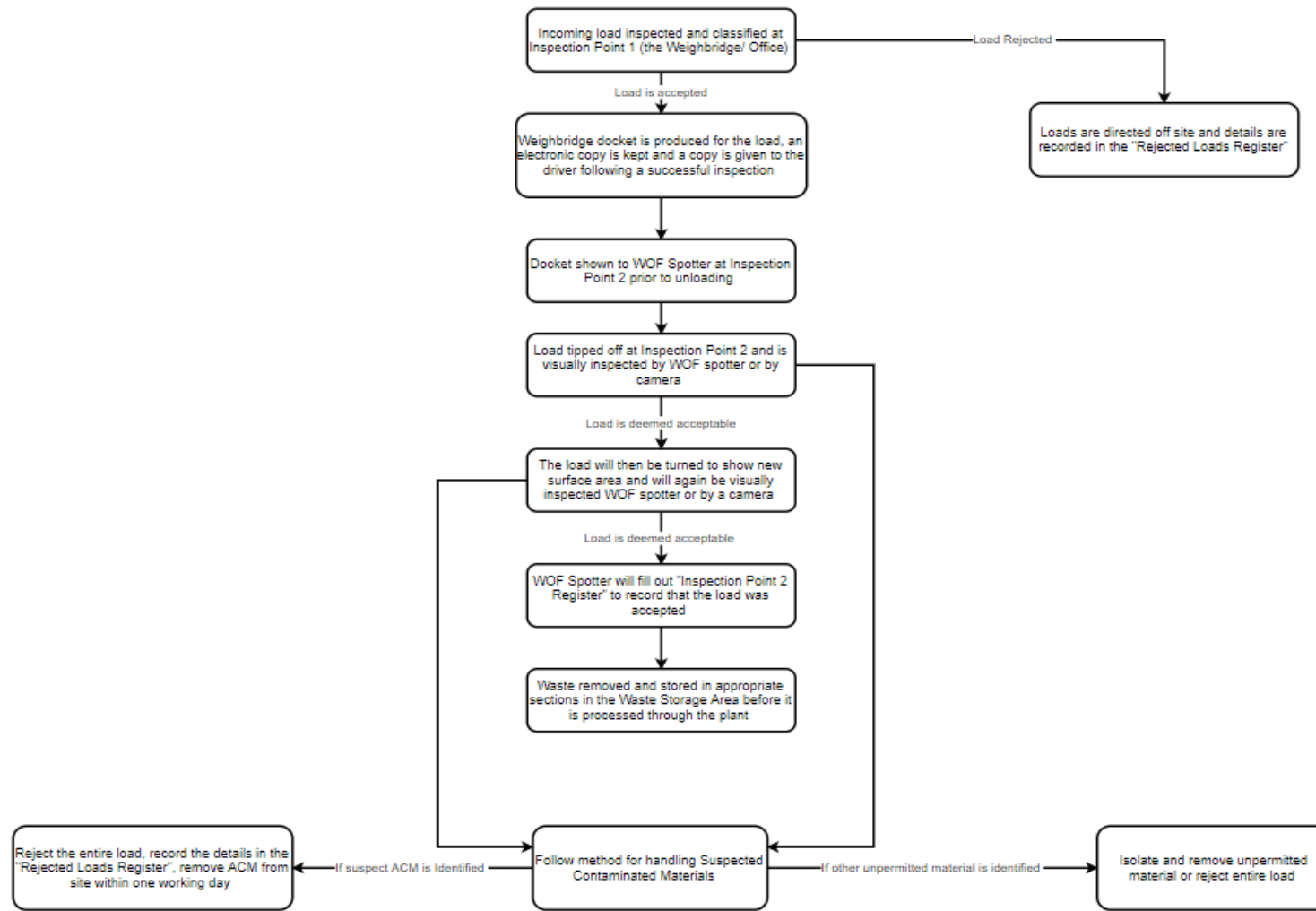
Step 7 - Inspection Point 3 (Waste Storage Area – Finished product)



Step 8- Loading of saleable product Loader



3.0 Inspection and Receival Flow Chart



4.0 Method for Handling Suspect Contaminated Materials

- 4.1 If suspect ACM is found in load, the load is to be rejected, material is to be wet down, loaded back onto waiting truck and weighbridge is notified. Rejected dockets are returned to the weighbridge as per normal procedure.
- 4.2 If any other unpermitted waste is identified, remove the waste or reject the entire load. The decision to reject the suspect load is the responsibility of Boral Recycling only and shall be final. The Receivals Account Manager(s) will be contacted where necessary to provide an opportunity for the Customer to be informed of the decision to reject the load and to reinforce the Inspections and Receivals Protocol.
- 4.3 The truck details, including weights are checked by the Receivals Clerk for weight legality. The dockets for the rejected loads will be recorded and the Customer is to be notified. The details of the rejected load are then placed in the "Rejected Loads Register". Dockets for rejected loads are to be retained in scanned copy as required by Minimum Standard 1.4.
- 4.4 If suspect ACM is found post truck departing site, load is to be wet down, isolated and marked with bollards and safety tape. Receivals Account Manager to contact Customer to request pick up of rejected load under Standard 1.2 of the Minimum Standards.
- 4.5 If the load is unable to be reloaded onto the vehicle in which it arrived or Customer unable or unwilling to pick up rejected load, Boral Recycling shall, within one working day, organise for an approved/licenced transport contractor to attend site to remove the contaminated load and transport to an licensed landfill, in accordance with the Minimum Standards. The details of the rejected load are then placed in the "Rejected Loads Register". Dockets for rejected loads, including dockets confirming disposal of contaminated materials at licensed landfill, are to be retained in scanned copy. All costs associated with the clean-up of the area will be invoiced to the Customer.
- 4.6 Area to be inspected by a suitably trained Boral employee after the load is removed to ensure no further contaminants are visible. Verbal approval is then given that the area is free from contamination and isolations can be removed.
- 4.7 Appropriate PPE will be worn at all times whilst performing this work.



5.0 Examples of Typical Asbestos Containing Material (ACM)

	
<p>Photo 1 – Asbestos Cement conduit</p>	<p>Photo 2 – Moulded Asbestos Cement product – Cable Tray</p>
	
<p>Photo 3 – Flat Asbestos Cement sheet fragments</p>	<p>Photo 4 – Membrane & Flashing containing Asbestos</p>



**5.0 Examples of Typical Asbestos Containing Materials (ACM)
cont.**



Photo 5 – Old Train Block Fragments containing Asbestos



Photo 6 – Fragments of Asbestos Cement sheeting on ground surface



Photo 7 – Flat Asbestos Cement sheet fragments

Signage boards shall also be visible at the weighbridge(s) for each Boral Recycling facility to provide further information on typical asbestos containing materials and the site protocols for inspection of ALL loads delivered by Customers.



6.0 Quality Control Protocol – Testing for Potential Hazardous Material

Boral Recycling material testing is conducted in accordance with the requirements and frequency of the Recovered Aggregate Order (RAO) and Exemptions (ROE) 2014. The Boral Inspection and Testing Protocol (ITP) exceeds the minimum requirements of the RAO and includes additional monthly testing for other ACM by an independent testing laboratory. Visual inspections are also conducted continuously throughout the day by various trained staff members including supervisors and lab technicians.

6.1 Asbestos Testing Method:

- 6.1.a A Front End Loader bucket of material produced on the day, at the scheduled sampling frequency, is to be taken and moved to a safe area for visual inspection and material sampling.
- 6.1.b Employees with asbestos awareness training will undertake a visual inspection & complete an assessment confirming whether or not the processed product comprises of suspect ACM.
- 6.1.c If the visual assessment determines there is no signs of suspect ACM, then sample the product in accordance to AS1141.3.1.9.2 – Sampling off a stockpile using a shovel. The sample (approx. 20kg) is to be sent to Hibbs & Associates with a toe tag placed within the bucket for identification of the sample.
- 6.1.d If potential hazardous materials are detected by Hibbs & Associates then resample the material and send to Hygienist to be retested. Resampling of the material is to be performed as per clause 4.1.b and 4.1.c. Site is to engage with the Hygienist to manage the potential hazardous material.
- 6.1.e If potential hazardous materials is found after resampling, A Hygienist will then be engaged to recommend an appropriate risk based management strategy which will be governed by the nature and extent of the contamination.

6.2 Asbestos Testing Frequency:

- 6.2.a Sampling will be conducted on a weekly basis. After 12 consecutive satisfactory samples have been obtained the frequency of sampling will reduce to monthly. However, if the site receives a result that shows the presence of suspected ACM, then sampling will recommence weekly over a 12 week process.
- 6.2.b If the presence of suspect ACM is found, production is to stop and the Supervisor shall be notified. The site employees will complete a visual assessment across the face of the unprocessed raw feed and processed product. If it is deemed that the site is visually clear from potential hazardous material (documented by a completed take5), then site continues its operation.




6.3 Delivery address for samples:

6.3.a Hibbs and Associates, Suite B, 255 Rawson St, Auburn NSW 2144
 Phone: (02) 9746 3244.

6.4 Recovered Aggregate Order 2014

In relation to protocol compliance, raw feed product before blending into finished product is sampled and tested to determine compliance to the POEO (Waste) Regulation 2014 - Recovered Aggregate Order 2014. The following Inspection and Test Plan must be adhered to;

 BORAL CONSTRUCTION MATERIALS NSW/ACT INSPECTION AND TEST PLAN					
Resource Recovery Order Under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014					
Document : RAO Rev 1					
The Recovered Aggregate Order 2014					
Material Property	Units	Test Method(s)	Compliance Frequency	Initiated by	Record Location
Chemicals and Other Attributes					
1. Mercury	mg/KG 'dry Weight'	EPA 3051/APHA 3030K - 21st Edition - Microwave Acid Digestion / Metals by ICP	Routine Testing min 1 representative sample per 2 weeks (in accordance with a written sampling plan - and Australian Standards 1141.3.1-2012)	Site Managers & MTS Lab	MTS Lab and Recycling Manager
2. Cadmium	mg/KG 'dry Weight'				
3. lead	mg/KG 'dry Weight'				
4. Arsenic	mg/KG 'dry Weight'				
5. Chromium (total)	mg/KG 'dry Weight'				
6. Copper	mg/KG 'dry Weight'				
7. Nickel	mg/KG 'dry Weight'				
8. Zinc	mg/KG 'dry Weight'				
9. Electrical Conductivity	dS/m	Guideline on Laboratory Analysis of Potentially Contaminated Soils - Method 104 - Electrical Conductivity			
10. Metal	%	NSW RTA Test Method T276 Foreign Materials Content of Recycled Crushed Aggregate			
11. Plastic	%				
12. Rubber plastic, paper, Cloth, paint, wood and other vegetable matter	%				
Prepared By J.Sweeney			Date 1st April, 2019		

Samples to be labelled “recovered aggregate” defined as material comprising of concrete, brick, ceramics, natural rock and asphalt processed into an engineered material. This does not include refractory bricks or associated refractory materials, or asphalt that contains coal tar. (Definition as per POEO Waste Regulations 2014)



Appendix 3: Contact Names and Telephone Numbers:

Name	Title	Office	Mobile
Jason Sweeney	Recycling Manager	02 9604 9101	0408 400 661
Angus Shedden	Recycling Operations Manager	02 9604 9101	0401 894 513
Widemere – Reconciliation Road Prospect NSW			
Adrian Preece	Site Manager	02 9604 9101	0401 894 981
Justin Ainge	Receivals Account Manager	02 9604 9001	0401 899 399
Weighbridge Operator	Receivals Clerk Widemere	02 9604 9101	
Kooragang – Egret Street Kooragang			
Richard Haskett	Site Manager	02 4920 1030	0401 894 967
Rebecca Brown	Receivals Account Manager	02 4920 1030	0401 893 546
Weighbridge Operator	Receivals Clerk	02 4920 1030	
Consultants			
Hibbs & Associates	Occupational Hygiene Consultants	02 9746 3244	
Ross Mitchell Mitchell & Associates	Asbestos Removal Contractor	02 9642 0011	0418 215 076



Appendix 4: Internal Audit – Task Observation against Inspection and Reveal Protocol

Task Observations against Inspection and Reveal protocol¹

Observer:	Task:	Date:	Time:
Observed:	Site:	Area:	

Announce – Explain the Task Observation process to worker & confirm the following (circle Yes, No or n/a)			
Have the employee completed the Boral 2 day Induction? Yes / No	Has the employee been inducted to this work site within the last 12 months? Yes / No		
Is there a written procedure for this task? Yes / No	Have they signed onto SWMS for task? n/a		Yes / No / n/a
Is the Inspection & Reveals Protocol current?			Yes / No / n/a
Has the employee been trained in the Inspection & Reveals Protocol			Yes / No / n/a
Has the employee received asbestos awareness and removal of non-friable asbestos training?			Yes / No / n/a
Has the employee received the full Working on Foot training program?			Yes / No / n/a
Has the employee been trained in all risk assessments/SWMS associated with the Inspection and Reveal Protocol and Minimum Standards for Managing construction waste in NSW?			Yes / No / n/a
What is the procedure for handling suspected contaminated material? answer appropriate?	Was		Yes / No / n/a
Does the site comply with the Method for Handling Suspected Contaminated Materials?			Yes / No / n/a
How were your competencies confirmed & were they able to be verified? answer appropriate	Was		Yes / No / n/a
Do you know where to find written instructions for working activities associated with the inspection and reveal protocol?			Yes / No / n/a
If there was a new hazard you identified in the task, what would you do? answer appropriate?	Was		Yes / No / n/a
What communication do you perform before, during & after this task? answer appropriate?	Was		Yes / No / n/a
What would you do if you noticed an unsafe behaviour by someone else? answer appropriate?	Was		Yes / No / n/a
<i>Check with supervisor - Are they fit for the task?</i>			Yes / No

¹ Task Observations are a constructive approach to identify and address issues and reinforce positive behaviours.



Appendix 4 cont.

<p>Watch – Observe task completion. Ask questions throughout to clarify as required</p> <p>Mark “√” for positive observations, “X” for concerns/issues and “-” if not applicable. Add comments below.</p>							
PPE		Receivals Area		Behaviours		Movement	
Glasses/goggles		Pre-start check completed		Eyes on task		Repetitive	
Safety boots		Emergency preparedness		Standing in safety zone		Communicating movement	
Gloves		Adequate lighting		Manual handling		Standing with back to stockpile	
Hi-vis shirt/Long / longs		Two way radio functional		Frustrated / confused		Visual contact with HME	
Hard hat		Plant & Equipment		Rushing			
Hearing protection		Pre-start check completed		Complacent			
Dust mask		Isolation trained		Communicating		Work Practices	
Whistle		Other-		Hazard identification		Take 5 / SWMS / SOP	
LED Hi-Viz vest				Fatigue		Reporting - Haz / Inc / Env	
LED Baton				Aware other work groups		Traffic management	
Environmental		Housekeeping		Consider zero/one/ten		Communication	
Air – (dust)		Designated areas-equipment		Other-		WoF Protocol	
Land – (oil spills)		Bins available		Administration		Quality control Protocol	
Noise		Area clean and tidy		Rejected Load Register		Appropriate Signage	
		Other-		Inspection Test Plan			
Comments:							

<p>Reinforce positive behaviours and Encourage improvements. Agree actions with worker and supervisor.</p>				
Recognised safe and positive behaviours observed	Supervisor updated? (name: _____)			
Observed	Action(s) ²	Responsible	Date	SIMS

² Actions may be preventative &/or reinforcing (e.g. sharing improvements/best practices, communication or recognition)



Appendix 5: Inspection Protocol and Final Production Contamination QA Audit

<i>Issued to</i>	:	Recycling Manager	
<i>Copies to</i>	:	Operations Manager - Recycling	
		Site Manager	
		Site Supervisor(s)	



**BORAL RECYCLING PTY LTD
CONSTRUCTION AND DEMOLITION RECYCLING - RECIEVALS
INSPECTION PROTOCOL & FINAL PRODUCT CONTAMINATION QA
AUDIT**

Site: _____

Premises Details: _____

Conferred With: _____

Previous Audit Date: _____

Audit Date: _____

Audited By: _____

Publication Date: _____

Forward

The purpose of this audit is to identify areas where a potential for contamination of recycled products could occur through receiving, inspecting, processing and distribution of recycled construction and demolition materials. The audit focuses on the current protocols and procedures either documented or not.

General: This audit pro forma has been designed to be used for internal purposes only either as a site check list or as an internal audit tool



Appendix 5 cont.

Area of Review	Yes/No/NA (records or visual)	Responsibility	Comments
1.0 Asbestos Awareness and Minimum Standards Training			
1.1 Provide evidence that all employees undertaking any tasks involved in meeting the requirements of the Minimum Standards have been trained in accordance with the Minimum Standards. 1.2 Provide evidence that permanent employees have been trained in asbestos awareness in the last 12 months.			
1.3 Provide evidence that all temporary employees involved with the tasks covered by the Minimum Standards receive asbestos awareness training as part of the induction process and annual refresher. 1.4 Provide evidence that permanent employees have been trained in removal of non-friable asbestos training in the last 12 months. 1.5 Provide evidence of non-friable asbestos removal SWP or similar and safety equipment.			
1.6 Are visual examples of typical suspected ACM materials displayed in the weighbridge?			
Comments: 			
2.0 Demolition and Material Source Sites			
2.1 Who are the designated receives account managers?			
2.2 Are demolition sites inspected for compliance in relation to material separation and handling?			
2.3 How frequently is this performed?			



Appendix 5 cont.

Area of Review	Yes/No/NA (records or visual)	Responsibility	Comments
2.4 On what occasions are clearance certificates obtained.			
Comments:			
3.0 Recycling Plant – Material Delivery: Weighbridge (Inspection Point 1)			
3.1 Upon arrival material delivery trucks report to Weighbridge/Office?			
3.2 Persons delivering materials are identified and details noted. How?			
3.3 Loads inspected, classified and weighed/estimated.			
3.4 Rejected loads directed off site and noted in 'Rejected Loads Register' and a copy of the docket for the rejected load is provided to the truck driver noting cancellation/rejection			
3.5 Is the 'Rejected Loads Register' available for inspection, what details are contained within?			
3.6 How frequently are loads rejected from the weighbridge/office or tip off? Check Rejected Loads Register			
3.7 A docket is produced electronically for all loads.			
3.8 The docket is given to the driver as an indication of an accepted load at Inspection Point 1.			
Comments:			
4.0 Recycling Plant – Material Delivery: Material Tipping (Inspection Point 2)			
4.1 Loads directed to Inspection Point 2.			
4.2 Driver shows the docket to the spotter prior to tipping as proof of weighbridge/office inspection.			



Appendix 5 cont.

Area of Review	Yes/No/NA (records or visual)	Responsibility	Comments
4.3 All loads spread and the surface area inspected for any suspected ACM.			
4.4 The load is then manually or mechanically turned, and the newly available surface area is visually inspected for any suspected ACM by a person or by a camera.			
4.5 The spotter completes the Inspection Point 2 Register to indicate that the load has passed the second inspection.			
4.6 Provide evidence of the Inspection Point 2 Register for future reference with the inspection verifications.			
Comments:			
5.0 Waste Storage Area (Inspection Point 3)			
5.1 Is each waste type stored in a separate area that is clearly identified as per the Inspection Point Maps?			
5.2 Maps identifying the Inspection Points are placed in the Weighbridge and daily toolbox areas.			
5.3 Each stockpile of waste is clearly separated from stockpiles of other waste if it is being stored outside of an enclosed bay.			
Comments:			
5.0 Suspect Load Handling Procedure			
5.1 Are all relevant employees trained on this procedure?			
5.2 If source of material is unknown and disposal is required are these non-conformances recorded.			



Appendix 5 cont.

Area of Review	Yes/No/NA (records or visual)	Responsibility	Comments
5.3 Are records maintained on all suspected ACM disposed off site?			
Comments:			
6.0 On site Plant operators			
6.1 Operators involved in tasks associated with the Inspection receivals Protocol and minimum standards are vigilant in the identification of suspected ACM.			
Comments:			
7.0 Auditing			
7.1 Internal short form audit by recycling staff on a monthly basis. Provide evidence.			
7.2 Formal audit by Boral Recycling management team with assistance from HSE representative performed annually. Provide evidence.			
7.3 External audit by a consulting occupational hygienist annually on a random occasion. Provide evidence of agreement with consultant and copy of audits.			
Comments:			
9.0 Protocol Document Control			
9.1 Date Issued displayed:			
9.2 Document review date displayed:			
9.3 Contact names up to date:			
Comments:			



Appendix 5 cont.

Area of Review	Yes/No/NA (records or visual)	Responsibility	Comments
10.0 Recycled Product QA Practice			
10.1 Once C&D material is pulverised, crushed, screened and placed into stockpiles for sale, what QA procedure both written and not are undertaken in regards to testing and suspect ACM			
10.2 To what extent is this documented?			
10.3 How are employees trained?			
Comments:			



Appendix 5 cont.

RECOMMENDATIONS - ACTION PLAN

Region:

Date of Audit:

Project Details: **Date of Response:** _____

The following recommendations for improving environmental risk management are proposed. The responsibility whether or not to implement these recommendations rests with the Recycling Manager receiving this report. It is vital that operations complete a copy of the Recommendations - Action Plan pages, including the response and progress on individual recommendations and forward these sheets to the Environment Manager for verification of suitability of proposed actions.

- Ratings:**
- A** Significant non-compliance with statutory instruments, codes and/or standards, or high environmental risk exposure with major impact potential - for immediate action.
 - B** Environmental improvements or minor non-compliances requiring only limited organisation change and/or expenditure - for prompt action.
 - C** Lesser environmental risk exposure and/or with moderate or minor impact potential - for medium term action.
 - D** Superior standard of environmental performance requiring significant capital expenditure - for appropriate scheduling.

Item No. (Eyear-No. eg. E02-01)	Element (refer Audit Item No.)	Recommendation	Rating A,B,C,D	Proposed Action	Cost Estimate	Person Responsible	Estimated Completion Date	Actual Completion Date



Appendix 7: EPA list of waste types

Description of waste
Aggregate, road base or ballast
Aluminium (non-ferrous)
Ashes
Asphalt
Batteries
Bricks or concrete
Biosolids or manures
Ceramics, tiles, pottery
Composts or mulches
Contaminated soil
Dredging spoil
E-waste
Ferrous (iron or steel)
Food or kitchen
Glass
Mattresses
Mixed Waste
Non-ferrous (metals, not iron steel or aluminium)
Oil
Paper or cardboard
Plasterboard
Pharmacy or clinical
Plastic
Potential Acid sulphate Soils
Problem Waste
Residues or rejects
Shredder floc
Soil (not contaminated or VENM)
Textiles, rags
Tyres
Vegetation or garden
Virgin excavated natural materials
Veterinary waste
Wood, trees or timber



Appendix 8: Daily Checklist/ Receivals Spotter Pre-Start

PPE Requirements	Yes	No	Action/NA	Init
Orange Rooback LED Hi-Viz vest - Spotters Only				
Is the LED Hi-Viz vest working?				
Orange light up baton/Is it working-Spotter Only				
Do you require a Helmet lamp or torch?				
Are you carrying your Gloves?				
Have you checked your 1st Aid equipment?				
Communication				
Complete 2way radio check with HME				
Complete 2way radio check with Spotter 2				
Inspection Recievals Protocol				
P2 dust masks / Tyvek suits available?				
Are there Asbestos bags and ties available?				
Environmental				
Have checked Water pressure?				
Have checked Fire fighting equipment?				
Traffic Management				
Have you completed Take5?				
Is the Receivals ready for traffic movement				
Stockpile Management				
Have you daily toolbox on stockpiling requirement?				
Have you undertaken a visual stockpile inspection and completed a Take 5? - As per min standards, is the stockpile area compact, hard ect (Check standards) -				
Training				
Are the Spotters trained in WRSWMS-R-001 V4 Operation in receivals?				
Are the Spotters trained in WRSWMS-R-003 Tyre and Draw bar inspection?				
Are the Spotters trained in WRSWMS-G-007 Two way radio usage?				
Are the Spotters trained in WRSWMS-R-009 Rejected load protocol V2?				



Appendix 8 cont.

Collection of Dockets							
Sign Off							
Sign Spotter 1			Sign Spotter 2 -			Date	
Comments							



Appendix 9: Map indicating Inspection Points 1 and 2 and Waste Storage Area (Inspection Point 3)

Widemere

Boral Recycling Inspection Points



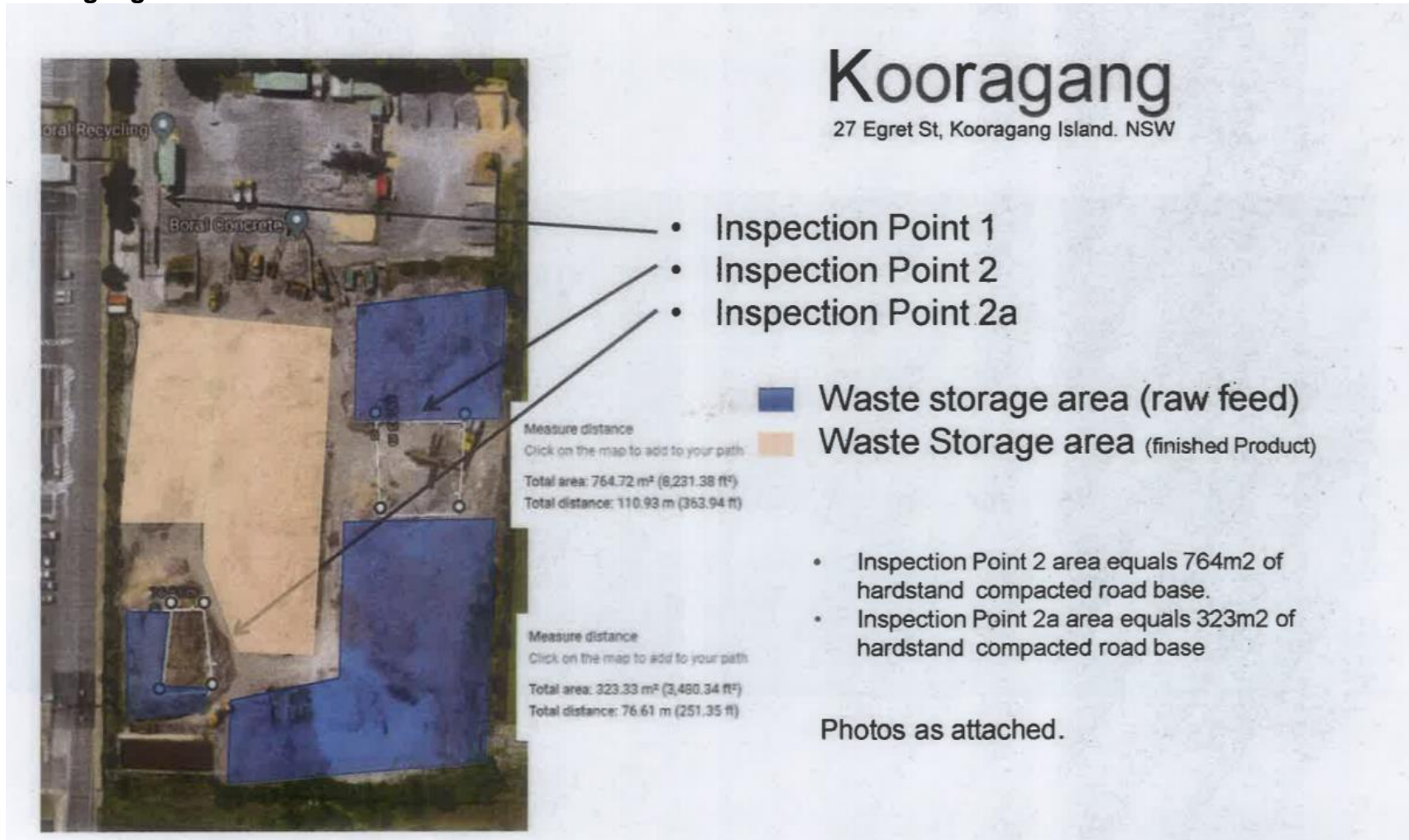
Boral Widemere Recycling
Widemere Rd,
Wetherill Park NSW 2164

-  Inspection Point 1
-  Inspection Point 2
-  Inspection Point 3
-  Waste Storage Area
-  Waste Storage Area

Inspection Point 2 area
equals 1,948m² of
hardstand compacted
roadbase.



Kooragang



Australia

SYDNEY

Level 10 201 Pacific Highway
St Leonards NSW 2065
T 02 9493 9500

NEWCASTLE

Level 3 175 Scott Street
Newcastle NSW 2300
T 02 4907 4800

BRISBANE

Level 1 87 Wickham Terrace
Spring Hill QLD 4000
T 07 3648 1200

CANBERRA

Suite 2.04 Level 2
15 London Circuit
Canberra City ACT 2601

ADELAIDE

Level 4 74 Pirie Street
Adelaide SA 5000
T 08 8232 2253

MELBOURNE

Suite 9.01 Level 9
454 Collins Street
Melbourne VIC 3000
T 03 9993 1900

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Perth WA 6000
T 08 6430 4800

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T 647 467 1605

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Vancouver BC V5T 3C2
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CALGARY

700 2nd Street SW Floor 19
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emmconsulting.com.au

Appendix B

Operational Traffic Management Plan

Kooragang Island Recycling Facility

Operational Traffic Management Plan

Prepared for Boral Recycling (NSW/ACT) Pty Ltd

December 2025

Kooragang Island Recycling Facility

Operational Traffic Management Plan

Boral Recycling (NSW/ACT) Pty Ltd

E240898 RP1

December 2025

Version	Date	Prepared by	Reviewed by	Comments
1	17 December 2024	Abdullah Uddin	Dr Phil Towler	Draft
2	6 February 2025	Abdullah Uddin	Verity Blair	Client's comments are incorporated
3	6 March 2025	Abdullah Uddin	Verity Blair	Update based on client comments
4	25 March 2025	Abdullah Uddin	Verity Blair	Final
5	9 May 2025	Abdullah Uddin	Verity Blair	PoN comments incorporated
6	19 December 2025	Abdullah Uddin	Verity Blair	DPHI comments addressed

Approved by



Verity Blair

Associate Director

19 December 2025

Level 10 201 Pacific Highway

St Leonards NSW 2065

ABN: 28 141 736 558

This report has been prepared in accordance with the brief provided by Boral Recycling (NSW/ACT) Pty Ltd and, in its preparation, EMM has relied upon the information collected at the times and under the conditions specified in this report. All findings, conclusions or recommendations contained in this report are based on those aforementioned circumstances. This report is to only be used for the purposes for which it has been provided. Except as permitted by the *Copyright Act 1968* (Cth) and only to the extent incapable of exclusion, any other use (including use or reproduction of this report for resale or other commercial purposes) is prohibited without EMM's prior written consent. Except where expressly agreed to by EMM in writing, and to the extent permitted by law, EMM will have no liability (and assumes no duty of care) to any person in relation to this document, other than to Boral Recycling (NSW/ACT) Pty Ltd (and subject to the terms of EMM's agreement with Boral Recycling (NSW/ACT) Pty Ltd).

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ABN: 28 141 736 558

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1 Introduction

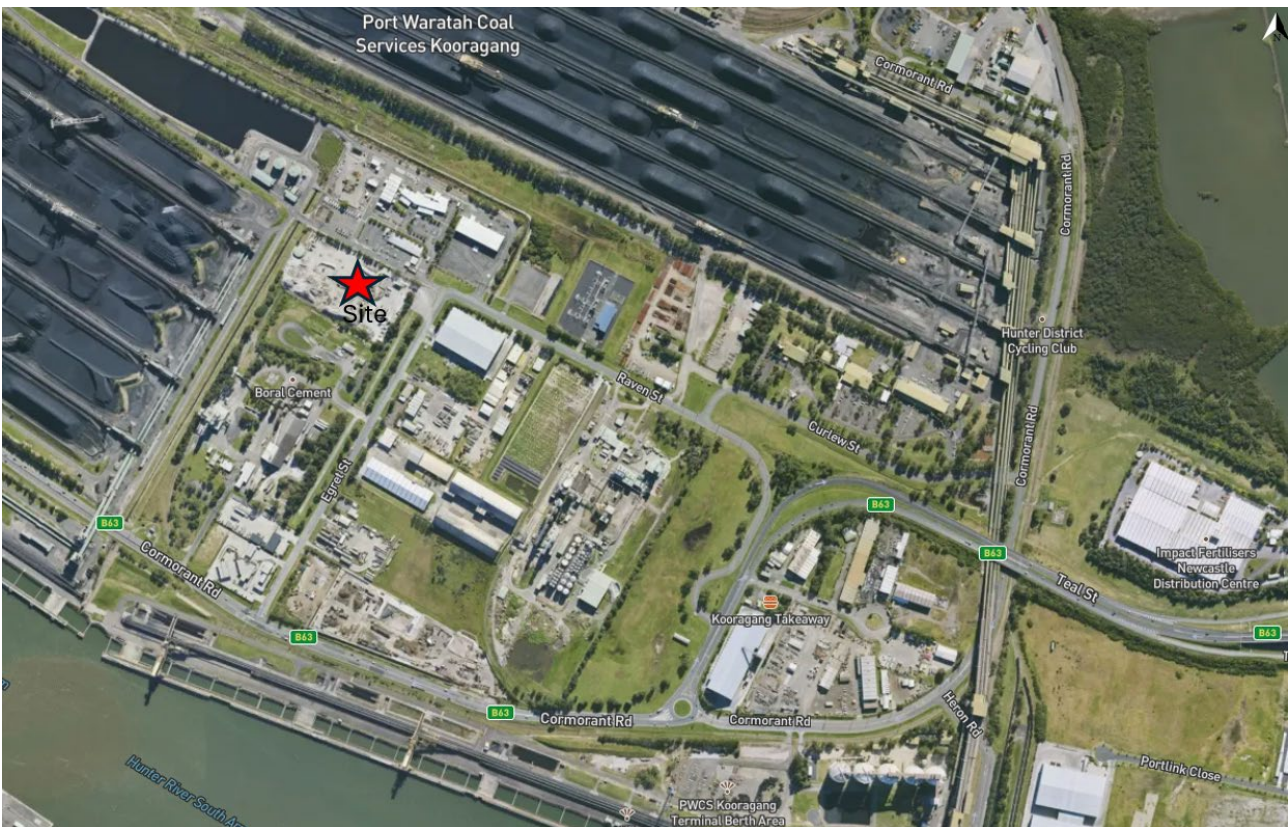
1.1 Purpose and objectives

Boral Recycling (NSW/ACT) Pty Ltd (Boral) operates the Kooragang Recycling Facility (the facility) located at 1/24 Egret Street, Kooragang Island. The facility is located within Lot 12 DP 1032146, approximately 5 kilometres (km) north north-west of the Newcastle Central Business District, at 1/24 Egret Street, Kooragang NSW (Figure 1.1). Approval for the development of Stage 1 of the facility was granted by the NSW Department of Planning, Housing and Industry (DPHI, then Department of Planning, Industry and Environment) under development consent SSD 7038, approved in July 2019, and the Environment Protection Licence (EPL 11968).

Condition B33 of SSD 7038 requires that an Operational Traffic Management Plan (OTMP) is prepared, to form part of an overall operational environmental management plan (OEMP) for the facility.

EMM Consulting Pty Limited (EMM) has been engaged by Boral to prepare an OTMP to detail the proposed site operations of the waste recycling and transfer facility. This OTMP has been prepared by Abdullah Uddin who has 21 years of experience in traffic engineering and transport planning in Australia.

This plan will be provided to the Secretary for approval and will be implemented at the site following approval.



Source: Metromap

Figure 1.1 Site location

1.2 Consultation

EMM has prepared this OTMP based on:

- reviews of relevant documentation specific to site traffic management including site plans and maps
- discussions with Boral.

This draft version of this OTMP has been submitted to Port of Newcastle for comments. Their comments are incorporated.

2 Environmental requirements

2.1 Legislative framework

The legislation that applies to the implementation of this OTMP is listed below:

- *Environmental Planning and Assessment Act 1979*
- *Roads Act 1993*
- *Road Transport Act 2013*
- *Work Health and Safety Act 2011*
- NSW Road Rules 2008.

2.2 Standards and guidelines

The following are the guidelines relevant to this OTMP:

- *Manual of Uniform Traffic Control Devices: AS1742*
- *Austrroads Guide to Traffic Management*
- *TfNSW Traffic Control at Worksites*, Issue 6.1, February 2022.

2.3 Approval conditions

The relevant SSD 7038 approval conditions and where they are addressed in this OTMP are provided in Table 2.1.

Table 2.1 Relevant consent conditions and EMM responses

Condition no.	Condition	Relevant section of the report
Operational traffic management plan		
B33	Prior to the commencement of Stage 1 operations, the Applicant must prepare an Operational Traffic Management Plan (OTMP) for the Development to the satisfaction of the Planning Secretary. The plan must form part of the OEMP required by condition C5 and be prepared in accordance with condition C1. The OTMP must:	n/a
a)	i) be prepared by a suitably qualified and experienced person(s)	Chapter 1
b)	ii) be prepared in consultation with Port of Newcastle (PON)	Section 2.4
c)	(a) detail the measures that are to be implemented to ensure road safety and network efficiency including: <ul style="list-style-type: none">– ensuring no queuing or parking of vehicles occur in the carriageway (except with the express consent of the PON), Egret Street or the surrounding road network– redirecting incoming trucks to prevent traffic build-up and queuing in the carriageway (except with the express consent of the PON) and Egret Street	Sections 5.3 and 5.10
d)	iii) detail heavy vehicle routes, access and parking arrangements	Sections 5.1, 5.3 and 5.11

Condition no.	Condition	Relevant section of the report
e)	iv) include a Driver Code of Conduct to: <ul style="list-style-type: none"> (a) ensure truck drivers use specified haul routes (b) ensure trucks drivers when exiting the site use Ravens Street and Curlew Street to access Cormorant Road (c) minimise the impacts on the local and regional road network (d) minimise conflicts with other road users (e) minimise road traffic noise (f) include a program to monitor the effectiveness of these measures. 	Chapter 6
Management plan requirements		
C1.	Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:	n/a
a)	i) details of: <ul style="list-style-type: none"> (a) the relevant statutory requirements (including any relevant approval, licence or lease conditions) (b) any relevant limits or performance measures and criteria (c) the specific performance indicators that are proposed to be used to judge 	Sections 2.1, 2.2 and 2.3 Section 2.2 Chapters 4 and 6
b)	ii) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria	Chapters 4 and 6
c)	iii) a program to monitor and report on the: <ul style="list-style-type: none"> (a) impacts and environmental performance of the development (b) effectiveness of the management measures set out pursuant to paragraph (b) above 	OEMP
d)	iv) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible	Chapters 4, 5 and 6 provide environmental management measures to manage predicted potential impacts Unpredicted impacts
e)	v) a program to investigate and implement ways to improve the environmental performance of the development over time	Included in Chapter 5 of the OEMP
f)	vi) a protocol for managing and reporting any: <ul style="list-style-type: none"> (c) incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria) (d) complaint (e) failure to comply with statutory requirements 	Chapter 6 and Chapter 7 of the OEMP
g)	vii) a protocol for periodic review of the plan.	Section 9.2 of the OEMP
h)	Note: the Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.	n/a

2.4 Port of Newcastle comments

The Port of Newcastle (PoN) at its email, dated 28 April 2025 has raised a number of comments on the draft OTMP. The PoN comments and EMM responses are provided in Table 2.2. The email is attached in Annexure A.

Table 2.2 PoN comments and EMM responses

Item no.	PoN comments	EMM responses
1	Can Section 4.3 please be updated so that any hazards, unsafe acts or incidents arising from Boral's operations and occurring on Egret Street, Raven Street or Curlew Street are reported to Port of Newcastle as soon as possible on 02 47908 2300.	This comment is incorporated in Section 4.3.
2	Can section 5.9 please clarify there is to be no queuing or parking of vehicles on Egret Street (except with the express consent of PON) or the surrounding road network.	Section 5.10 states that based on the estimated traffic generation to the site, it is unlikely that there will be any potential queueing on Egret Street or any other nearby public roads. Section 5.3 states that there will be sufficient parking within the site which eliminates the need for parking on any adjoining public roads.
3	Will the trucks queuing on Boral's site turn their engines off while waiting?	Yes, all waiting trucks will have their engine off to minimise any noise impact. Section 6.5 has been updated.
4	Section 6.7 states that all loaded vehicles are to be inspected prior to leaving site – who will be carrying out these inspections?	Site Supervisor will carry the inspection for outbound trucks. Section 6.7 has been updated.

3 Road network

The NSW administrative road hierarchy comprises the following road classifications, which align with the generic road hierarchy as follows:

- State roads – freeways and primary arterials (TfNSW managed)
- regional roads – secondary or sub arterials (council managed and part funded by the State)
- local roads – collector and local access roads (council managed).

An overview of each of the key roads is shown in Figure 3.1 and details are provided in Table 3.1 to Table 3.4.

Raven, Egret and Curlew streets are Port of Newcastle controlled Local Roads. Cormorant Road is a TfNSW controlled State Road.



Figure 3.1 Road hierarchy near the site

Table 3.1 Cormorant Road

Aspect	Description
Road classification and connectivity	TfNSW controlled State Road runs along the southern boundary of the site. Local section of the road at east of Teal Street.
Alignment	East-west.
Number of lanes	Two lanes each way with a divided carriageway. Additional capacity is provided at intersections.
Carriageway type and length	Sealed road between Delta Road (west) and Teal Street (east).
Carriageway width	Approximately 22 to 23 m (including the central median island).
Posted speed limit	80 km/hr.
Heavy vehicle access	TfNSW's approved 26 m long B-double route.
Traffic function	Provides connection to Kooragang industrial precinct and also carries through traffic.



Plate 3.1 Cormorant Road (looking east towards Egret Street)

Table 3.2 **Egret Street**

Aspect	Description
Road classification and connectivity	Port of Newcastle controlled Local Road.
Alignment	North-south.
Number of lanes	One lane each way, parking is provided on both sides, away from the intersections.
Carriageway type and length	Sealed road between Cormorant Road (south) and Raven Street (north).
Carriageway width	Approximately, 13.5 to 14 m between kerbs.
Posted speed limit	60 km/hr but closer to the site entrance, the speed limit is reduced to 40 km/h.
Heavy vehicle access	TfNSW's approved 26 m long B-double route.
Traffic function	Provides access to the industrial properties.



Plate 3.2 **Egret Street (looking north near the site access)**

Table 3.3 Raven Street

Aspect	Description
Road classification and connectivity	Port of Newcastle controlled Local Road.
Alignment	East-west and north-south.
Number of lanes	One lane each way, parking is provided on both sides, away from the intersections.
Carriageway type and length	Sealed road between Egret Street (west) and Teal Street (east).
Carriageway width	Approximately, 15 m between kerbs.
Posted speed limit	60 km/hr.
Heavy vehicle access	TfNSW's approved 26 m long B-double route.
Traffic function	Provides access to the industrial properties.



Plate 3.3 Raven Street (looking east)

Table 3.4 Curlew Street

Aspect	Description
Road classification and connectivity	Port of Newcastle controlled Local Road.
Alignment	Generally east-west.
Number of lanes	One lane each way.
Carriageway type and length	Sealed road between Raven Street (west) and Cormorant Road (east).
Carriageway width	Approximately, 14 m between kerbs.
Posted speed limit	60 km/hr.
Heavy vehicle access	TfNSW approved 26 m long B-double route.
Traffic function	Provides access to the industrial properties.
Additional comments	5.2 overbridge height restriction is in place near Cormorant Road.



Plate 3.4 Curlew Street (looking east)

4 Site responsibilities

4.1 Legislative requirements

Boral has a duty to ensure, as is reasonably practicable, workers and others are not exposed to health and safety risks arising from the business or undertaking at the site. This duty starts with the General Manager and includes identifying and implementing control measures to prevent people being injured by moving vehicles at the workplace contained within this OTMP.

4.2 General Manager Recycling and Recycling Operations Manager

It is the responsibility of the General Manager Recycling and the Recycling Operations Manager to:

- ensure the overall implementation of, and compliance with, the OTMP
- ensure the timely communication of the contents and requirements of the OTMP to all relevant employees, delivery drivers, contractors and visitors
- ensure that all hazards, unsafe acts or incidents involving traffic movement or pedestrians at the site are reported (including in accordance with any legislative requirements) and corrective action(s) are promptly implemented
- provide adequate support, clarification and guidance to all personnel conducting operational activities in mitigating traffic management risks
- ensure that the OTMP is reviewed to monitor its effectiveness after first twelve months and then reviewed in accordance with Condition C8 (see Section 6.11 and 6.12 of this plan and Section 9.2 of the OEMP).

OTMP reviews will cover any formal complaints, safety incidents, toolbox meeting discussions pertinent to improvements, as well as driver and operator feedback. Draft adjustments to the OTMP, which must not revoke or remove those items and procedures pertaining to the satisfaction of the Development Conditions, will then be submitted to DPPI for consideration and approval.

4.3 Managers and supervisors

It is the responsibility of the Site Manager/supervisors to:

- implement, comply and monitor the requirements of the OTMP
- conduct training and communication of the OTMP to all personnel, delivery drivers, contractors and visitors
- ensure the safe and efficient loading and unloading activities and co-ordinate their arrival and dispatch from designated loading/unloading areas
- ensure that any hazards, unsafe acts or incidents involving traffic movement are reported (including any legislative requirements to report) and corrective action(s) are implemented for their area
- provide support and guidance to all personnel conducting operational activities in mitigating traffic management risks
- report any hazards, unsafe acts or incidents arising from Boral's operations and occurring on Egret Street, Raven Street or Curlew Street to Port of Newcastle as soon as possible on 02 47908 2300.

4.4 Load shifting equipment operators and delivery vehicle operators

It is the responsibility of load shifting equipment operators and delivery vehicle operators to:

- not be under the influence of drugs or alcohol whilst operating load shifting equipment vehicles
- maintain the appropriate licence(s) for the operation of the load shifting equipment
- undertake pre-operational checks on load shifting equipment prior to use
- report any load shifting equipment hazards or faults to their direct manager or operations manager
- keep a safe distance (approximately 5–10 m, or as reasonably practicable) from tip yard inspector and weighbridge operators interacting with moving equipment
- always ensure Ultra High Frequency (UHF) Radio is on and that all safety communications from weighbridge operators, tipping inspectors and equipment operators can be heard
- observe and comply with the requirements of the OTMP at all times, including but not limited to safety warning signage, communication devices, and loading and unloading requirements
- report any traffic management hazards, unsafe act or incidents immediately to the relevant Site Manager/supervisor.

4.5 Other Boral employees

It is the responsibility of all Boral employees working at the site to:

- observe, understand and comply with the requirements of the OTMP at all times.
- park in the areas internal and external areas specified in the OTMP
- use the designated pedestrian accesses to the office areas, neighbouring businesses plant and equipment and loading and unloading areas
- report any traffic management hazards, unsafe act or incident immediately to the relevant Site Manager/supervisor.

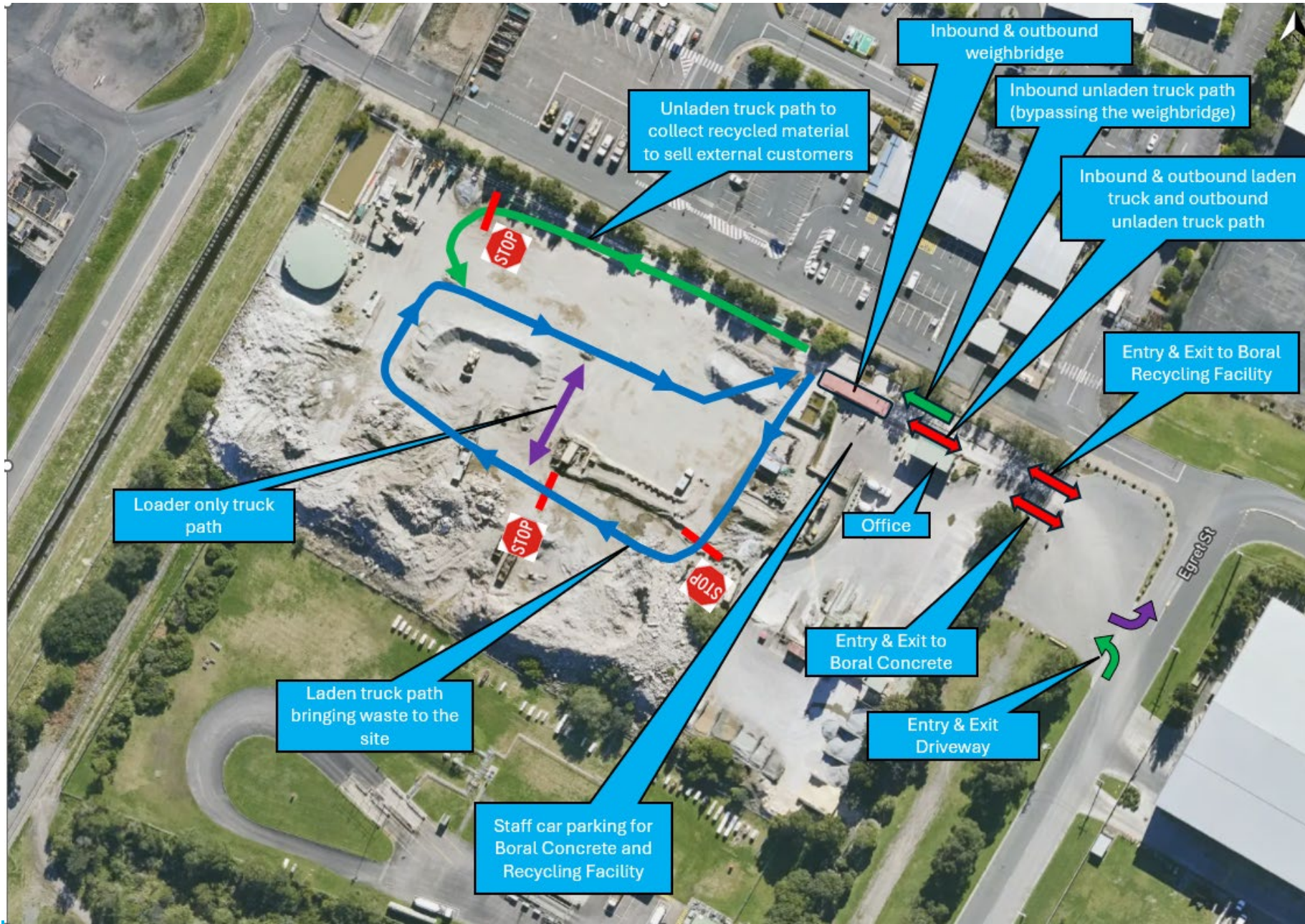
5 Traffic management

5.1 Site access

Access to the site is provided by Egret Street. After entering the site, all heavy vehicles carrying recyclable materials are weighed at the weighbridge where a visual inspection of the load occurs. Once the inspection is complete, trucks proceed in a clockwise direction to the incoming material stockpile area to unload materials where a second inspection occurs on the load in accordance with the *Boral Recycling: Inspection and Receipts Protocol, 2015* (blue line in Figure 5.1). After unloading, unladen trucks proceed to the weighbridge for weight check, the details are recorded in the monitoring system and the truck can then leave the site via Egret Street.

Unladen trucks arriving the site to collect recycled materials, may proceed without accessing the weighbridge if they have an unladen weight recorded at the site. If the truck has not previously visited the site, they will need to be weighed on the weighbridge. The trucks then travel in an anticlockwise direction (green line in Figure 5.1). After collecting the load, they merge with the receivable trucks and proceed towards the weighbridge to be weighed and then leave the site via Egret Street.

To manage the site efficiently and in a safe manner, 'Stop' signs are placed in strategic locations (Figure 5.1). All Boral staff, equipment operators and truck drivers using the facility must have access to a UHF Radio when working at the site. The use of UHF radios provides communication between heavy vehicles, equipment operators, tipping inspectors and weighbridge operators when accessing and egressing the site.



Source: Metromap

Figure 5.1 Truck circulation within the site

5.2 Operating hours

The facility is approved to operate 24 hours Monday to Saturday, with no operational work to occur on Sundays or public holidays. Maintenance activities are permitted to occur between 6:00 am and 6:00 pm on Sundays.

5.3 Car parking

The facility has sufficient parking for all workers to park within the site. The increased production of the site may result in an increase of one additional staff member who will be able to park in the existing car park, without requiring parking on Egret Street or any nearby public road.

Trucks are not parked on site overnight. Vehicles parked on-site overnight are limited to those associated with operations ie. excavator / forklift.

5.4 Heavy Vehicle parking

Given the nature of the business and its operational functions, there is no requirement for trucks/heavy vehicles to park on-site. All trucks/heavy vehicles carrying recyclable materials are weighed at the weighbridge, where a visual inspection of the load occurs. Once the inspection is complete, trucks/heavy vehicles proceed in a clockwise direction to the incoming material stockpile area to unload materials where a second inspection occurs. After unloading, unladen trucks proceed to the weighbridge for weight check, the details are recorded in the monitoring system and the truck/heavy vehicle exits the site via Egret Street.

5.5 Visitors to the site

All visitors must report to the site office before entering the site. Away from the office, all visitors are accompanied by site personnel for safety reasons.

5.6 Tipping area

Heavy vehicles and plant operators interact while unloading and inspecting waste in the tipping area.

The tipping area is managed by the tipping inspector.

There is constant communication between the tipping inspector, load shifting plant/equipment and heavy vehicles loading/unloading within the tipping area. The use of UHF radios significantly reduces the risk of vehicular/pedestrian conflict.

Site workers must not approach mobile plant and equipment within 5 to 10 m (where practicable) until UHF or signalling the operator and they have understood and agreed to their request to approach. Mobile plant operators must also stay 5 to 10 m away from other site workers (where practicable) until they have been advised by the worker that they are aware of the proposed plant movement.

Mobile plant operators/heavy vehicle drivers must not get out of their vehicles in the weighbridge area or in the tipping area unless a spotter is present and all clear is given by the relevant weighbridge operators. No other Boral worker or visitor may enter the tipping area unless they are accompanied by a tipping inspector with a UHF radio.

All staff are educated through the WHS induction process and are aware of mobile plant operator blind spots.

Truck drivers must follow the instructions of the onsite personnel (Figure 5.2).



Figure 5.2 Instructions to the truck drivers

5.7 Weighbridges

There is one combined entry and exit weighbridge to the site.

Empty trucks arriving to the site to collect recycled materials may not need to use the weighbridge if they have previously been to the site. Therefore, the site operates efficiently with the one weighbridge.

With the increased production, one weighbridge is considered to be sufficient given there are approximately 100 m between the site driveway on Egret Street and front of the weighbridge which can accommodate approximately 4 to 5 medium sized trucks (Figure 5.1). However, to prevent any queuing of vehicles waiting to enter the tipping area, the weighbridge operator and tipping inspector ensure that all heavy vehicles are stopped at an appropriate area to allow other heavy vehicles within the tipping area to tip and then exit.

There will be ongoing communication on UHF radio between weighbridge operator, tipping inspector and all load shifting plant/equipment, as well as heavy vehicles waiting to progress into the tipping area.

5.8 Wheel wash bay

A wheel wash bay is at the weighbridge to ensure all outbound laden trucks are clean and do not track material onto public roads.

5.9 Vehicle and pedestrian incidents

There is no pedestrian footpath in the vicinity of the vehicular entrance from Egret Street, hence there is minimal potential vehicular/pedestrian interaction at the driveway entrance. The area is surrounded by Industrial premises and pedestrian traffic is minimal along the front of the site.

Pedestrian access into the site is provided from the front gate with signage and safety gates to stop and warn of potential vehicular interactions when crossing the site access road. To ensure safety, the speed limit within the site is 10 km/h.

If an incident involving a vehicle and/or a pedestrian occurs within the site, Boral will follow the *HSEQ 3-02 Incident Reporting Investigation and Action Management* standard and protocol. All workers are trained to this standard. This includes reporting all vehicle and pedestrian incidents immediately.

Should there is an incident on site, the scene will be preserved until such time that it has been allowed to be cleared following approval from the site's manager/supervisor or in cases of major incidents, an approved delegated person will handle the situation which may be an internal or external person depending on the incident.

5.10 Traffic generation and potential queuing

As recyclable materials are sourced only from registered customers, most of the materials arrive in larger trucks rather than smaller trucks or private vehicles, thereby reducing the number of vehicle trips generated. On average, each truck remains on the site for maximum 10 to 15 minutes.

The *Traffic Impact Assessment* (ARC Traffic + Transport YEAR) estimated that the site will generate 318 heavy vehicle movements per day for the increased production limit. In addition, staff and visitors will generate additional 30 movements per day which equates to 348 movements per day (inbound and outbound). The estimated 318 trucks trips or 159 inbound per day equates to approximately 16 inbound movements on a typical peak hour (assuming 10% movement will occur during the peak hours). This equates to one truck in every 3 to 4 minutes.

With the 100-m long queuing storage space between Egret Street and the weighbridge, one truck in every 3 to 4 minutes is unlikely to have any potential queuing on Egret Street or any other adjoining public road as some of the unladen trucks will bypass the weighbridge to enter into the site.

In the worst scenario, should there is any queuing stretching back to Egret Street, truck drivers are instructed to drive around the area and come back later, rather than stay behind the queue and potentially impacting the traffic operation along Egret Street.

5.11 Haulage routes

The site is surrounded by TfNSW approved 26 m long B-double truck routes (Figure 5.3). The general inbound route is Cormorant Road – Egret Street and the general outbound route is Egret Street – Raven Street – Curlew Street – Cormorant Road. Hence, there is no potential for using any local residential street which may cause any residential amenity issues at the vicinity of the site.



Figure 5.3 TfNSW approved 26 m long B-double route in the vicinity of the site

5.12 Mobile plant requirements

The General Manager/Operations Manager are to ensure that all Boral mobile plant equipment have the following fully operational safety equipment:

- mirrors
- reverse beepers
- flashing light beacons
- seat belts
- roll-over protective structures (ROPS)
- falling object protective structures (FOPS).

5.13 Training requirements

In order for this OTMP to be fully effective, all staff, contractors and visitors will need to be aware of the requirements and expectations. This requires education and awareness for all persons that work at or visit the site.

New staff will be provided with training/awareness sessions with regards to this OTMP on induction, and regularly thereafter in toolbox talks and staff meetings. The key components of this OTMP will also be conveyed regularly to contractors and visitors interacting with the site.

Any workers conducting traffic control of heavy vehicles will be adequately trained as required by the legislation.

6 Driver code of conduct

6.1 Purpose of the code

The Driver Code of Conduct (Code) outlines procedures to ensure that truck drivers adhere to the designated transport routes and implement safe driving practices.

It is a condition of employment and use of the facility that all employees, users and contractors are aware of the Code and that they drive responsibly and adhere to the Code. All drivers will be trained in the requirements of the Code and audits of the compliance with the Code will be regularly conducted. All drivers reported or found to be acting in a manner contrary to the Code will be subject to disciplinary action.

6.2 General requirements

Heavy vehicle drivers accessing the site must:

- undertake a site induction carried out by an approved member of the site's staff or suitably qualified person under the direction of the site's management
- hold a valid driver's licence for the class of vehicle they are driving
- operate the vehicle in a safe manner within and external to the site
- adhere to designated transport routes
- not park on street, verges, or footpaths in the vicinity of the site or when accessing the site
- not load or unload from the public roadway when accessing the site
- comply with all directions of authorised site personnel when within the site.

6.3 Heavy vehicle speed

The site speed limit is 10 km/h.

Drivers are to observe the posted speed limits on all public roads with speed adjusted appropriately to suit the road environment and prevailing weather conditions, to comply with the Australian Road Rules. The vehicle speed must be appropriate to ensure the safe movements of the vehicle based on the vehicle configuration.

In addition, all drivers and truck operators working for or on behalf of Boral are to be made aware of the Three Strikes Scheme (<https://www.aic.gov.au/sites/default/files/2020-05/tandi446.pdf>) introduced by the Australian government which applies to all vehicles over 4.5 tonnes. When a heavy vehicle is detected travelling at 15 km/h or more over the posted or relevant heavy vehicle speed limit by a mobile police unit or fixed speed camera, TfNSW will record a strike against that vehicle. If three strikes are recorded within a three-year period, TfNSW will act to suspend the registration of that vehicle (up to three months).

6.4 Driver fatigue

Fatigue is one of the biggest causes of crashes for heavy vehicle drivers. The National Heavy Vehicle Accreditation Scheme (<https://www.nhvr.gov.au/safety-accreditation-compliance/national-heavy-vehicle-accreditation-scheme>) allows heavy vehicle operators the choice of operating under three fatigue management schemes: Standard Hours of Operation; Basic Fatigue Management (BFM); and Advanced Fatigue Management (AFM). All heavy vehicle drivers operating at the site must be aware of their adopted fatigue management scheme and operate within its requirements.

Fatigue includes (but is not limited to):

- feeling sleepy
- feeling physically or mentally tired, weary or drowsy
- feeling exhausted or lacking energy
- behaving in a way consistent with any of the above.

6.5 Heavy vehicle control

The following controls will apply to truck operators to minimise the impact of noise from truck transport:

- Compression brakes not to be used in the vicinity of residential areas.
- Tailgates must be locked and secured to avoid noise or spillage.
- Always observe the posted speed on site and the local road network.
- No tailgating is permitted – a 3 second gap is to be observed at all times.
- Equipment to be used must be fit for the purpose.
- Drivers to obey the operating hours outlined in Section 5.2.
- All trucks to turn off the engines while waiting to enter into the site.

6.6 Load covering

Loose material on the road surface has the potential to cause road crashes and vehicle damage. All loaded vehicles entering or leaving the site must be effectively covered for the duration of the trip. The load cover may be removed upon arrival at the delivery site. All care is to be taken to ensure that all loose debris from the vehicle body and wheels is removed prior to leaving the site and again after unloading.

Drivers must ensure that the tailgate is locked before leaving the site. Site management is to monitor loose material on the side of the vehicle route from facility operations and take appropriate action (removal or suppression) regularly.

6.7 Cleanliness

All loaded vehicles are to be inspected by the site supervisor prior to leaving the site for cleanliness. Any materials that could fall on the road should be removed prior to leaving the site. It is noted that all outgoing vehicles will traverse through a wheel wash to ensure contaminants are contained on-site.

6.8 Breakdown and incidents

In the case of a breakdown, the vehicle must be towed to the nearest breakdown point as soon as possible. All breakdowns must be reported to the Site Manager and the vehicle protected in accordance with the [Heavy Vehicle Drivers Handbook](#).

6.9 Complaint management

There is complaint management system to engage in active community consultation and maintain positive relations with local residents/businesses for the site.

The purpose of this system is to minimise complaints by addressing their concerns upfront and monitor the environmental performance of the site. The complaint management system is detailed in the site Operational Environmental Management Plan.

6.10 Registering complaints

Any enquiries or complaints made by members of the public to site personnel will be directed to the Site Manager.

Complaints may be made to the direct line (1300 002 662) during business hours. These numbers are provided on a sign at the site entrance.

6.11 Complaint response

Any complaint received regarding noise impacts will be acted on within 24 hours in the following manner:

- details of the complaint (date, time, specifics, complainants contact details) will be recorded
- activities occurring during the complaint period will be investigated
- findings of operations during the complaint period will be recorded in the complaints register
- relevant management practices will be reviewed as necessary
- with findings of the review will be communicated to the complainant.

6.12 Complaints register

The managerial roles at the site will periodically review truck movements and compliance with the Drivers Code of Conduct (DCoC). Any complaints or non-compliances found with the DCoC will trigger a review of the DCoC and additional training requirements.

The details of any complaint will be logged in the complaints register, with investigation findings and actions noted.

The record of a complaint will be kept for at least four years after the complaint was made. The record will be produced to any authorised officer of the EPA who asks to see them.

Should the complaint be relevant to any of the conditions of the Approval, it will be handled as per the Approval conditions relevant to that environmental aspect.

Annexure A

Port of Newcastle email

From: Verity Blair
To: Abdulhish Uddin
Cc: Nadia Eisenlohr
Subject: Fw: Review of Boral's Operational Traffic Management Plan
Date: Thursday, 8 May 2025 10:55:45 AM
Attachments: Outlook-mm4n3a3v.onq
image.png
image0581n79.png
Outlook-3ok1osu.onq
Kooragang Recycling_OTMP.pdf

From: Glenn Cook
Sent: Wednesday, April 30, 2025 4:02 PM
To: Verity Blair
Subject: Fw: Review of Boral's Operational Traffic Management Plan

CAUTION: This email originated outside of the Organisation.

Verity,

Can you please address Port of Newcastle comments in an updated OTMP and OEMP for Kooragang Recycling.

Thanks,

GLENN COOK
Environmental Business Partner NNSW

Mobile: 0458 155 337
Email: glenn.cook@boral.com.au



Boral | Level 5, Trinitti 2, 39 Delhi Rd, North Ryde, NSW 2113

From: Megan Carroll <megan.carroll@pon.com.au>
Sent: Monday, April 28, 2025 6:17 PM
To: Glenn Cook <glenn.cook@boral.com.au>
Cc: Alicia Marix-Evans <Alicia.Marix-Evans@pon.com.au>; Sarah Fitzpatrick <sarah.fitzpatrick@pon.com.au>; Simon Turner <simon.turner@pon.com.au>
Subject: FW: Review of Boral's Operational Traffic Management Plan

CAUTION: External message. Exercise caution with links and attachments.

Hi Glenn,

Report Suspicious

Thank you for sending the draft OTMP through for a review.

We have reviewed the OTMP, and our comments are as follows:

- Can section 4.3 please be updated so that any hazards, unsafe acts or incidents arising from Boral's operations and occurring on Egret Street, Raven Street or Curlew Street are reported to Port of Newcastle as soon as possible on 02 47908 2300.
- Can section 5.9 please clarify there is to be no queuing or parking of vehicles on Egret Street (except with the express consent of PON) or the surrounding road network.
- Will the trucks queuing on Boral's site turn their engines off while waiting?
- Section 6.7 states that all loaded vehicles are to be inspected prior to leaving site – who will be carrying out these inspections?

Please let me know if you would like to discuss any of the above.

Regards,

Megan Carroll
Property & Compliance Manager



Mob: +61 459 328 531
Address: Level 4, 251 Wharf Road Newcastle New South Wales 2300
Email: megan.carroll@pon.com.au
Web: www.pon.com.au

Located on Awabakal and Worimi Country

The contents of this email (including all attachments) are confidential and intended for the sole receipt and attention of the person named within the document as addressee. This email may be subject to a claim for legal professional privilege and such confidentiality or claim is not lost because the email has been sent to you by mistake.

From: Glenn Cook <Glenn.Cook@boral.com.au>
Sent: Thursday, 10 April 2025 10:14 AM
To: Megan Carroll <megan.carroll@pon.com.au>
Subject: Fw: Review of Boral's Operational Traffic Management Plan

Megan,

The requested information is provided below with the OTMP attached.

Regards,
Glenn

GLENN COOK
Environmental Business Partner NNSW

Mobile: 0458 155 337
Email: glenn.cook@boral.com.au



Boral | Level 5, Trinitii 2, 39 Delhi Rd, North Ryde, NSW 2113

From: Glenn Cook <Glenn.Cook@boral.com.au>
Sent: Wednesday, April 9, 2025 3:59 PM
To: info@pon.com.au <info@pon.com.au>
Subject: Review of Boral's Operational Traffic Management Plan

Dear Port of Newcastle,

In accordance with the development consent for Boral's Kooragang Recycling facility located at 1/24 Egret Street Kooragang, Boral are required to develop an Operational Traffic Management Plan (OTMP).

As part of the conditions of the development consent (SSD 7083) we are required to consult with the Port of Newcastle on the OTMP (refer to condition B33 below).

Operational Traffic Management Plan

B33. Prior to the commencement of Stage 1 operations, the Applicant must prepare an Operational Traffic Management Plan (OTMP) for the Development to the satisfaction of the Planning Secretary. The plan must form part of the OEMP required by condition C5 and be prepared in accordance with condition C1. The OTMP must:

- (a) be prepared by a suitably qualified and experienced person(s);
- (b) be prepared in consultation with Port of Newcastle (PON);

Please note, we have finalised a draft of the OTMP and have attached a copy of the OTMP for your review.

Can you please review the attached document and provide any comments on the OTMP by **30 April 2025**.

We appreciate your assistance with the review of the attached OTMP. Please reach out to myself on the number below if you need any further information or have any questions regarding this request.

Regards,

GLENN COOK
Environmental Business Partner NNSW

Mobile: 0458 155 337
Email: glenn.cook@boral.com.au



Boral | Level 5, Trinitii 2, 39 Delhi Rd, North Ryde, NSW 2113

From: Glenn Cook <Glenn.Cook@boral.com.au>
Sent: Tuesday, April 8, 2025 10:13 AM
To: info@pon.com.au <info@pon.com.au>
Subject: Review of Traffic Management Plan

Good morning,

As discussed, I work for the Boral Recycling Facility located on Egret St Kooragang and we have developed an Operational Traffic Management Plan (OTMP) in accordance with our Development Consent requirements. We have recently developed a draft of the management plan and our consent requires input from PoN.

Are you able to advise who I could contact to discuss and finalise this with.

Thanks,

GLENN COOK
Environmental Business Partner NNSW

Mobile: 0458 155 337
Email: glenn.cook@boral.com.au



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emmconsulting.com.au

Appendix C

Air Quality Management Plan

Kooragang Recycling Facility

Air quality management plan

Prepared for Boral Recycling (NSW/ACT) Pty Ltd

February 2026

Kooragang Recycling Facility

Air quality management plan

Boral Recycling (NSW/ACT) Pty Ltd

E240898 RP4

February 2026

Version	Date	Prepared by	Reviewed by	Comments
1	7 March 2025	Scott Fishwick	Verity Blair	Draft
2	25 March 2025	Scott Fishwick	Verity Blair	Final
3	10 September 2025	Zainab Ahmed	Nadia Eisenlohr	Updated to address DPHI comments
4	19 December 2025	Zainab Ahmed	Verity Blair	Updated to address DPHI comments
5	6 February 2026	Nadia Eisenlohr	Scott Fishwick	Updated to address DPHI comments
6	26 February 2026	Nadia Eisenlohr	Scott Fishwick	Updated to address DPHI comments

Approved by



Scott Fishwick

Associate Director

26 February 2026

Level 10 201 Pacific Highway

St Leonards NSW 2065

ABN: 28 141 736 558

This report has been prepared in accordance with the brief provided by Boral Recycling (NSW/ACT) Pty Ltd and, in its preparation, EMM has relied upon the information collected at the times and under the conditions specified in this report. All findings, conclusions or recommendations contained in this report are based on those aforementioned circumstances. This report is to only be used for the purpose for which it has been provided. Except as permitted by the *Copyright Act 1968* (Cth) and only to the extent incapable of exclusion, any other use (including use or reproduction of this report for resale or other commercial purposes) is prohibited without EMM's prior written consent. Except where expressly agreed to by EMM in writing, and to the extent permitted by law, EMM will have no liability (and assumes no duty of care) to any person in relation to this document, other than to Boral Recycling (NSW/ACT) Pty Ltd (and subject to the terms of EMM's agreement with Boral Recycling (NSW/ACT) Pty Ltd).

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ABN: 28 141 736 558

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Source contribution to annual particulate matter emissions

5

1 Introduction

Boral Recycling (NSW/ACT) Pty Ltd (Boral) operates the Kooragang Recycling Facility (the facility) located at 1/24 Egret Street, Kooragang Island. The facility is located within Lot 12 DP 1032146, approximately 5 kilometres (km) north north-west of the Newcastle Central Business District. Approval for the development of Stage 1 of the facility was granted by the NSW Department of Planning, Housing and Industry (DPHI, then Department of Planning, Industry and Environment) under development consent SSD 7038, approved in July 2019, and Environment Protection Licence (EPL).

Condition B38 and B39 of SSD 7038 requires that an air quality management plan (AQMP) is prepared, to form part of an overall operational environmental management plan (OEMP) for the facility prior to commencement of Stage 1 and Stage 2 operations.

EMM has been engaged by Boral to prepare the AQMP for the facility. This AQMP has been prepared by Scott Fishwick, EMM Consulting Pty Ltd (EMM) on behalf of Boral.

Table 1.1 provides a summary of where the consent conditions relevant to air quality are addressed in the AQMP. Scott has over 19 years' experience as an air quality consultant, specialising in atmospheric dispersion modelling, air quality impact assessments, meteorological processes and air quality management plans.

This AQMP has been developed to meet the requirements listed in Conditions B38 and B39 and to support operational conditions C5–C7 (Schedule C) of development consent SSD 7038. This AQMP is a subplan to the overarching OEMP. The condition requirements and where they have been addressed in this plan are summarised in Table 1.1.

The objective of the AQMP is to establish a framework for environmental management in accordance with the consent, as well as to meet the requirements of Boral's Health, Safety, Environment and Quality (HSEQ) management system. This AQMP covers Stage 1 of the development and applies to a receipt and processing capacity at the facility of up to 350,000 tonnes (t) of general solid waste (non-putrescible) per annum (tpa) and storage of up to 100,000 t of general solid waste (non-putrescible) at any one time.

Table 1.1 Air quality approval conditions

Condition	Relevant section of AQMP
B35 The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.	Noted
B36 The Applicant must ensure that: a) all on-site roads and car parking areas are sealed with concrete or asphalt b) water sprinklers at the stacker above the processed stockpile and transfer points must be utilised at all times when the plant is operational c) exposed surfaces and stockpiles are suppressed by regular watering d) sealed roads are swept regularly e) maintain the seal on the main access road from the wheelwash and weighbridge f) a water cart will remain onsite for use on manoeuvring areas in hot and dry weather g) all trucks entering or leaving the site with loads have their loads covered h) trucks associated with the development do not track dirt onto the public road network i) public roads used by these trucks are kept clean j) land stabilisation works are carried out progressively on site to minimise exposed surfaces.	Addressed in Section 4.1
B37 The Applicant must install and operate equipment in line with best practice to ensure that the development complies with all load limits, air quality criteria/air emission limits and air quality monitoring requirements as specified in the EPL applicable to the site.	Section 3.2 and Section 4.3

Condition	Relevant section of AQMP
B38 Prior to the commencement of Stage 1 and Stage 2 operations, the Applicant must prepare an Air Quality Management Plan (AQMP) to the satisfaction of the Planning Secretary. The plan must form part of the OEMP required by condition C5 and be prepared in accordance with condition C1. The AQMP must:	This AQMP
a) be prepared by a suitably qualified and experienced person(s) whose appointment has been endorsed by the Planning Secretary	Chapter 1
b) detail and rank all emissions from all sources of the development, including particulate emissions	Chapter 2
c) describe a program that is capable of evaluating the performance of the operation and determining compliance with key performance indicators	Chapter 3 and Chapter 4
d) identify the control measures that that will be implemented for each emission source	Section 4.1, Table 4.1
e) nominate the following for each of the proposed controls:	-
i) key performance indicator	Section 2.3
ii) monitoring method	Section 4.5, Table 4.2
iii) location, frequency and duration of monitoring	Section 4.5, Table 4.2
iv) record keeping	Section 4.5, Table 4.2
v) complaints register	Section 3.3
vi) response procedures	Section 3.4 and Section 4.5, Table 4.2
vii) compliance monitoring.	Section 4.5, Table 4.2
B39 The Applicant must:	Chapter 5
a) not commence operation until the AQMP required by condition B38 is approved by the Planning Secretary	
b) implement the most recent version of the AQMP approved by the Planning Secretary for the duration of the development.	
B40. The Applicant must ensure the development does not cause or permit the emission of any offensive odour (as defined in the POEO Act).	Section 4.4

2 Emission sources

2.1 Facility operations

The facility operates as a waste recovery centre, accepting general solid waste (non-putrescible), delivered to the facility by trucks. Material accepted at the facility is primarily construction and demolition (C&D) waste, as well as recovered aggregate.

Incoming trucks enter site via a weighbridge, where the load is observed by Boral personnel from an elevated platform. Accepted loads are permitted to enter site, while 'unfavourable' loads (i.e. loads containing asbestos, high clay or liquid content, steel etc.) are rejected.

From the weighbridge, trucks travel to the material receivals area, where they are unloaded at the relevant material type stockpiling area. Larger concrete pieces are broken down by excavator. Material is transferred to the crushing and screening circuit hopper via front-end loader (FEL) and processed.

2.2 Operating hours

The operating hours of the recycling facility are shown in Table 2.1.

Table 2.1 Hours of operation

Activity	Day	Hours
Stage 1 operation	Monday to Saturday	24 hours
	Sunday	6:00 am to 6:00 pm Maintenance only

2.3 Performance criteria

Performance criteria for waste management relate to the volumes and stored quantities and type of waste permitted, as specified in the development consent SSD 7038 and EPL 11968. Relevant criteria are presented in Table 2.2.

Table 2.2 Volume and storage of waste

Aspect	Criterion
Volume of waste permitted on the site at any one time ¹	100,000 t
Volume of waste permitted to be received or processed per year	350,000 t
Maximum stockpile height	15 m above ground level

Notes: 1. Until Stage 2 construction is complete, following which 144,000 t of waste may be stored at one time.

Performance criteria for air quality management are specified in Table 2.3.

Table 2.3 Key performance indicators

Key performance indicator	Measure
Minimisation of dust generation from materials handling processes	Regular use of water sprays and water cannons during materials handling activities Regular deployment of street sweeper and water cannons to paved surfaces, in particular transport routes around site
No track out of material to public roads	Any observed spillage or tracking onto public roads will be removed within 24 hours Regular monitoring of wheel wash water to ensure minimal sediment levels
Minimise wind-blown dust generation	All stockpiles to be kept below the maximum allowable height of 15m and suppressed by regular watering Daily weather monitoring to ensure appropriate measures are deployed during adverse conditions
No emission of offensive odour	No odour complaints that can be attributed to the facility
No air quality complaints made without analysis and response	Detailed response to all complaints listed in complaints register
Annual average dust deposition below 4 g/m ² /month	No site-generated dust deposition exceedances, confirmed through data analysis and investigation

2.4 Particulate matter emissions sources

An air quality impact assessment (AQIA) was completed by SLR Consulting Pty Ltd in 2015 (SLR AQIA) for the facility. The SLR AQIA included quantification of particulate matter emissions and atmospheric dispersion modelling to predict impacts to the surrounding environment.

Section 7.1 of the SLR AQIA identified the following sources of particulate matter emissions:

- materials handling:
 - assorted material transfers:
 - truck dumping of raw material onto stockpiles
 - handling of raw material
 - loading the crusher with raw material
 - crushing and screening
 - handling of material from the crushing/screening process
 - stockpiling material
 - loading trucks with final product for transportation off-site
- wind erosion:
 - wind erosion from raw material and final product stockpiles

- haulage:
 - hauling raw materials onto site on sealed hard-stand
 - hauling final product off-site on sealed roads.

Particulate matter emissions from these sources were quantified for three size fractions in the SLR AQIA, namely:

- total suspended particulates (TSP)
- particulate matter with an equivalent aerodynamic diameter of 10 micrometres (PM₁₀)
- particulate matter with an equivalent aerodynamic diameter of 2.5 micrometres (PM_{2.5}).

The contribution to total annual TSP, PM₁₀ and PM_{2.5} emissions from each category by particle size fraction is illustrated in Figure 2.1. From this analysis based on calculations from the SLR AQIA, the wind erosion of stockpiled material is the largest particulate matter emission sources at the facility. Material handling (including crushing and screening) also is a significant contributor to TSP emissions.

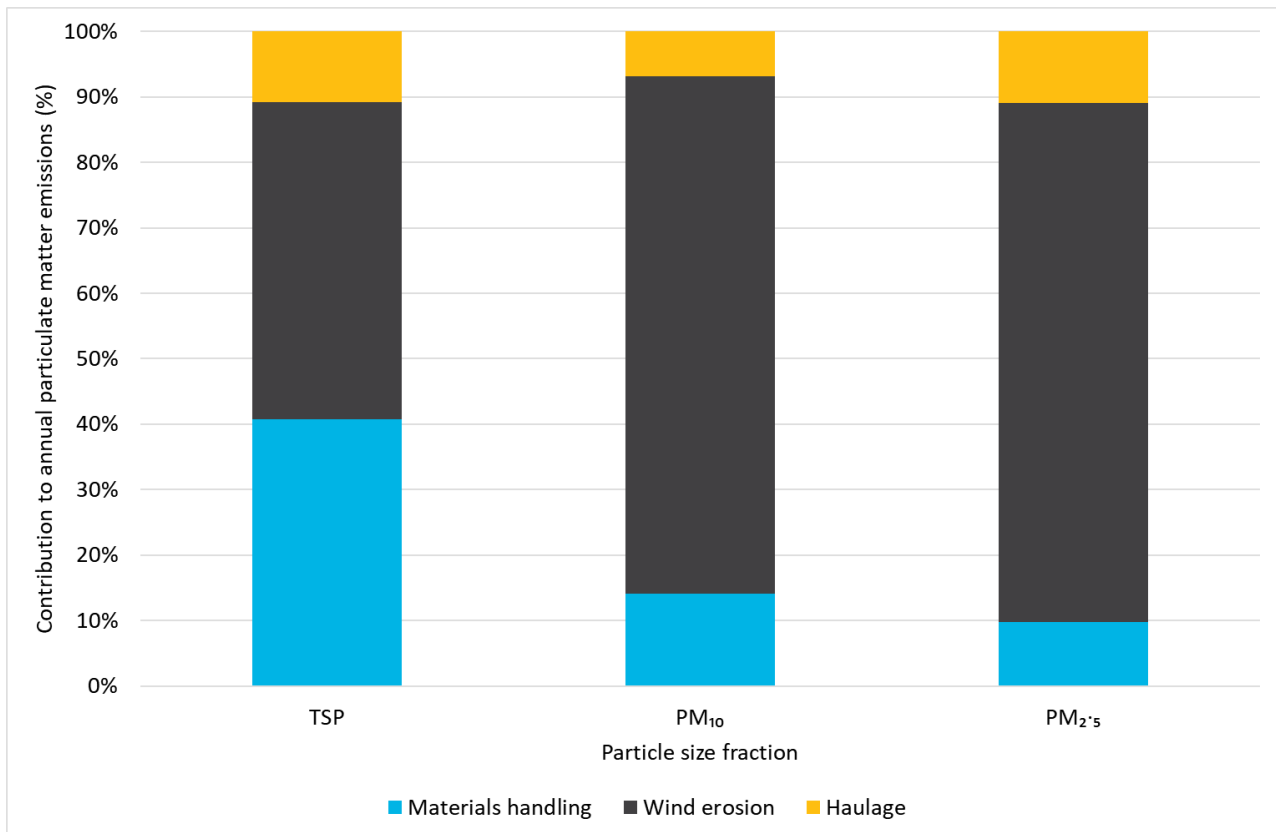


Figure 2.1 Source contribution to annual particulate matter emissions

The SLR AQIA noted that no background dust deposition data was available for the facility or for the wider region. The SLR AQIA assumed a background dust level of 2 g/m²/month for the region, which resulted in the cumulative assessment criterion of 4 g/m²/month being the defining criterion for the Project. It is noted that Boral established two dust deposition gauges at the facility in 2024. Further discussion relating to dust deposition monitoring is provided in Chapter 3.

3 Management and incident reporting

3.1 Air quality management

Air quality resulting from the facility operations and/or maintenance is managed to minimise its impact on the amenity of the local environment, and to prevent adverse environmental and/or health impacts. Boral HSEQ procedure *GRP-HSEQ-8-06 Air Management* element provides air management practices for all Boral sites. The minimum mandatory requirements under this guideline are as follows:

- Air quality shall be managed at all sites, documenting operations and maintenance of pollution control equipment.
- All emissions to air (point source and fugitive) shall meet regulatory requirements and where required, applicable air quality data shall be reported to relevant regulatory agencies.
- All complaints, incidents and breaches shall be reported, documented, investigated and appropriately actioned.

All site personnel will be informed (through the site induction) that they must minimise dust on site for the health and safety of themselves and the surrounding community. Visual dust monitoring will be the responsibility of all site personnel, works creating dust plumes should be brought to the attention of the site supervisor, who will implement mitigation measures to avoid further dust plumes.

Dust deposition gauges are positioned at the north-western and eastern corners of the facility. Dust deposition gauges will be operational at all times for the entirety of the project. Monitoring of dust deposition rates, linked to the insoluble solids metric, is conducted continually throughout the year, with sample flasks changed on a 30 day \pm 2 day routine. The applicable NSW EPA impact assessment criterion for dust deposition is 4 grams/square metre/month ($\text{g}/\text{m}^2/\text{month}$), expressed as an annual average. This criterion has been adopted by the facility as there is no air quality emission criteria listed in the EPL or Development Consent.

All monitoring will be undertaken in accordance with the Approved Methods for the Sampling and Analysis of Air Pollutant in NSW (NSW EPA 2022) and as required by the EPL.

3.2 EPL requirements

EPL 11968 identifies the following air quality-related requirements for monitoring at the facility:

M4.1 At the point(s) identified below, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1 of the table below, using the corresponding sampling method, units of measure, averaging period and sampling frequency, specified opposite in the Columns 2, 3, 4 and 5 respectively.

Point 1:

Parameter	Sampling method	Units of measure	Averaging period	Frequency
Wind speed at 10 metres	AM-2 & AM-4	metres per second	-	Continuous
Wind Direction at 10 metres	AM-2 & AM-4	Degrees	-	Continuous
Temperature at 10 metres	AM-2 & AM-4	Degrees Celsius	-	Continuous

M4.2 The licensee must ensure that the meteorological station on the premises complies with the requirements in the latest version of the *Approved Methods of Sampling of Air Pollutants in New South Wales*

Regarding odour emissions, EPL 11968 contains the following requirement:

L4.1 The licensee must not cause or permit the emission of offensive odour beyond the boundary of the premises.

It is noted that EPL 11968 contains no emission load limits, air quality criteria, air emission limits or air quality monitoring requirements.

3.3 Complaints reporting

Any complaint received by Boral regarding dust or odour impacts from the facility will be acted on within 24 hours in the following manner:

- Details of the complaint (date, time, specifics, complainants contact details) will be noted.
- Activities occurring during the complaint period to be investigated.
- Log findings of operations during the complaint period in the complaints register. Review relevant management practices as necessary.
- Respond to complainant with findings of the review.

The details of any dust or odour related complaint will be logged, with investigation findings and actions noted. The record of a complaint must be kept for at least 4 years after the complaint was made. The record must be produced to any authorised officer of the EPA who asks to see them.

All complaints received will be listed in the EPL Annual Return. A verified complaint would be treated as an air quality incident which would be directly reported to the Department of Planning Housing & Infrastructure (DPHI).

3.4 Air quality incident definition and response

As stated previously, a verified complaint that is deemed to be the direct result of operational emissions from the facility will be classified as an air quality incident. Within 24 hours of an air quality incident, an initial letter report outlining basic details of the incident will be sent to the DPHI. As per Condition 11 and Appendix 3 of the Development Consent, within seven days of an incident, a detailed report will be prepared and submitted to the DPHI documenting incident investigation findings, causes of the incident and additional mitigation measures proposed to prevent a reoccurrence. Further detail about incident and non-compliance management can be found in Section 7 of the OEMP.

A register of verified incidents will be maintained by Boral and made available for review on request.

3.5 Roles and responsibilities

Facility personnel are responsible for monitoring the performance of onsite air quality (dust and odour) mitigation measures on a day-to-day basis. Responsibilities for air quality emission management are outlined in Table 3.1 below.

Table 3.1 Air quality roles and responsibilities

Role	Responsibilities
Site Manager – Recycling	<ul style="list-style-type: none"> • managing vehicle speed movements • restricting operations during periods of strong wind • utilising spray systems when required for receipt, stockpiling and processing activities • arranging or street sweeping of hardstand/roads when required • maintain effectiveness of wheel wash by monitoring water levels and the removal of sedimentation when necessary • arranging for watering of the pavement to reduce dust when appropriate • regular monitoring of odour levels in the facility • cleaning of the waste storage/processing areas • arranging the removal of residual waste • reducing odours by the use of portable odour neutralising sprays when appropriate.
Recycling Operations Manager	<ul style="list-style-type: none"> • implementing this management plan • auditing the site on a regular basis to ensure compliance with the OEMP for air and odour emissions • coordinating investigation of the dust or odour complaints with the Site Supervisor/Manager • documenting the results of the investigation and actions taken • maintaining the records of the dust and odour complaints • liaison with the complainant regarding the steps to be taken to minimise further air pollution emissions where appropriate • ensuring that the nominated officers have been trained in the requirements of this procedure.
Site Supervisor	<ul style="list-style-type: none"> • regular visual monitoring of the dust levels at the facility • completion of a complaint form if dust or odour complaint is received • coordinating with the Site Manager to ensure the complaint is investigated.
All site personnel	<ul style="list-style-type: none"> • reporting all incidents, near misses and hazards • comply with all environmental policies, procedures and instructions • participate in environmental training, meetings and toolboxes.

4 Mitigation measures and monitoring

4.1 Dust mitigation measures

Condition B36 of the SSD 7038 consent requires that Boral must ensure that the following particulate matter mitigation measures are implemented at the facility:

- a) all on-site carparking areas are sealed with concrete and asphalt
- b) water sprinklers at the stacker above the processed stockpile and transfer points must be utilised at all times when the plant is operational
- c) exposed surfaces and stockpiles are suppressed by regular watering
- d) sealed roads are swept regularly
- e) maintain the seal on the main access road from the wheelwash and weighbridge
- f) a water cart will remain onsite for use on manoeuvring areas in hot and dry weather
- g) all trucks entering or leaving the site with loads have their loads covered
- h) trucks associated with the development do not track dirt onto the public road network
- i) public roads used by these trucks are kept clean
- j) land stabilisation works are carried out progressively on site to minimise exposed surfaces.

Condition B37 of the SSD 7038 consent requires that Boral must:

install and operate equipment in line with best practice to ensure that the development complies with all load limits, air quality criteria/air emission limits and air quality monitoring requirements as specified in the EPL applicable to the site.

Condition O3 of EPL 11968 outlines the requirements of dust management, as follows:

O3.1 All operations and activities occurring at the premises must be carried out in a manner that will minimise the generation of dust at the premises; and prevent the emission of dust from the premises.

O3.2 Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading.

O3.3 No material, including sediment is permitted to be tracked from the premises.

In order to meet these requirements, the management measures implemented at the facility are summarised in Table 4.1 below. The performance of all on-site mitigation measure technology will be routinely checked and serviced to maintain ongoing performance.

As stated in the EIS and in Condition 36 f of Development Consent SSD 7038, the Kooragang site is required to have a watercart to remain onsite for use in manoeuvring areas in hot and windy conditions. However, the site does not have a water cart for this practice. The site has instead upgraded the water cannon system located throughout the site with increased water cannons to enable the application of water to cover the internal road network and manoeuvring areas in hot and windy conditions.

Table 4.1 Emission source mitigation and control measures

Emission source category	Mitigation measures in place at the facility
Haulage	
Wheel generated dust – unpaved roads	<ul style="list-style-type: none"> • Wet suppression of haul roads is undertaken by the application of water via water cannons located throughout the site on a regular basis. • Travel speeds along all unpaved roads within the facility are limited to 15 km/hour. • Primary unsealed roads will be routinely maintained to minimise surface silt content and dust generation potential.
Wheel generated dust – paved roads	<ul style="list-style-type: none"> • All paved surfaces are routinely swept. The facility has a road sweeper that attends site regularly and as requested. • Wet suppression of internal haul roads is undertaken by the application of water via water cannons located throughout the site on a regular basis. • Travel speeds along all paved roads within the facility are limited to 10 km/hour. • All trucks leaving site must pass through a wheel wash facility prior to exiting to minimise tracking of material onto public roads.
Materials handling	
Material handling (truck unloading, handling by mobile plant, loading to trucks)	<ul style="list-style-type: none"> • The use of water sprays in the crushing and screening plant and at material stockpiles aids to increase the moisture content of product material and reduce the dust generation potential of material loaded to stockpiles and dispatched to market. • Minimise the fall distance of material from plant (excavator, front end loader, etc) to load point (truck, stockpile, etc). • Reduce or cease material handling activities under dry, windy conditions with excessive visual dust generation.
Material processing (crushing, screening, conveying)	<ul style="list-style-type: none"> • Water sprays are fitted at the crushing and screening plant. • Water sprays are fitted to the conveyor transfer points and product stockpile loadout. • Water cannons are used on crushing and screening areas to manage dust generation by wind from raw feed stockpiles. • Conveyor belts and transfer points will be routinely cleaned of overspill.
Wind erosion	
Wind erosion of stockpiles and exposed surfaces	<ul style="list-style-type: none"> • Water sprays are installed in the material stockpiling area. • Water cannons are used on crushing and screening areas to manage dust generation by wind from raw feed stockpiles. • Stockpile heights are limited to 15 m.

4.2 Mitigation during adverse weather conditions

From the perspective of dust emissions from the facility, adverse meteorological conditions are considered to be sustained periods of hot and dry weather and/or high wind speeds. A key environmental management responsibility of facility personnel, led by the Site Manager – Recycling, is the visual monitoring of dust emissions (Section 3.5 presents air quality emission management responsibilities).

In the event of adverse weather conditions, the facility foreman is required to maintain vigilance for visual dust emissions leaving the facility boundary and implement appropriate additional mitigation strategies. Additional mitigation measures will include the targeted use of water sprays and cannons at site to the identified dust emissions sources or the temporary restriction and/or cessation of the activity until the adverse weather conditions have eased.

4.3 Plant and equipment emission mitigation measures

All mobile plant and equipment owned and operated by Boral at the facility will be routinely serviced to ensure that fuel combustion emissions meet manufacturer emissions specifications on an ongoing basis. At a minimum, all Boral mobile plant and equipment will be serviced on an annual basis, with more frequent servicing conducted if required (e.g. occurrence of excessive smoky exhaust). Further, engine idling will be minimised wherever practicable. A register of all servicing to plant and equipment conducted will be established and maintained by Boral.

In accordance with Condition B37 of the SSD 7038 consent, equipment will be installed and operated in accordance with best practice to ensure that the development complies with all load limits, air quality criteria, air emission limits and air quality monitoring requirements as specified in the EPL applicable to the site.

4.4 Odour emissions - general

Condition B40 of SSD 7038 relates to the management of odour emissions and requires that Boral:

Must ensure the development does not cause or permit the emission of any offensive odour (as defined in the POEO Act).

The majority of material received by the facility would be inert C&D waste and therefore the potential for odour emissions is low. The facility is licensed to receive wastes as per EPL Licence Condition L2.1. The facility is not approved to undertake composting on site nor receive putrescible waste.

Storage of potentially odorous material, such as glass, will only be undertaken for a limited period of time, reducing the potential for odorous emissions impacting the surrounding area.

Measures implemented at the facility to reduce odour emissions from stockpiled materials include:

- regular monitoring of odour levels in the facility by site personnel
- cleaning of the waste storage/processing areas
- ensuring the removal or residual waste on a timely basis
- use of odour neutralising sprays as required.

4.5 Air quality monitoring

Ongoing monitoring of the facility's air quality is conducted daily by facility personnel through visual monitoring and proactive management of the facility's plant, equipment and processes.

Visual dust monitoring is undertaken at all times by the employees of the Recycling facility. In the event dust is observed by any of the employees, the employees can respond and address the issue by water application via water sprays and modifications to operations if required.

Dust deposition gauges will be operational at all times for the entirety of the project. Dust deposition samples will be gathered monthly.

Further detail on the monitoring tasks and mitigation and management measures alongside relevant performance indicators are listed in Table 4.2 below.

Table 4.2 Air quality monitoring

Monitoring task	Management	Responsibility	Record	Key performance indicator
Daily meteorological monitoring	<ul style="list-style-type: none"> To inform appropriate management measures for the weather conditions. 	Site Manager – Recycling	Meteorological station report/register	Minimise wind-blown dust
Daily visual monitoring of facility dust levels <ul style="list-style-type: none"> Undertaken at all times by the employees of the facility throughout the facility. In particular at: <ul style="list-style-type: none"> Materials handling areas, such as receival and processing areas Stockpiles Internal roads 	<ul style="list-style-type: none"> Vehicle speed movements. Restricting operations during periods of strong wind. Utilising spray and cannon systems when required for receival, stockpiling and processing activities. Watering of the pavement to reduce dust when appropriate. 	Site Manager – Recycling Site Supervisor	Site diary	Minimisation of dust generation from materials handling processes
Daily visual monitoring of the roads at entry and exit <ul style="list-style-type: none"> Undertaken at all times by the employees of the facilities of the internal and external roads at the entry and exit of the facility 	<ul style="list-style-type: none"> Street sweeping of hardstand/roads when required. 	Site Manager – Recycling Site Supervisor	Street sweeper schedule	No track out of material to public roads
Daily monitoring of wheel wash	<ul style="list-style-type: none"> Maintain effectiveness of wheel wash by ensure adequate water levels and the removal of sedimentation when necessary. 	Site Manager – Recycling Site Supervisor	Site diary by exception Cleaning schedule	No track out of material to public roads
Daily monitoring of odour levels in the facility	<ul style="list-style-type: none"> Cleaning of the waste storage/processing areas. Removal of residual waste. Use of portable odour neutralising sprays when appropriate. 	Site Manager – Recycling Site Supervisor	Site diary by exception Cleaning schedule	No emission of offensive odour
Dust deposition gauges located on the eastern and western edges of the facility. Dust deposition gauges will be operational at all times for the entirety of the project. Gauges are sampled monthly in accordance with AS/NZS 3580.10.1 - <i>Methods for sampling and analysis of ambient air - Determination of particulate matter - Deposited matter - Gravimetric method.</i>	<ul style="list-style-type: none"> An impact assessment criterion of 4 g/m²/month has been adopted by this facility. Should an exceedance occur, a review will be conducted to determine the significance of the exceedance and possible causes. The review will assess dust deposition data available, relevant weather records as well as recent activities and whether any visual increase in dust has been noted by site personnel 	Site Manager – Recycling Site Supervisor	Dust deposition monitoring report	Annual average dust deposition below 4 g/m ² /month

Monitoring task	Management	Responsibility	Record	Key performance indicator
Complaints register	<ul style="list-style-type: none"> Any complaints attributed to facility are thoroughly investigated as outlined in Section 3.3 of this AQMP 	Recycling Operations Manager Site Supervisor	Complaints register Complaints record	No air quality complaints made without analysis and response

5 Review and improvement

5.1 Review of AQMP

A review of the OEMP, sub-plans and monitoring programs will be undertaken during operations as required and in accordance with Condition C8 of SSD 7038. These reviews will be completed to determine the efficiency of the monitoring program and any required changes necessary to ensure compliance.

This AQMP will be reviewed and revised as necessary within three months of the following:

- Approval of a modification to facility operations.
- Submission of a compliance report under Condition C16 of the conditions of consent.
- Submission of an incident report under Condition C11 of the conditions of consent.
- Completion of an independent audit under Condition C19 of the conditions of consent.
- The issue of a direction of the Planning Secretary under Condition A2(b) which requires a review.

5.2 Update and amendment

Updates and amendments to this AQMP must first be approved by the Environmental Business Partner and then may require to be submitted to the Planning Secretary for approval via the Planning Portal website. A copy of the updated plan and changes will be distributed to all relevant stakeholders and changes implemented immediately.

In accordance with Condition B39 of the Development Consent, the facility will not commence operation until this AQMP has been approved by the Planning Secretary. The most recent version of the AQMP approved by the Planning Secretary will be implemented for the duration of the development.

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