

**QUALITY CONTROL PLAN
PRODUCT 1 SF**

**EASTERN CREEK RECYCLING
ECOLOGY PARK**

DISCLAIMER:

Dial A Dump (EC) Pty Ltd (“DADEC”) has prepared this document in good faith on the basis of information available at the time of publication, without any independent verification. DADEC gives no express or implied warranty as to the accuracy, reliability, completeness or currency of the information included in this document nor its usefulness for any particular purpose.

To the extent permitted by law, DADEC accepts no responsibility or liability (in negligence or otherwise) for any loss or damage resulting from or relating to any error in this document and there is no guarantee given as to the accuracy or currency of any matter disclosed in this document.

This document has been prepared exclusively for DADEC and may contain confidential / privileged information. Any use of this document by any party other than DADEC is strictly prohibited.

This document is copyright. Apart from any use permitted under the *Copyright Act 1968*, no part may be reproduced in any form without written permission from Greenacre Recycling, which permission can be revoked at any time at Bingo Industries’ absolute discretion

QUALITY CONTROL PLAN – PRODUCT 1 SF

Occupant:	Dial-A-Dump (EC) Pty Ltd
Postal Address:	305 Parramatta Rd, Auburn NSW 2144 PO BOX 7535, Silverwater NSW 2128
Telephone:	1300 424 646
Street Address:	Honeycomb Drive, Eastern Creek, NSW

VERSION CONTROL

Date	Doc Version	Authorised by
31/08/2022	1.0	John Hassett

THIS REVISION

Date	Revision #	Section/ Paragraph	Description of Change	Authorised by
31/08/2022	D	New Document	Draft	John Hassett

CONTENTS

1 INTRODUCTION..... 7

1.1 Overview 7

1.2 Scope 8

1.3 Responsibilities..... 9

1.4 Prequalification criteria for supply of SWDF to Boral..... 9

1.5 Green waste, timber mulch, SF 10

1.6 Materials Processing Centres (MPC)..... 10

1.6.1 Mechanical processing..... 11

1.6.2 Sorting and screening 11

1.7 Landfill (Management of non-conforming material)..... 11

1.8 Waste Process Flow 12

2 SUPPLIER FACILITY QUALITY CONTROL..... 13

2.1 Waste acceptance 13

2.1.1 Permissible waste 13

2.1.2 Non permissible wastes 13

2.2 Weighbridge and weighbridge office (QC Point 1)..... 14

2.2.1 Waste recording 14

2.3 Management of non-conforming waste at tip floor (QC Point 2 & 3)..... 15

2.4 Mechanical Waste Processing (MPC2 QC Point 4) 15

2.5 Mixed Engineered Picking Line (QC Point 5)..... 15

2.6 Segregated Stockpiles (QC Point 6)..... 16

2.7 Quality Control Testing (QC Point 7)..... 16

3 STATUTORY AND OTHER REQUIREMENTS 18

3.1 Permits and Licences 18

3.2 Guidelines..... 18

3.3 Training and Competence 18

3.4 Records and Document Management 18

3.5 Monitoring and Inspections 19

3.5.1 Inspections..... 19

3.5.2 Monitoring 20

3.5.3 Non-Conformance, Non-Compliances and Corrective Actions..... 20

4 IMPLEMENTATION..... 21

4.1 Sorting..... 21

4.2 Waste storage..... 21

4.3 Bingo stockpiling and sampling 21

4.4 Material quality checks and pre transport requirements..... 22

4.5 Transport and acceptance at receiving facility 23

4.6 Energy from waste resource recovery requirements 24

4.7 Boral SF Specification 26

4.7.1 Material Sampling 26

4.7.2 Testing Facilities and Material Analysis 27

4.8 Records and Records Management 28

4.9 Reporting 28

5 APPENDIX..... 29

5.1 APPENDIX A, EPA GUIDANCE ON PRESERVATIVES USED IN TIMBER TREATMENT 29

5.2 APPENDIX B, BORAL CONTRACTED SPECIFICATION 30

5.3 APPENDIX C, BINGO WASTE MONITORING PROGRAM..... 31

5.4 APPENDIX D, LOW CHLORINE SUSTAINABLE FUEL (SF) SAMPLING PLAN 32

1 SAMPLING PLAN – EASTERN CREEK PRODUCT 1 SF- BORAL..... 33

1.1 Scope 33

1.2 Assessment Criteria 33

1.3 continuous process 33

1.4 Sampling/Procedure 33

1.5 sampling from crusher conveyor belt 34

1.6 Sample division;..... 34

1.6.1 Coning and quartering..... 34

1.7 Sampling Records..... 35

1.8 Sample Storage 36

1.9 Transfer of samples to laboratory 36

1.10 Laboratory Analysis..... 36

1.11 Quality assurance and quality control 36

1.12 Interpretation of results 36

1.13 Sample retention 36

1.14 Sample Register and Records 36

1.15 Sampling Schedule 37

1.16 Field Sampling Sheet..... 39

1 INTRODUCTION

1.1 Overview

Bingo Industries Limited (**Bingo**) acquired the Eastern Creek Recycling Ecology Park (& Landfill) (**the Facility**) in February 2019 and took over the management of the Eastern Creek site in April 2019. The site was previously known as the Genesis Facility.

The facility is located at Honeycomb Drive, Eastern Creek in the central western suburbs of Sydney NSW, approximately 36 km west of the Sydney CBD, 18 km west of Parramatta and 12 km east of Penrith. The site is wholly within the Local Government Area (**LGA**) of Blacktown, situated in the area known as the M7 Business Hub. The operational area is 54 hectares (ha) in area and was a former breccia quarry that closed when it ceased extraction activities.

The existing facility, including recycling centre/s and landfill were granted approval by the then Minister for Planning under Section 75J of the Environmental Planning and Assessment (EP&A) Act 1979 on 22 November 2009 (MP 06_0139) and commenced operation in June 2012. The Project was transitioned to a State Significant Development (**SSD**) on 2 October 2020.

The Facility operates under two Environment Protection Licences (**EPL**) issued by the Environment Protection Authority (**EPA**); EPL 20121 focusses on resource recovery and EPL13426 covers landfill operations. The Facility has approval to:

- Accept up to two million tonnes per annum (Mtpa) of C&D (construction and demolition), Construction and C&I (commercial and industrial) waste
- Landfill up to 1 Mtpa of non-putrescible waste and asbestos
- Stockpile up to 50 tonnes of waste tyres
- Stockpile up to 20,000 tonnes of green waste.

The Facility is operated by Dial-a-Dump (EC) Pty Ltd (**DADEC**), the licensee and a fully owned subsidiary of Bingo Industries Pty Ltd.

Bingo is committed to sustainable resource use and developing viable, long term, sustainable markets for recovered materials.

Boral Cement Limited (**Boral**) is a manufacturer of cement products at an EPL licenced facility in Berrima (EPL 1698) located at Taylor Avenue New Berrima NSW 2577. Boral's cement manufacturing process utilises kilns to heat limestone and other materials to produce clinker, the main ingredient in cement.

As a licensed Energy Recovery facility, the Boral Cement Works (EPL 1698) has consented approval to use non-standard fuels such Solid Waste Derived Fuels (SWDF) which includes Wood Waste Derived Fuel (WWDF) and Sustainable Fuel (SF).

SWDF is a general term used to describe any solid fuels processed from waste materials to be utilised as a heat source in the kiln at the Cement Works. This includes fuels derived from the processing of

commercial and industrial and construction and demolition waste (referred to as Solid Recoverable Fuels (SF)).

The type of SWDF that is produced at BINGO's Eastern Creek REP is a SF. The term SF is defined in the Berrima Cement Works Development Consent No. 401-11-2002-I (Cement Works Development Consent) to mean:

Sustainable Fuel - A fuel produced by processing the residues of waste by sorting and shredding (particle size reduction), dehydrating (moisture removal), and removal of recyclable and hazardous materials

Bingo Waste Services has entered into a supply agreement with Boral Cement to provide a lower Chlorine Sustainable Fuel derived from commercial and industrial and construction and demolition waste materials sourced from Eastern Creek.

The main sources of the lower chlorine SF at the Facility includes:

- Source separated wood offcuts from construction
- Material recovered from building demolition (excluding PVC and heavy plastics)
- Wood pallets and crates.
- Source separated softwood offcuts (untreated, H2 treated blue pine, H2 LOSP), LVL and glulam offcuts from businesses such as frame and truss manufacturers.
- Engineered wood products (EWPs) sourced from C&I businesses and construction process picked from the wood waste stream.

1.2 Scope

This Quality Control Plan (**QCP**) has been prepared to satisfy Boral's specification for acceptance of low chlorine sustainable fuel (**SF**) derived from C&I and C&D residues for use in the cement manufacture process.

This QCP sets out the Facility's approach for ensuring that the SF recovered by Bingo meets quality and other specified requirements outlined in the requirements the *NSW Energy from Waste Policy Statement*.

This QCP also set out the Facility's approach to quality assurance of SF to be used as SF by Boral to ensure that all relevant license, approval, regulatory and other specified requirements are met by DADEC and Boral. Boral requires suppliers of SF to implement a QCP for all materials sent from the suppliers facility.

1.3 Responsibilities

The following people are responsible for implementation and maintenance of this Plan:

Name	Position	Contact Details
John Hassett	Chief Executive NSW B&D	E: John.Hassett@bingoindustries.com.au M: 0401 771 199
Jim Sarkis	General Manager – Resource Recovery	E: Jim.Sarkis@bingoindustries.com.au M: 0401 227 590
Edward Malouf	Production Manager	E: Edward.Malouf@bingoindustries.com.au M: 0402 666 446
Fezeh Lotfi	Environment Manager	E: Fezeh.Lotfi@bingoindustries.com.au M: 0406 785 321

1.4 Prequalification criteria for supply of SWDF to Boral

Boral require potential suppliers of SWDF to meet certain criteria before any materials are supplied on an ongoing basis. Bingo provides the following prequalification criteria:

1. The following information has been provided to Boral:
 - a. Name and contact details
 - b. Type of product
2. Classification
 - a. Boral has consented approval to use Solid Waste Derived Fuels (SWDF) which includes Wood Waste Derived Fuel (WWDF) and Sustainable Fuel (SF)
 - b. SF is a fuel that produced by processing the residues of waste by sorting and shredding (particle size reduction), dehydration (moisture removal) and removal of recyclable and hazardous materials.
 - c. Boral accept the SF material that meets the Boral specification.
3. Risk assessment
 - a. Some accepted wood products and heavy plastics are not recoverable SF for the purpose of supply to Boral (non-recoverable) and therefore:
 - i. Processing methods and where required procedures developed to prevent non-recoverable material being mixed with recoverable SF. Procedures include:
 - ii. Identification of locations for separation of non-recoverable material.
 - iii. Provision of facilities for storage of separated clean recoverable material from non-recoverable waste
 - iv. Training and processes to ensure staff can identify recoverable material and non-recoverable waste and not how to manage each type
 - v. Training at site and role induction and when changes occur at the facility to reduce the risk of recoverable material contamination (e.g. changes in process, new staff, new materials)
 - vi. A system for verifying that contamination risk is being managed, and how increased contamination risk is managed
 - vii. Collection, storage, and dispatch of recoverable material

- viii. Collection, storage and disposal of non-recoverable waste
 - ix. Reporting and treatment of contaminated recoverable material
 - x. Maintaining records of volumes of recoverable material dispatched.
4. Transfer of custody of recoverable material
- a. Bingo ensures that the premises and users of recovered materials are lawfully able to accept them before materials are transported.
 - b. At the time of transport, Bingo issues a weighbridge docket communicating:
 - i. The transaction or docket number including the weight;
 - ii. The Facility details including business name and address; and
 - iii. A statement of compliance specification.
 - c. Bingo weighbridge records include the intended destination of the recoverable material at the time it departs the Facility and if the material is destined for Boral the following customer information - Boral Cement Works at Berrima.

1.5 Green waste, timber mulch, SF

Up to 20,000 tonnes of green waste, timber mulch and picked timber may be stockpiled at the Facility at any one time (Schedule 3 Condition 1 of the Project Approval). Once screened by the weighbridge officer, loads of green waste and timbers are directed to the green waste/timber yard. Here tipping of the material is supervised and inspected to facilitate the removal of contaminating or non-biodegradable materials and separating materials which bio-degrade at a slower pace (i.e. separation of raw green waste from construction timbers). Engineered wood products are also separated into recoverable and non-recoverable materials to meet the specification for Boral low chlorine SF. A picking station is installed at the timber yard to manually remove any materials that are not acceptable for resource recovery and or Boral use e.g. PVC's and heavy plastics.

The materials are stockpiled separately for processing or transferred to an appropriate third party for recycling. Green waste and recovered timber suitable for reuse will also be collected from the MPC and stockpiled in this area for further processing or transfer.

True green waste, e.g. grass, leaves, branches, logs or tree stumps, are removed at this stage to a separate location within the timber yard, where the material is stockpiled for transport to a third-party facility for processing. With reference to Figure 1 this material is stockpiled in the area marked in green.

Timber mulch destined for purposes other than Boral use, for example land application as defined in *The Mulch Order 2016*, is segregated, and stored separately. With reference to Figure 1 this material is stored in areas marked blue. Preservative-treated and coated wood residues (e.g., Copper Chrome Arsenate treated timbers), as defined in *The Mulch Order 2016*, are removed prior to this stage, and are stored separately in the timber yard for separate removal.

SF is stored in the separate area. Unacceptable wood products such as preservative-treated and coated wood residues (e.g. Copper Chrome Arsenate treated timbers) and heavy plastics (e.g PVCs) are removed prior to stockpiling in the area and are not stored in the timber yard.

Recovered materials that are classified as materials which do not meet the Boral specifications are stored separately and either undergo further processing, resource recovery for other purposes, or are landfilled.

1.6 Materials Processing Centres (MPC)

The MPC accepts mixed and source separated waste suitable for resource recovery.

1.6.1 Mechanical processing

Mechanical processing involves the sorting and segregating of materials to remove valuable recoverable materials, principally metals, concrete, brick and tile, fines, timber, and recovered timbers. Preliminary gross sorting removes metals, wire, gas cylinders, batteries, fire extinguishers and materials of this nature which may be removed for re-use or have valuable re-use function without the need for intervention. Most metals can be removed using a magnet.

Other materials removed and segregated at this stage include organic materials (i.e. green waste). This material is removed to the green waste stockpile.

1.6.2 Sorting and screening

The remaining material is subjected to an automated process of screening and sorting which differentiates the materials into different classes. This includes:

Hard and soft plastics, PVC, paper, timber, metals (including steel), cardboard which is removed to designated areas for processing and recycling or sent to third party processors.

Metals (ferrous and non-ferrous) will either be removed to the steel processing area of the site for sorting, shredding, and shearing or sent to third party processors.

Reusable and surplus materials that have a commercial value resulting from processing at the MPC will be stockpiled, sold, and transported off site. Materials that cannot be processed and residue of the materials listed above will be sent to the landfill.

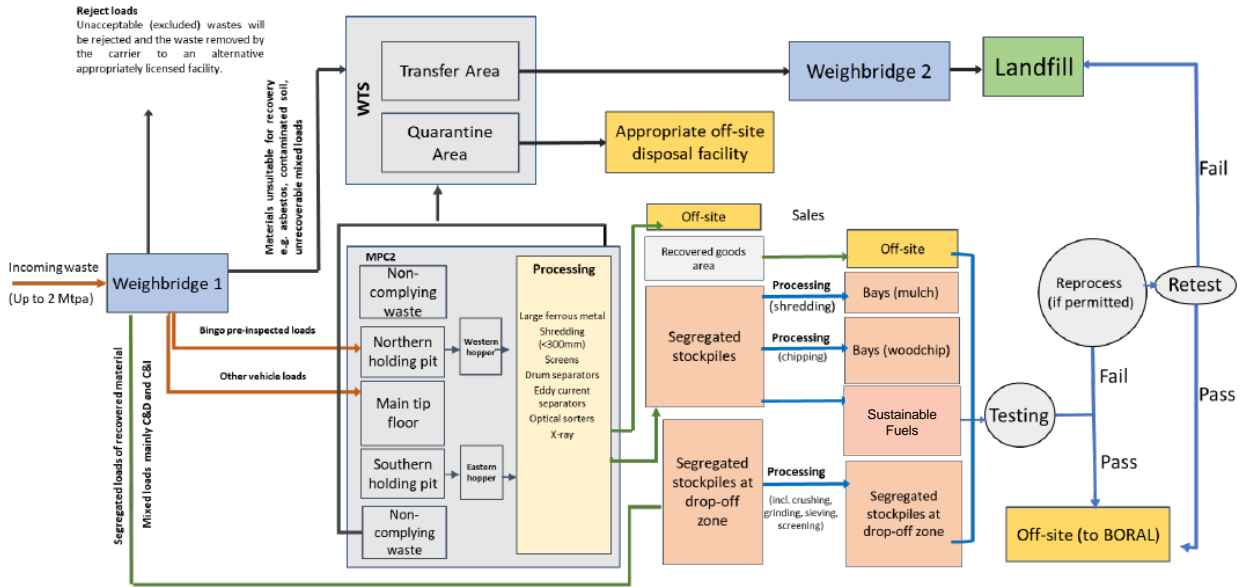
Manual sorting of waste occurs in picking stations by trained staff. Picking stations are a quality control process facilitating removal of targeted materials which may be either materials for specific recovery or potential contaminants to recoverable materials. The picking line can be adjusted to suit job specific requirements and specifications.

1.7 Landfill (Management of non-conforming material)

After processing all non-recoverable waste is sent to the landfill.

1.8 Waste Process Flow

Figure 1 - details the processing flow of waste material as the material is segregated, processed, stored and sold or disposed at the landfill.



2 SUPPLIER FACILITY QUALITY CONTROL

2.1 Waste acceptance

2.1.1 Permissible waste

The Facility has the capacity to receive up to 2 Mtpa general solid waste (non-putrescible) types, as defined by *Schedule 2 of the Protection of the Environment Operations (POEO) Act 1997* including:

- Construction and demolition (C&D) waste
- Commercial and industrial (C&I) waste.
- Waste streams complying with acceptable waste for general solid waste (non-putrescible) facilities and assessed to be inert waste or solid waste following the technical assessment procedure outlined in Part 1 of the Waste Classification Guidelines (NSW EPA, 2014).
- Green waste.

Materials received will comprise both segregated materials and mixed materials, which will include but not be limited to, brick, concrete, virgin excavated natural material (VENM), terracotta roof tiles, soils, green waste, timber, metals, paper, and plastics. Materials incapable of economic separation or later sale, or which is the residue from recycling processes, are taken to the landfill for disposal.

Materials suitable for recycling include, but not be limited to, both hardfill materials (e.g. sand, soil concrete, brick and tile) and also specified materials e.g. metals (including steel), plastics, paper, timber, vegetation, carpet and mattresses etc.

Materials recycled for sale will meet specifications prescribed by the POEO Act and the relevant Resource Recovery Orders and Exemptions for aggregate, soils, fines, mulch and urban wood waste or the Boral SWDF specification.

2.1.2 Non permissible wastes

Schedule 3 Condition 1 of the Project Approval details which wastes cannot be received at the Facility. These include:

- Putrescible wastes (which include food or animal matter and unstable or untreated biosolids)
- Waste that is contaminated by chemicals and/ or pathogens that will not be rendered harmless by the process or that may constitute a health or environmental risk, including clinical and related waste and diseased carcasses
- Waste containing contaminants classified as hazardous waste, restricted waste) or liquid waste under the POEO Act
- Scheduled Chemical Wastes will not be allowed into the MPC or the landfill site. Scheduled chemical wastes are controlled by the Scheduled Chemical Wastes Chemical Control Order (2004) under the Environmentally Hazardous Chemicals Act 1985.

Other unacceptable wastes include but are not limited to:

- Liquid wastes
- Explosives

QCP – BORAL	Ver 1.0 Rev D	Date: August 2022	Page 13 of 39
-------------	---------------	-------------------	---------------

- Poisons
- Dangerous goods
- Radioactive materials
- Clinical, hospital and related wastes
- Loose, uncovered (non-bonded) or friable asbestos
- Scheduled pharmaceuticals
- Scheduled wastes.

Screening of wastes at the weighbridge is for early detection of non-conforming waste to prevent entry to the site.

2.2 Weighbridge and weighbridge office (QC Point 1)

Waste material is delivered to the site by a combination of light, medium and heavy vehicles, with loads typically varying from about 1 tonne (t) to 40 t in weight. The vehicles will access the Facility via Kangaroo Avenue.

Preliminary waste acceptance and visual screening is undertaken at the weighbridge. All incoming vehicles and wastes are directed through the waste reception area and the loads inspected by the weighbridge operator via cameras (CCTV). The weighbridge is manned by a suitably trained operator. Waste is weighed on the weighbridge in gross tonnes, or in the case of the small vehicles the weight is calculated using published weight factors in accordance with the NSW EPA method.

The vehicles proceed beyond the weighbridge area along the main haul road where they are directed by appropriate signage for unloading.

Trained traffic controllers located at various locations throughout the facility, direct vehicles to the correct location for tipping and loading after further determining the load contents or purchase. They assist in the determination of load weights and contents and will redirect the vehicles if required to the appropriate area i.e. segregated stockpiles, MPC, WTS and landfill. The vehicles are weighed out over the (exit) weighbridge when exiting the Facility. Any unacceptable (excluded) wastes are rejected.

The weighbridge will be operated and maintained in accordance with the procedure *Weighbridge Operation and Maintenance (SOP-BDR005)*. If the weighbridge is not operational the *Procedure for Converting Waste to Tonnes when Weighbridge Not Operational (SOP-BDR003)* will be followed.

2.2.1 Waste recording

The weighbridge load cell is linked to a computerised system that provides accurate records of the weight of incoming wastes on a vehicle-by-vehicle basis. The system is capable of being operated by a single user within the weighbridge office and data obtained from the site can be transferred directly to Bingo’s Head Office. If loads are overweight, they will be managed in accordance with the *Overweight Load Procedure (SOP-BDR002)*.

The weighbridge operator is responsible for the overall management and maintenance of weighbridge systems and the related preparation of management reports. This includes the detail of materials classified as non-recyclable wastes which enter the site for the purposes of landfilling. This information

QCP – BORAL	Ver 1.0 Rev D	Date: August 2022	Page 14 of 39
-------------	---------------	-------------------	---------------

will be provided to the NSW EPA in the form of returns under the waste ‘contributions’ levy (S88 of POEO Act).

The weighbridge operator is responsible for recording all details required by law to be kept by a waste facility including details of all loads of waste accepted at and transported from the Facility.

2.3 Management of non-conforming waste at tip floor (QC Point 2 & 3)

Vehicles are checked for non-conforming waste (NCW), in staging area, prior to tipping. If NCW is identified loads are redirected to landfill (waste permitting) or rejected from site.

Vehicles are not permitted to leave the tip floor area until they have been checked and cleared for NCW post tipping. If NCW’s are identified, they will be immediately reloaded into the incoming vehicle and directed to return to the weighbridge. Bingo will record details of the waste and carrier and communicate this information to the weighbridge office and then to the NSW EPA under the provisions of the POEO Act. This will be done in accordance with the procedure *Visual Inspection and Management of Non-Conforming Waste (SOP-BDR007)* and *Process for Non-Conforming Waste (SOP-BDR011)*.

If tipping has occurred then the operator will, segregate and isolate and/or remove any NCW and transport the wastes to a designated quarantine area (within the MPC) or other suitable location, where the wastes will be securely stored until off-site disposal arrangements are made by the original carrier.

If the carrier or owner of the waste does not make arrangements for the waste to be collected Bingo will make arrangements for the waste to be tested and disposed at an appropriate licensed facility and the owner or carrier of the wastes will be billed for the costs involved.

Notification of NCW and Reload/ Rejected Load forms will be completed in accordance with Bingo’s reject loads procedure, *Visual Inspection and Management of Non-Conforming Waste (SOP-BDR007)* and *Process for Non-Conforming Waste (SOP-BDR011)*, *Reject Load Certificate (SF055)* and *Notification of Non-Complying waste and Rejected Reload Rejected Load (SF106)* filed in the facility Reject Load Register. A formal advice that the load contains materials that cannot be accepted at the Facility will be provided to the Customer (Driver).

BINGO has an offtake agreement with a PVC recycler which incentivises BINGO to remove this waste stream at all transfer sites and at EC from the tip floor prior to processing in MPC2

2.4 Mechanical Waste Processing (MPC2 QC Point 4)

Material is processed in MPC2 Plant and subject to mechanical sorting through screens, magnets, blowers, air separators, drum separators and optical sorters. The material is sorted at the different sorting procedures, based on their properties such as, size, density, gravity, magnetism, electric conductivity, or combinations thereof. MPC2 density separators and MPC2 optical sorters screen PVC away from Boral SF stream

2.5 Mixed Engineered Picking Line (QC Point 5)

Post processing through MPC2 plant, material passes through Mixed Engineered Picking Line, located in timber Yard. Trained quality controllers remove any material that is not SF as per Boral SF specification.

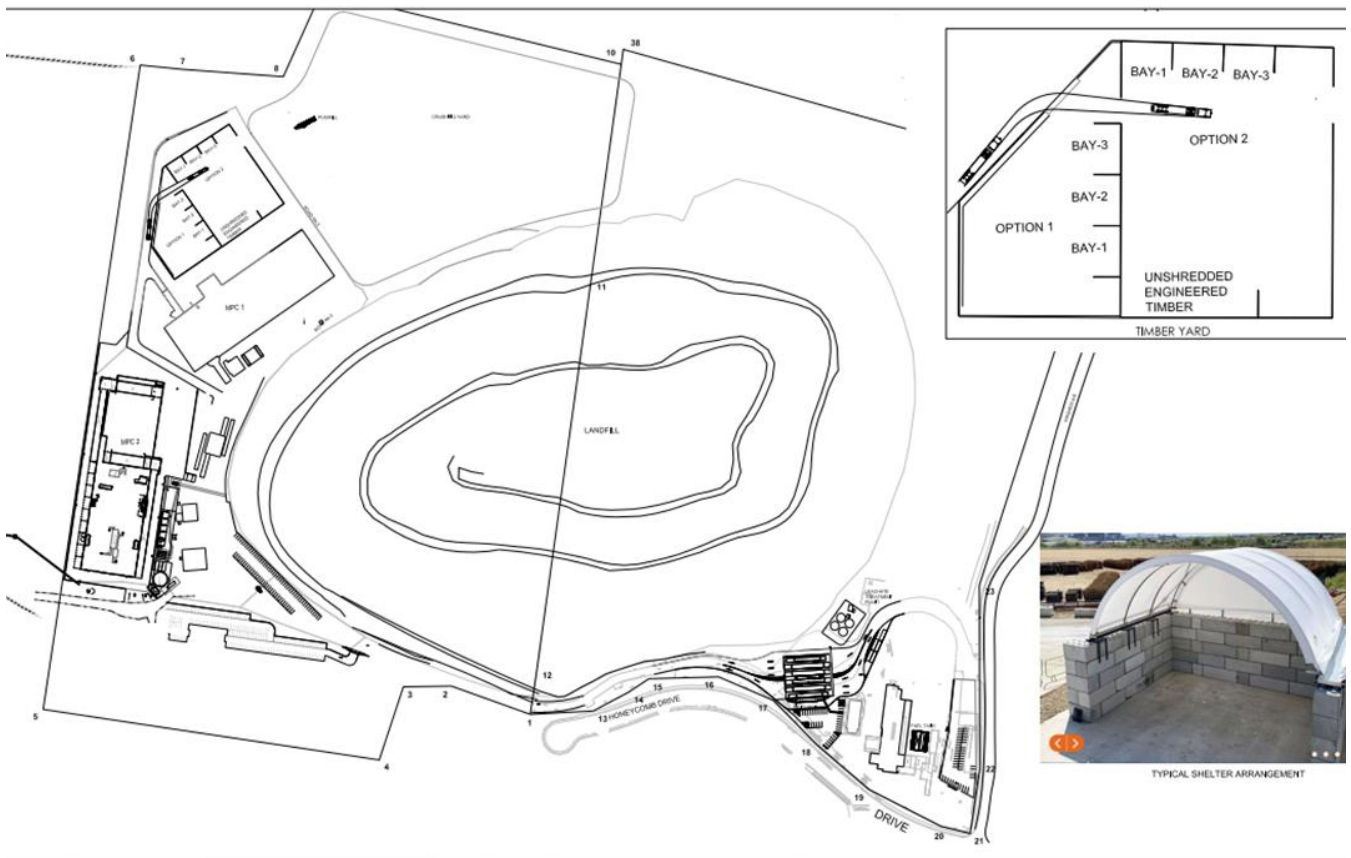
Unacceptable wood products such as preservative-treated and coated wood residues (e.g. Copper Chrome Arsenate treated timbers) and heavy plastics (e.g PVCs) are removed prior to stockpiling in the area and are not stored in the timber yard.

2.6 Segregated Stockpiles (QC Point 6)

As required by Schedule 3 Condition 55 of the Project Approval, all stockpiles will be maintained to a level below the height of the amenity berms (<10 m) to minimise visual impacts to surrounding areas. Stockpiles will be managed in accordance with the relevant site operational plans. Stockpiles of different waste types are separated by a minimum distance of 3 metres at the base of the stockpile.

SF material is conveyed and stockpiled in Timber Yard where it is periodically inspected by QC5 Leading Hand and Timber Yard Manager. SF igloo storage area (Figure 2) is labelled and signposted in the Timber Yard.

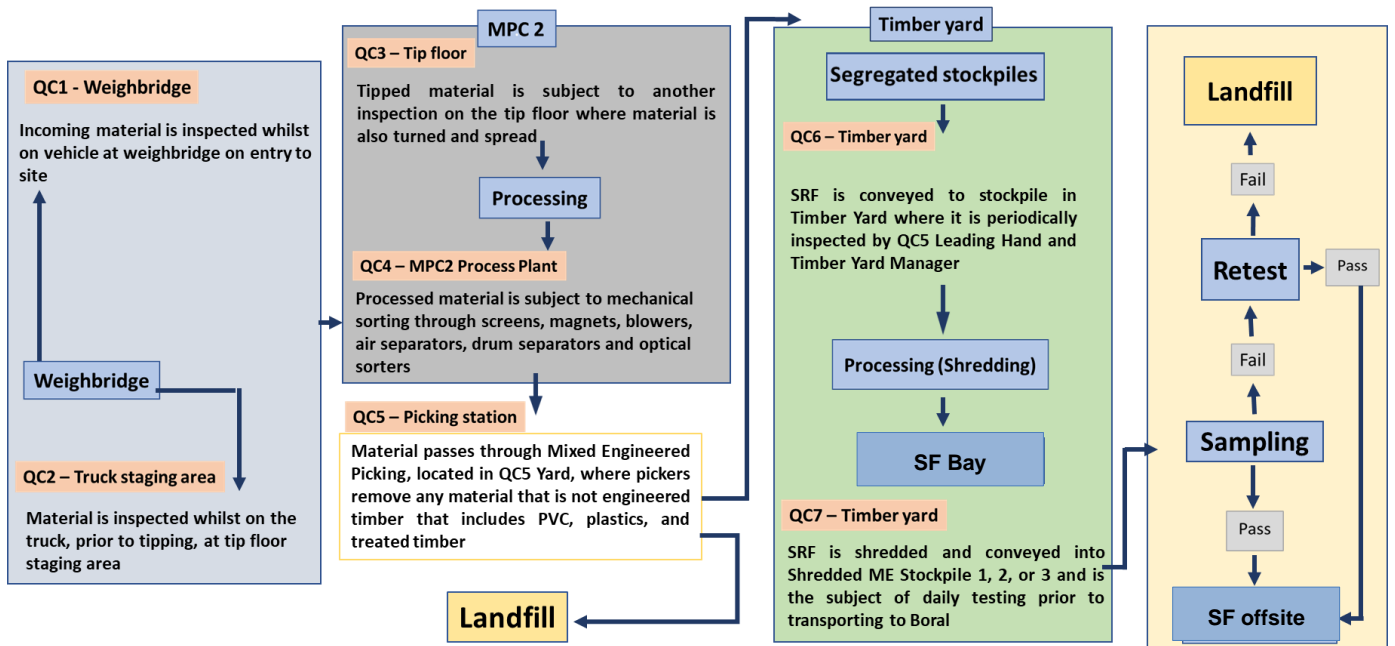
Error! Reference source not found. - Overall site plan



2.7 Quality Control Testing (QC Point 7)

Mixed SF is shredded and conveyed into Shredded Mixed Engineer Stockpile 1, 2, or 3 and is the subject of the requirement testing (daily, weekly, and monthly). If the test results meet the RFD Boral specification the material will send to Boral.

Figure 3 - Quality control plan



3 STATUTORY AND OTHER REQUIREMENTS

3.1 Permits and Licences

In addition to the Project Approval Conditions, other key permits and licences applicable to the Facility is summarised in **Table 3-1**.

Table 3-1: Environmental Approvals

Licence Number / Permit	Licence / Permit	Activity	Regulator	Issued Date
13426	EPL	Landfilling operation	NSW EPA	17 March 2022
20121	EPL	Resource recovery operation	NSW EPA	20 June 2022

The current EPLs describes the types of waste which may be received at the Facility and what activities can be undertaken in relation to each waste type permitted to be held on site.

3.2 Guidelines

The Facility design and operating procedures documented have due regard to relevant policies, guidelines and codes of practice including but not limited to:

- Waste Classification Guidelines – Part 1 (including Addendum): Classifying Waste, EPA, November 2014
- Resource Recovery Orders and Resource Recovery Exemptions under Protection of the Environment Operations (Waste) Regulations 2014 (Clause 93).
- NSW Waste to Energy Policy Statement
- EN14780:2011 “Solid Biofuels – Methods for sample preparation”

3.3 Training and Competence

All personnel undertaking work at the Facility will undergo general environmental awareness training and training relevant to their responsibilities. This training includes learning conducted online and face to face with content included in Bingos online Learning Management System (LMS), toolbox talks and daily start up meetings as well as through leader led SEQ conversations. The online learning component incorporates the requirements of site and individual roles and responsibilities in relation to the POEO Act, the site EPLs and the Minimum Standards for managing construction waste in NSW. Specific requirements of their roles including separation of recoverable SF where relevant to the role, are managed within the Training Needs Register (TNR). Elements of the above training contribute to the training requirements for recovery and storage of picked Boral timber.

All staff training is conducted in accordance with the Bingo Training and Development Plan and procedures including SOP-SEQ003 Induction, Competence, Training and Awareness Procedure.

3.4 Records and Document Management

A register of the records and documentation related to SF will be maintained. All procedures and plans are subject to document controls and records management procedures Document Control and Records Management Procedure (SOP-SEQ008) in accordance with the company’s SEQ document control system and certified Work Health and Safety, Environmental Management and Quality Management systems.

Procedures are made available in Bingo’s intranet site, Templates Folder and Intelex document management system.

3.5 Monitoring and Inspections

Regular monitoring will be undertaken to monitor the performance of resource recovery processes. Monitoring will be through a series of formal and informal inspections and daily site supervisor checks. Inspection and checks are recorded in Bingo’s Intelex system (Figure 4).

3.5.1 Inspections

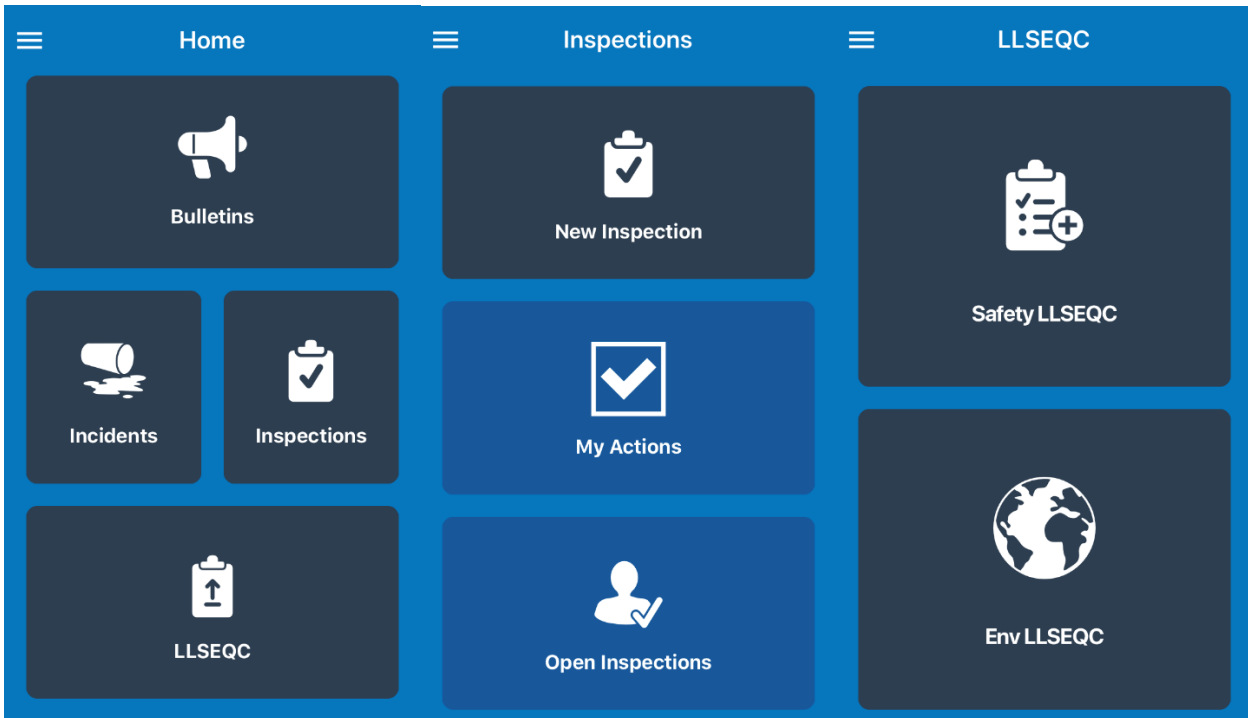
Regular stockpile and other inspections are undertaken by the Site SEQ Officers, Site Operations Manager, and Area Supervisors.

Daily environment inspections are to be undertaken by the Site Operations Manager (or delegate) and the inspection results recorded in Intelex, an online app and web-based system. Forms to be completed by operations and or SEQ Team staff relevant to stockpile inspections include:

- Recycling centre transfer station shift supervisor checklist
- SEQ recycling centre and transfer station site audit
- Operations daily yard report
- Eastern Creek MPC / timber yard / plant shift supervisor checklist
- Other routine inspections are also recorded by the Site Operations Manager or his/her delegate.

Any non-conformances/non-compliances are recorded on the inspection forms require an action plan. The cause of incidents is investigated by the Site Operations Manager or the SEQ team. Corrective and/or preventative action will be recommended by the person undertaking the inspection and the effectiveness of the corrective and/or preventative action assessed at the next site inspection. The Site Operations Manager reports any significant non-conformances arising from site inspections to the SEQ Team.

Figure 4 - Intelex App – incidents, audits, inspections and conversations



3.5.2 Monitoring

Monitoring where required is undertaken in accordance with a Sampling Plan (Appendix D) for the material. All monitoring is undertaken using standard monitoring techniques and calibrated equipment operated by trained personnel. Analysis of samples will be undertaken in accordance with the requirements of the relevant resource recovery order and exemption and or the customer or receiving facility specifications. All monitoring (sampling) results will be retained for six years.

3.5.3 Non-Conformance, Non-Compliances and Corrective Actions

3.5.3.1 Non-Conformances

Non-conformances are observations or actions that do not comply but are not considered to be a non-compliance. Where a non-conformance is also considered to represent a non-compliance, it will be recorded as an incident.

It is the responsibility of all personnel to report non-conformances to the Site Supervisor and / or Site Environmental Officer, who will investigate non-conformances, log corrective actions, and delegate responsibility for corrective actions within assigned timeframes.

All non-conformances are recorded in a computer-based incident recording and reporting system - Intelex. Non-conformances, corrective actions, responsibilities, planned and actual completions dates and details of reporting to Regulatory Agencies and the community where appropriate will be tracked by this system.

4 IMPLEMENTATION

This section addresses the key risks and environmental performance issues associated with the operation of the Facility and the environmental controls established to manage the key risks.

4.1 Sorting

Following completion of the waste acceptance visual inspection requirements the material is sorted, screened and classified into waste and recoverable product types before being transferred to the waste storage area. The waste storage area is a dedicated area that is clearly labelled and signposted and may be either a stockpile, storage bay or bin.

Where an accepted load of waste is received as source separated material it is directed to the dedicated storage area for that material, tipped and inspected as for all loads before being moved into the storage location.

No mixing of inspected and sorted materials occurs following inspection and sorting. Inspected and sorted materials are not mixed with other waste types post the sorting process and are located in a dedicated storage area.

4.2 Waste storage

In the storage / stockpile location each material is stored in bays, stockpiles or bins with the following additional controls to ensure no mixing of different waste types or contamination.

- Waste which has been classified into an individual listed waste type, is to be clearly labelled or signposted to indicate the individual type of waste being stored in that area;
- Each label or signpost must be legible and clearly visible;
- Where material is to be sampled and analysed that material will be labelled ‘awaiting validation’;
- Stockpile will be clearly delineated and separated from stockpiles of other material of a different type by a minimum of 3 metres from the base of the stockpile; and
- As referred to in section 2.4 trained staff will inspect each storage area daily and if any waste is found in an incorrect storage area they will ensure the material is removed from that area to the correct area. Any observations and corrective actions will be recorded and retained as required.

4.3 Bingo stockpiling and sampling

Bingo will build a stockpile for deliveries of approved SF. The SF materials will be covered and stored in a sealed and bunded area to ensure they stay dry (Figure 2). The stockpile will be representatively sampled as per Bingo sampling plan.

4.4 Material quality checks and pre transport requirements

There will be an auditable chain of custody from the SF Generator facility to the Receiver Site. Each vehicle load of SF despatched will be assigned a transport certificate/delivery docket detailing the:

- delivery date;
- time of departure;
- description of SF
- gross/tare and net weights of delivering/exporting vehicle;
- vehicle registration number; and
- Unique reference number (Bingo delivery schedule number) assigned to the load.

Bingo staff will be trained in the QA/QC procedures outlined in this document, including:

- identifying prohibited and unacceptable materials;
- procedures for managing contaminated loads;
- recording details of the inspection;
- procedures for SF acceptance and rejection; and
- the method of and communicating with the relevant third parties as required. A record of training will be recorded in the training register.

Transporter's delivery vehicles must be pre-approved by the receiving facility at which a register of preapproved vehicles will be kept. Only such approved vehicles and only drivers who have successfully completed the relevant receiving facility Safety Induction will be permitted to weigh-in and discharge Boral SF at the Site.

Table 4.1 - Lower Chlorine SF Specification as per contract of supply

Parameter	Specification
Gross Calorific Value	≥15.0
Ash	≤15% m/m
Moisture (as H ₂ O)	Target of ≤15.0% m/m up to a maximum of <20% m/m
Chlorine (as Cl)	≤0.12% m/m
Total Fluorine, Bromine, Iodine (as F, Br, I)	≤0.20% m/m
Sulphur (as S)	≤1.0% m/m
Particle size	≤50 mm in any direction with >95% passing 35mm. No dimension to be >50mm
Biomass content	≥90%
K ₂ O (%)	1.0
Na ₂ O (%)	0.5
Mercury (Hg) (mg/kg)	≤1.2
Cadmium (Cd) (mg/kg)	≤20
Thallium (Tl) (mg/kg)	≤20
Total Group II metals (mg/kg) Cadmium (Cd) + Thallium (Tl)	≤30
Copper (mg/kg)	≤500
Lead (mg/kg)	≤1000
Total Group III metals (mg/kg) Antimony (Sb) + Arsenic (As) + Cobalt (Co) + Copper (Cu) + Chromium (Cr) + Lead (Pb) + Manganese (Mn) + Nickel (Ni) + Vanadium (V)	≤3000
PCB's (Polychlorinated biphenyls)	<10 mg/kg
PCP's (Phencyclidines)	<100 mg/kg

4.5 Transport and acceptance at receiving facility

After receiving pass test results, General Manager of the Resource Recovery approves the SF load out for transport to Boral. The transporter is to carry the weighbridge docket to Boral Cement Berrima and it will be recorded into the weighbridge system.

In the case that materials cannot be accepted at the receiving facility (for either legal or technical reasons) the vehicle will be directed to a dedicated quarantine area for non-acceptable Boral SF and not discharged. For those loads not accepted, Bingo will be notified in writing by the receiving facility and the load will be directed to return to the facility. The return of such loads will be the responsibility of Bingo.

On arrival at the receiving facility each load of Boral SF will be weighed over the weighbridge and the data recorded, detailing the:

- arrival date;
- time of arrival;
- breakdown of SF into the various SF categories;
- gross/tare and net weights of delivering/exporting vehicle;
- vehicle registration number; and
- unique reference number (Bingo docket) assigned to the load.

Each month a reconciliation will be made between the delivery data and the arrival data from the receiving facility to confirm a match-up of delivered and received loads. Any mismatch between delivered and received loads will be investigated.

4.6 Energy from waste resource recovery requirements

Under the NSW Energy from Waste Policy Statement the Boral Berrima Cement Works is defined as an Energy Recovery Facility. Energy Recovery facilities meet demonstrated international best practice techniques to thermally treat waste or waste-derived materials that do not meet the definition of an eligible waste fuel.

Energy recovery facilities may only receive feedstock from waste processing facilities or collection systems that meet the criteria outlined in Tables 4 and 5 in the *NSW Energy from Waste Policy Statement*. Table 4 and Table 5 of the Policy statement are copied below.

Bingo maintains and implements a Waste Monitoring Program that includes waste acceptance and screening requirements as well as procedures for rejecting loads of non-conforming waste. The weighbridge records sources of incoming waste stream for each load to confirm if material sourced from C&D, C&I or Municipal sources. The majority of waste recovered at the facility is from C&D sources. The weighbridge software records total volume (in tonnes) received per load and cumulatively. This information feeds into a dashboard enabling staff to keep track of material received and transported off site per waste type. Timber makes up a small proportion by weight of the total material received on site in any 12-month period

Table 4.2- Resource recovery criteria for energy recovery facilities – mixed waste stream, [Table 4 (the *NSW Energy from Waste Policy Statement*)]

Mixed waste stream	Processing facility	% residual waste allowed for energy recovery
Mixed municipal waste (MSW)	Facility processing mixed MSW waste where a council has separate collection systems for dry recyclables and food and garden waste	No limit by weight of the waste stream received at a processing facility
	Facility processing mixed MSW waste where a council has separate collection systems for dry recyclables and garden waste	Up to 40% by weight of the waste stream received at a processing facility
	Facility processing mixed MSW waste where a council has a separate collection system for dry recyclables	Up to 25% by weight of the waste stream received at a processing facility
Mixed commercial and industrial waste (C&I)	Facility processing mixed C&I waste	Up to 50% by weight of the waste stream received at a processing facility
	Facility processing mixed C&I waste where a business has separate collection systems for all relevant waste streams	No limit by weight of the waste stream received at a processing facility
Mixed construction and demolition waste (C&D)	Facility processing mixed C&D waste	Up to 25% by weight of the waste stream received at a processing facility
Residuals from source-separated materials		
Source-separated recyclables from MSW	Facility processing source-separated recyclables from MSW	Up to 10% by weight of the waste stream received at a processing facility
Source-separated garden waste	Facility processing garden waste	Up to 5% by weight of the waste stream received at a processing facility
Source-separated food waste (or food and garden waste)	Facility processing source-separated food or source-separated food and garden waste	Up to 10% by weight of the waste stream received at a processing facility

Table 4.3- EPA Resource recovery criteria for energy recovery facilities – separated waste stream, [Table 5 (the *NSW Energy from Waste Policy Statement*)]

Separated waste stream	Feedstock able to be used at an energy recovery facility
Waste wood	Residual wood waste sourced directly from a waste generator e.g. manufacturing facility
Textiles	Residual textiles sourced directly from a waste generator
Waste tyres	End-of-life tyres
Biosolids	Used only in a process to produce a char for land application
Source separated food and garden organics	Used only in a process to produce a char for land application

Notes

The EPA may consider increases to the maximum allowable percentage of residuals from facilities receiving mixed municipal and commercial and industrial waste where a facility intends to use the biomass component from that process for energy recovery, rather than land application. The facility must be able to demonstrate they are using best available technologies for material recovery of that stream.

Waste streams proposed for energy recovery should not contain contaminants such as batteries, light bulbs or other electrical or hazardous wastes.

Bio-char or char materials produced from facilities using mixed waste streams will not be able to be considered for land application as a soil amendment or improvement agent.

The C&I 'no limit' category is likely to apply only to mixed waste collected from single generators of large volumes of waste (e.g. supermarkets) or precinct-based businesses (e.g. shopping centres). Proponents will need to demonstrate that each entity generating waste has effective and operating collection systems for all waste streams they generate that have reuse or recycling opportunities (e.g. paper/cardboard collection; organic collection; and residual waste collection). Proponents wishing to use the C&I 'no limit' category will need to contact the EPA to determine the eligibility of each entity.

4.7 Boral SF Specification

These details are subject to change to ensure compliance to regulatory requirements as agreed. The Boral SF materials intended to be supplied to Boral may include all of the materials listed as acceptable / recoverable and being within the acceptance criteria. The Boral specification requires assurance the SF to be used meets the following requirements;

- Iodine, pharmaceutical, pesticide and biocide products in any formulation except as a constituent of another material and at levels, are minimised as far as is reasonably practical.
- Exclusion of radioactive, nuclear, hospital and clinical waste.
- Exclusion of explosive materials including propellants and cartridges.
- Exclusion of railway sleepers, telegraph poles, power poles and other SF covered in tar, creosotes and chromated copper arsenate.
- Take reasonable precaution to minimise wood covered in PVC, pentachlorophenol and avoid high concentrations of MDF and similar Melamine materials containing urea formaldehyde;
- All wood wastes will be non-hazardous; and
- PVCs and hard plastics are removed.

4.7.1 Material Sampling

Sampling shall be conducted in accordance with this Sampling Plan and EN14780:2011 "Solid Biofuels – Methods for sample preparation" to ensure that the samples represent, as far as practicable, the true nature

of the lot or the section of the main body of material from which they were drawn. The procedures are designed to achieve this objective, with measures in place to ensure traceability and integrity of the samples throughout the process. The Sampling Plan at **Appendix D** sets out the sampling methodology.

4.7.2 Testing Facilities and Material Analysis

Daily and weekly analysis

- Bingo Laboratory

Responsible	Qualifications
Fezeh Lotfi (Environmental Manager)	PhD of Environmental Engineering Over 10 years sampling and laboratory testing experience

Monthly analysis

- HRL Laboratory, HRL (HRL is the only NATA accredited laboratory for the approved methods of analysis of Biomass and Sustainable Fuel (SF) in Australia)– Routine analysis

Table 4.4 – Laboratory analysis

Weekly Suite (internal)				
Particle Size	%	≤50 mm in any direction with >95% passing 35mm. No dimension to be >50mm.	On-site testing	lab
Daily Suite (internal)				
Gross Calorific Value	MJ/kg	≥15.0	On-site testing	lab
Moisture (as H ₂ O)	% m/m	≤15.0% m/m	On-site testing	lab
Chlorine (as Cl)	% m/m	≤0.12 % m/m	On-site testing	lab

Routine Suite - Monthly			
Parameter	Units	Specification	Test Method
Gross Calorific Value	MJ/kg	≥15.0	EN 15400:2011
Ash	% m/m	≤15	EN 15403:2011
Moisture (as H ₂ O)	% m/m	Target of ≤15.0% m/m up to a maximum of <20% m/m	EN 15414:2010
Chlorine (as Cl)	% m/m	≤0.20	EN 15408:2011
Total Fluorine, Bromine, Iodine (as F, BR, I)	% m/m	≤0.2	Standard test method as per NATA accredited Laboratory
Sulphur (as S)	% m/m	≤1.0	EN 15408:2011

Particle size	%	≤50 mm in any direction with >95% passing 35mm. No dimension to be >50mm.	EN 15412-1:2011
Biomass Content	%	≥90	EN15440:2011
K₂O	%	1	EN 15410:2011
Na₂O	%	0.5	EN 15410:2011
Mercury (Hg)	mg/kg	≤1.2	EN 15411:2011
Cadmium (Cd)	mg/kg	≤20.0	EN 15411:2011
Thallium (Tl)	mg/kg	≤20.0	EN 15411:2011
Total Group II Metals: Cadmium (Cd) + Thallium (Tl)	mg/kg	≤30.0	EN 15411:2011
Copper	mg/kg	≤500	EN 15411:2011
Lead	mg/kg	≤1000	EN 15411:2011
Total Group III Metals: Antimony (Sb) + Arsenic (As) + Cobalt (Co) + Copper (Cu) + Chromium (Cr) + Lead (Pb) + Manganese (Mn) + Nickel (Ni) + Vanadium (V)	mg/kg	≤3000	EN 15411:2011
PCB's (Polychlorinated biphenyls)	mg/kg	≤10	Standard test method as per NATA accredited Laboratory
PCP's (Phencyclidines)	mg/kg	≤100	Standard test method as per NATA accredited Laboratory

4.8 Records and Records Management

Results of laboratory testing are to be uploaded to Bingos ESDAT system. ESDAT is an environmental data warehouse facilitating direct reporting by the laboratory to Bingo. The system is enabled with alarms when threshold values are triggered.

Bingo will work with relevant laboratories to establish reporting via ESDAT (ESCIS software). Sampling and inspection record will be established, recorded and retained in Intellex (Figure 4).

4.9 Reporting

Boral will be provided with written results of individual monthly composite sampling as soon as Bingo receives the monthly results from HRL laboratory.

Boral will be advised in writing of an exceedances of the limits set out in the Boral specification as soon as reasonably practicable. If an exceedance is reported for any material that has already been received by Boral from the Supplier, Boral will review the causes of the exceedance with the Supplier with a view to the Supplier making changes to prevent further exceedances.

The format and content of reports is as agreed between Boral and DADEC.

5 APPENIDX

5.1 APPENIDX A, EPA GUIDANCE ON PRESERVATIVES USED IN TIMBER TREATMENT



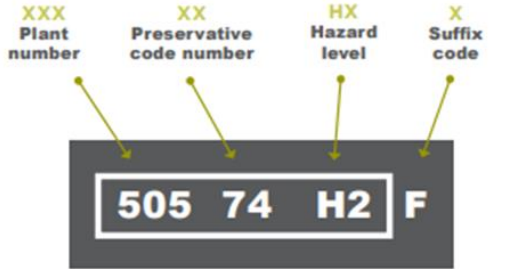
Select the right treated timber for the job – and if possible, choose an arsenic-free alternative

Hazard level	Exposure	Biological hazard	Typical uses	Preservative currently used for hazard level
H1	Inside, above ground	Lyctid borer	Borer susceptible hardwood used for dry interior framing, flooring, furniture and joinery	Boron
H2	Inside, above ground	Borers and termites	Framing, flooring, joinery, etc. used in interior dry situations	Boron (south of the Tropic of Capricorn only), synthetic pyrethroids, imadacloprid
H2F	Inside, above ground	Borers and termites	Framing used in interior dry situations (south of the Tropic of Capricorn only)	'Blue Pine' (synthetic pyrethroids, imadacloprid)
H2S	Inside, above ground	Borers and termites	LVL/Plywood (glue-line treatment) in dry situations (south of the Tropic of Capricorn only)	Synthetic pyrethroids, imadacloprid
H3	Outside, above ground	Moderate decay, borers and termites	Weatherboard, fascia, pergola posts (above ground), window joinery, framing and decking	ACQ, CA, CCA (not residential decking), LOSP
H3A	Outside, above ground (protected by paint)	Moderate decay, borers and termites	Fascia, bargeboards, exterior cladding, decking, window and door joinery and veranda posts	LOSP
H4	Outside, in-ground	Severe decay, borers and termites	Landscaping timbers, fence posts and pergola posts (in-ground)	ACQ, CA, CCA, creosote (farm fencing only)
H5	Outside, in-ground, contact with or in fresh water	Very severe decay, borers and termites	Retaining walls, piling, house stumps and building poles	ACQ, CA, CCA, creosote (power poles)
H6	Marine waters	Marine wood borers and decay	Boat hulls, marine piles and jetty cross bracing	CCA, creosote (in waters above Batemans Bay only in combination with CCA)

ACQ: alkaline copper quaternary **CCA:** copper chrome arsenate **LOSP:** light organic solvent preservative
CA: copper azole **PEC:** pigment emulsified creosote **LVL:** laminated veneer lumber

Identifying the chemicals used to treat timber

Preservative code numbers



A typical treated timber label

- CCA:** 01, 02, 03, 14, 15, 16, 31, 32, 33, 34, 38, 40, 43, 51, 55
- Synthetic pyrethroids:** bifenthrin 73, 75; permethrin 70, 74
- Copper quaternary:** 89
- Copper azole:** 58
- LOSP:** tebuconazole + propiconazole + permethrin 64; imidacloprid 59, 60
- Boron:** 9, 10, 11
- ACQ:** 90
- Creosote:** 20; PEC 45

5.2 APPENDIX B, BORAL CONTRACTED SPECIFICATION

5.3 APPENDIX C, BINGO WASTE MONITORING PROGRAM

5.4 APPENDIX D, LOW CHLORINE SUSTAINABLE FUEL (SF) SAMPLING PLAN

1 SAMPLING PLAN – EASTERN CREEK PRODUCT 1 SF- BORAL

1.1 Scope

This Sampling Plan outlines considerations and specifies procedures for taking samples of SF. It includes a description of sample preparation and storage procedures.

Sampling shall be conducted in accordance with this Sampling Plan and EN14780:2011 “Solid Biofuels – Methods for sample preparation” to ensure that the samples represent, as far as practicable, the true nature of the lot or the section of the main body of material from which they were drawn. The procedures are designed to achieve this objective, with measures in place to ensure traceability and integrity of the samples throughout the process.

Responsible	Role
Edward Malouf	SF Materials Coordinator
Fezeh Lotfi	Sampling and internal testing
Jim Sarkis	Sign off – Final Approval

1.2 Assessment Criteria

The following guideline was used as comparative criteria to assess the environmental quality of the collected samples materials:

EN14780:2011 “Solid Biofuels – Methods for sample preparation”

1.3 continuous process

Continuous sampling requires Daily, Weekly and monthly to be undertaken.

Daily Sampling:

Taking 5 to 10 kilograms sample per production per day. Daily monitoring for CV, chlorine and moisture will be performed prior to deliver to Boral.

Weekly sampling:

Making one sample from daily samples and test it as a weekly composite sample.

Routine (monthly) sampling

Making one sample from weekly samples and test it as a monthly composite sample by specifies procedures for reducing combined samples.

1.4 Sampling/Procedure

The main purpose of the preparation is that a sample is reduced to one or more test portions that are in general smaller the original sample. The main principal for sample reduction is that the composition of the sample as taken on site shall not be changed during each stage of sample preparation. Each sub-sample shall be representative of the original sample. To reach this goal, every particle in the sample before sample division shall have an equal probability of being included in the sub-sample following sample division.

1.5 sampling from crusher conveyor belt

Sample the daily SF material during the free fall by arranging the sampling shovels or scoops (flat bottom with edge raised high enough to prevent particles from rolling off) in such a way that it passes horizontally through the falling stream. Ensure that the sampling cup extends completely through the stream.

Pass the cup through the stream at random times during the transfer operation. Make sure that at least 10 separate passes are made at a uniform speed such that the cup is approximately half filled each time.

Empty the contents of the cup from each pass into a suitable container. The total sample obtained shall be 5 to 10 kilograms.

1.6 Sample division;

Sample division is the process of the process of reducing the mass of the sample without reducing the size of the particles. For every division step, the mass of retained material given in the following table (Table 1.a) shall be considered.

Table 1.a – Guideline for minimum masses to be retained during sample division stages

Nominal top size mm	Minimum mass g
100	15000
63	4000
45	1500
31,5	500
16	350
8	250
3,15	100
1	30
0.25	11

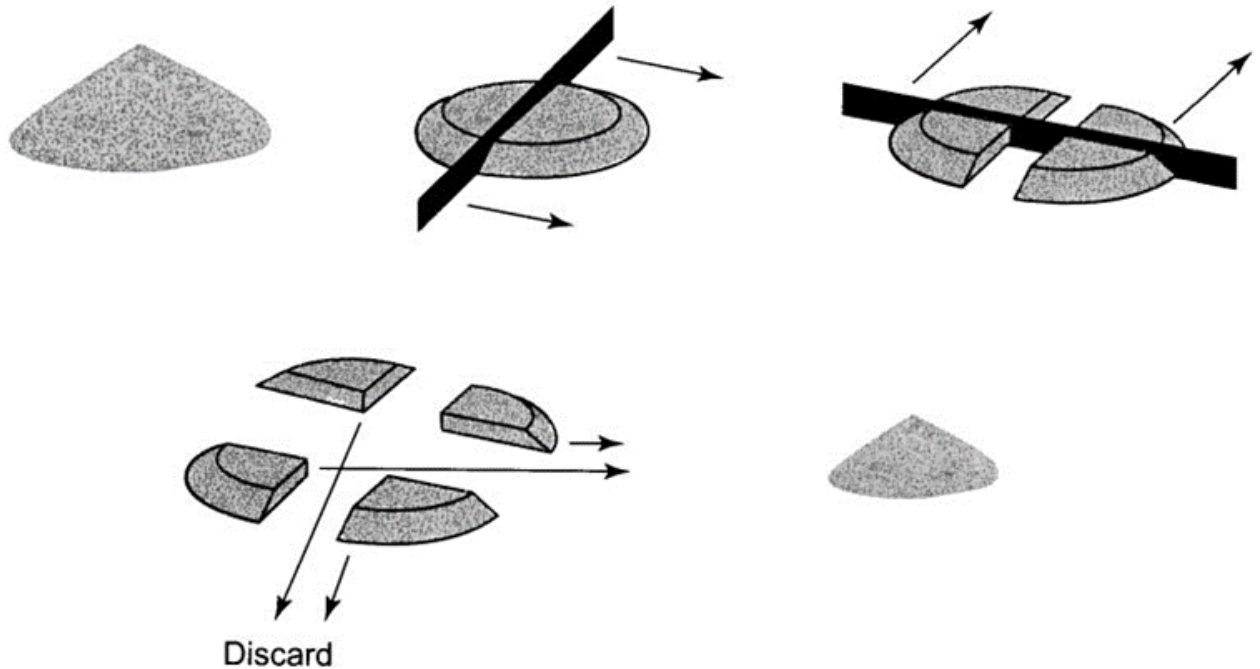
1.6.1 Coning and quartering

Coning and quartering method is for producing sub-samples of these materials down to approximately 1kg. Place the whole combines sample on a clean, hard surface. Shovel the sample into a conical pile, placing each shovelful on top of the preceding one in such a way that the SF runs down all sides of the cone and evenly distributed and different particles sizes become well mixed. Repeat this process three times, forming a new conical pile each time. Flatten the third cone by inserting the shovel repeatedly and vertically into the peak of the cone to form a flat heap that has a uniform thickness and diameter and is no higher than the blade of the shovel. Quarter the flat heap along two diagonals at right angles by inserting the shovel vertically into

the heap (Figure 1.a). Discard one pair of opposite quarters. Repeat the coning and quartering process until a sub-sample of the required size is obtained.

The sample is getting mix before each step of sample division.

Figure 1.a – Coning and quartering



1.7 Sampling Records

While undertaking the collection process the sampler must complete a sampling form on Intelex to document their process and sampling outcomes. The form will assist in recording the general locations of the composite and sub-samples.

Labelling sample containers with individual and unique identification, including project number, sample location and sampler name. And photographs of sampling locations with annotations related to location, sample number and composite sub-sample locations.

The sampler will finalise documentation by completing the Chain of Custody (COC):

- Site
- Sample collector
- Contact
- ID of all samples collected
- Allocation of testing suite – Characterisation and asbestos
- Signature

A photo of the COC will be taken and recorded with the Intelex Sampling Form.

1.8 Sample Storage

Samples shall be stored in plastic bags that are durable, decontaminated, airtight, and suitably protected when transported to avoid deterioration, contamination, or damage. Do not expose collected samples to extreme heat, e.g., storing on the dashboard, in the back of a utility or truck, or in a locked-up vehicle during the heat of the day. Samples shall be identified by permanently marking the sampling bags with the following information:

- a. Customer (e.g. Bingo)
- b. Unique customer sample number (e.g. EC Engineered Timber #3-1, 3-2, 3-3 etc.)
- c. Date sampled

1.9 Transfer of samples to laboratory

Accompanying the samples, will be a Chain of Custody (COC) when delivering to the NATA accredited Laboratory by Bingo staff. A ‘Sample Register’ shall be maintained on-site. The laboratory is to record all samples. Each sample shall be given a unique laboratory sample number assigned in numerical order.

1.10 Laboratory Analysis

Daily and weekly samples will test at Bingo laboratory and the monthly Samples will be supplied HRL according to Table 4.4. HRL is the only NATA accredited laboratory for analysis of Biomass and Sustainable Fuel (SF) in Australia.

1.11 Quality assurance and quality control

A clear record of the discrete subsamples that contribute to each composite must be maintained.

Chain-of-custody procedures must be demonstrated, outlining the handling, transportation and receipt of samples by authorised individuals.

A sufficient quantity of each discrete subsample must be archived by the analysing laboratory to allow for further individual analysis should this be required.

1.12 Interpretation of results

Where the results of a daily sample exceed the adjusted investigation level. The resampling of the material should be individually analysed to verify the result.

Where the results of the resampling exceed the adjusted investigation level. The stockpile will not be supplied to Boral.

1.13 Sample retention

At the completion of daily testing, remaining sample shall be clearly labelled as ‘completed (date)’ and stored in the sample storage area of the laboratory for weekly and monthly composite. Samples will be retained for 30 days to receive the monthly results from HRL.

1.14 Sample Register and Records

A register of samples will be maintained and updated with results retention of duplicates.

1.15 Sampling Schedule

Week	Analysis/Testing	Comments
1	Weekly suite, Daily suite	Refer to Table 4.4 for details
2	Weekly suite, Daily suite	Refer to Table 4.4 for details
3	Weekly suite, Daily suite	Refer to Table 4.4 for details
4	Routine (monthly) suite, Weekly suite, Daily suite	Refer to Table 4.4 for details
5	Weekly suite, Daily suite	Refer to Table 4.4 for details
6	Weekly suite, Daily suite	Refer to Table 4.4 for details
7	Weekly suite, Daily suite	Refer to Table 4.4 for details
8	Routine suite (monthly), Weekly suite, Daily suite	Refer to Table 4.4 for details
9	Weekly suite, Daily suite	Refer to Table 4.4 for details
10	Weekly suite, Daily suite	Refer to Table 4.4 for details
11	Weekly suite, Daily suite	Refer to Table 4.4 for details
12	Routine suite (monthly), Weekly suite, Daily suite	Refer to Table 4.4 for details
13	Weekly suite, Daily suite	Refer to Table 4.4 for details
14	Weekly suite, Daily suite	Refer to Table 4.4 for details
15	Weekly suite, Daily suite	Refer to Table 4.4 for details
16	Routine suite (monthly), Weekly suite, Daily suite	Refer to Table 4.4 for details
17	Weekly suite, Daily suite	Refer to Table 4.4 for details
18	Weekly suite, Daily suite	Refer to Table 4.4 for details
19	Weekly suite, Daily suite	Refer to Table 4.4 for details
20	Routine suite (monthly), Weekly suite, Daily suite	Refer to Table 4.4 for details
21	Weekly suite, Daily suite	Refer to Table 4.4 for details
22	Weekly suite, Daily suite	Refer to Table 4.4 for details
23	Weekly suite, Daily suite	Refer to Table 4.4 for details
24	Routine suite (monthly), Weekly suite, Daily suite	Refer to Table 4.4 for details
25	Weekly suite, Daily suite	Refer to Table 4.4 for details
26	Weekly suite, Daily suite	Refer to Table 4.4 for details
27	Weekly suite, Daily suite	Refer to Table 4.4 for details
28	Routine suite (monthly), Weekly suite, Daily suite	Refer to Table 4.4 for details
29	Weekly suite, Daily suite	Refer to Table 4.4 for details
30	Weekly suite, Daily suite	Refer to Table 4.4 for details
31	Weekly suite, Daily suite	Refer to Table 4.4 for details
32	Routine suite (monthly), Weekly suite, Daily suite	Refer to Table 4.4 for details
33	Weekly suite, Daily suite	Refer to Table 4.4 for details

34	Weekly suite, Daily suite	Refer to Table 4.4 for details
35	Weekly suite, Daily suite	Refer to Table 4.4 for details
36	Routine suite (monthly), Weekly suite, Daily suite	Refer to Table 4.4 for details
37	Weekly suite, Daily suite	Refer to Table 4.4 for details
38	Weekly suite, Daily suite	Refer to Table 4.4 for details
39	Weekly suite, Daily suite	Refer to Table 4.4 for details
40	Routine suite (monthly), Weekly suite, Daily suite	Refer to Table 4.4 for details
41	Weekly suite, Daily suite	Refer to Table 4.4 for details
42	Weekly suite, Daily suite	Refer to Table 4.4 for details
43	Weekly suite, Daily suite	Refer to Table 4.4 for details
44	Routine suite (monthly), Weekly suite, Daily suite	Refer to Table 4.4 for details
45	Weekly suite, Daily suite	Refer to Table 4.4 for details
46	Weekly suite, Daily suite	Refer to Table 4.4 for details
47	Weekly suite, Daily suite	Refer to Table 4.4 for details
48	Routine suite (monthly), Weekly suite, Daily suite	Refer to Table 4.4 for details
49	Weekly suite, Daily suite	Refer to Table 4.4 for details
50	Weekly suite, Daily suite	Refer to Table 4.4 for details
51	Weekly suite, Daily suite	Refer to Table 4.4 for details
52	Routine suite (monthly), Weekly suite, Daily suite	Refer to Table 4.4 for details

1.16 Field Sampling Sheet



Sampler:	
Location:	
Date/Time:	
Material Type:	
Equipment used:	Hand sampling tool / Gloves / Sample Bags
Sample Depth:	
Source:	Stockpile / Conveyor
Photos Taken:	

Sample Locations/Comments:

Please indicate location of the sampling points (include any comments)