

EMS0001

Operational Environmental Management Plan

Porta Products

124 Lowes Mount Road, Oberon NSW

Porta Products Pty Ltd

31 October 2025

Revision History

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				Name	Signature
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1 Introduction

1.1 Background

This Management Plan has been prepared for the Porta Products Pty Ltd (Formally Borg Manufacturing, Borg Panels, Australian Panels) Oberon site (and will be referred to herein as the 'Development')

The development operates as an existing Medium Density Fibre (MDF) and particleboard production facility in Oberon, NSW, manufacturing a range of Customwood MDF products and particleboard products including:

- Standard MDF;
- Moisture Resistant MDF;
- E0 (Low Formaldehyde Emitting) MDF;
- Ultraprime MDF Mouldings;
- Standard particleboard;
- Moisture resistance particleboard;
- Particleboard flooring products for structural applications;
- Decorative Laminated MDF and Particle Board; and
- Treated paper for the lamination of MDF and Particle Board.

On 29 May 2017 Development Consent SSD 7016 was granted by the Minister for Planning to construct a Particle Board manufacturing facility, modify the existing MDF manufacturing facility and undertake general site works (the Project) at the existing facility located on 124 Lowes Mount Road, Oberon.

Conditions contained within the Consent require the Development to provide for the ongoing environmental management of the Development. Though initially developed to satisfy condition C4, this Operational Environmental Management Plan (OEMP) has been reviewed and updated where necessary as per condition C6 and C10.

1.2 Purpose of the OEMP

The purpose of this OEMP is to:

- Implement and maintain effective environmental management systems;
- Ensure adequate management, monitoring and mitigation regimes are in place to protect the surrounding environment;
- Ensure compliance with relevant legislation, regulatory requirements and any other undertakings given by the Development;
- Establish procedures for reviewing progress and implementing corrective actions; and
- Provide a framework for review and continual improvement.

1.3 Structure of the OEMP

This OEMP has been developed to provide a strategic framework for environmental management at the Development and to satisfy the requirements set out in Condition C4 of Development Consent SSD 7016, and includes information on the following:

- **Section 2** – Legislative and Regulatory Compliance
- **Section 3** – Existing Development
- **Section 4** – Roles and Responsibilities
- **Section 5** – Identification and Management of Environmental Aspects
- **Section 6** – Community
- **Section 7** – Incident Response
- **Section 8** – Monitoring, Review and Improvement
- **Section 9** – Review and Continual Improvement

This OEMP outlines the environmental management strategies implemented by the Development including organisational responsibilities, planning activities, procedures, processes, implementation and review. It is an integral component of the overall environmental management system for the facility.

The environmental management sub-plans have been developed in consultation with relevant government agencies and departments as required and are updated as needed. Copies of these required management plans are included as Appendices to this OEMP as follows:

- **Appendix B** – Operational Air Quality Management Plan;
- **Appendix C** – Operational Noise Management Plan;
- **Appendix D** – Mobile Wood Chipper Operation Management Plan;
- **Appendix E** – Surface Water Management Plan; and
- **Appendix F** – Waste Management Plan.

1.4 Approval of the OEMP

Porta Products Operational Environmental Management Plan (OEMP) revision1 was submitted to the Secretary of the Department of Planning, Industry and Environment (DPIE) for approval on 30 November 2017 to satisfy condition of consent C4. DPIE provided approval on 21 December 2017.

2 Legislative and Regulatory Compliance

2.1 Relevant Legislation

Key environmental legislation relating to operation of the facility includes:

- *Environmental Planning and Assessment Act 1979*;
- *Protection of the Environment Operations Act 1997*; and
- Protection of the Environment Operations (General) Regulation 2009.

Key legislation relating to the management of air quality, noise, surface water and waste are identified in the relevant environmental management sub-plans.

2.2 Conditions of Consent

The Development operations are subject to the conditions contained in Development Consent SSD 7016 dated 29 May 2017 and the following modifications:

- MOD 1 – extension of mouldings warehouse, reorientation of materials handling building, layout changes to particleboard chipper/debarker building, extension of northern noise bund, reconfiguration of elements of the surface water management system, reclamation of the Spring Dam (approved 20 November 2018);

- MOD 2 – installation of an electricity generation gas turbine and ancillary equipment (approved 29 November 2019)
- MOD 3 – additional materials handling equipment, extension to northern warehouse, changes to the site surface water system and construction of further hardstand (approved 22 May 2020); and
- MOD 4 – Additions and alterations to the existing timber processing facility including reclamation of the remaining spring fed dam, relocation and expansion of the existing mechanic's workshop and improvements to the site's water treatment plant (approved 20 August 2022).
- MOD 5 – Minor update to the approved mechanical workshop including additional workshop bays, additional first floor storage and minor updates to the office plus removal of the refuelling system and automated truck washing machine. The proposed development will also result in the increase in length of the stormwater management system to cover an additional 11m length of the mechanics workshop building. (approved 23 April 2024).

The specific requirements for the OEMP (Schedule 2, Condition C4 and C6) are detailed in **Table 1**.

Table 1 – Development Consent Conditions

No.	Requirement	Document Reference
	OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN	
C4.	Within 6 months of the date of this consent, the Applicant must prepare an Operational Environmental Management Plan (OEMP) for the Existing Development to the satisfaction of the Secretary. The OEMP must:	This Plan
	a) be submitted to the Secretary for approval;	Section 1.4
	b) be prepared by a suitably qualified and experienced expert;	Revision History
	c) provide the strategic framework for environmental management of the Existing Development;	Section 1.2
	d) identify the statutory approvals that apply to the Existing Development;	Section 2
	e) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Existing Development;	Section 4
	f) 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 Existing Development; (ii) receive, handle, respond to, and record complaints; (iii) resolve any disputes that may arise; (iv) respond to any non-compliance; (v) respond to emergencies; and	Section 6.1 Section 6.2 Section 6.3 Section 8.3 Section 7.5

No.	Requirement	Document Reference
	g) include the following environmental management plans addressing: (i) Air Quality (Condition B5); (ii) Noise (Condition B18); (iii) Mobile Wood Chipper Operation (Condition B24); (iv) Surface Water (Condition B32); and (v) Waste (Condition B51).	Appendix A Appendix B Appendix C Appendix D Appendix E
C6	Prior to commencement of operation of the Project, the Applicant must update the OEMP required under Condition C4 to incorporate the Project and its management to the satisfaction of the Secretary. The updated plan must be prepared in accordance with the requirements of Condition C4, and must incorporate the following:	This Plan
	a) procedures, roles and responsibilities of key personnel involved in the environmental management of the Development;	Section 4
	b) community consultation requirements for the Development; and	Section 6
	c) updates to the environmental management sub-plans listed under Condition C4(g)	Appendices A through E

2.3 Development Consent SSD 7016 Mitigation Measures

Schedule 2 Part C Environmental Management, Reporting and Auditing of SSD 7016 condition C4 and C6 sets out the requirement for the Development to develop and maintain an Operational Environmental Management Plan (OEMP) as described in Table 1.

Appendix B Applicant's Management and Mitigation Measures of Development Consent SSD 7016 details the reasonable and practical measures to avoid or minimise impacts to the environment that may arise as a result of the Project. There were no mitigation measures specific to the OEMP that related to the 'Existing Development' as unmodified.

2.4 Environment Protection Licence

Environment Protection Licence 3035 (EPL 3035) authorises the carrying out of the scheduled activities chemical production and wood or timber milling or processing at the facility in accordance with the requirements of the licence.

3 Process Overview

The Development is shown in **Figure 1**. The facility consists of a log yard, debarkers and chippers, an MDF manufacturing plant, particleboard manufacturing plant, mouldings plant, paper treatment process, and MDF and particleboard decorative finishing presses.

3.1 MDF Plant

Development Consent SSD 7016 allows for the production of up to 380,000m³ of MDF per calendar year. The MDF plant has two production press lines. Conti 1 press line was commissioned in May 1988 and Conti 2 press line was commissioned in September 1997.

Under MOD 4 improvements and modernisation to the MDF plant was proposed. This included the construction of a new contiroll press line (Conti 4), replacing the old multidaylight press, which will allow for the efficient manufacture of panels up to 9mm thick.

Manufacture of MDF begins with sorted logs being transferred to a debarking plant either directly from incoming trucks or from the log yard. Oversized logs are rejected and diverted to storage. Bark from this process falls to a lower deck and is collected by a scraper, which feeds the bark to a conveyor and stockpile. Bark and other wood refuse is then used as fuel for the heat plant or on-sold for landscaping purposes. De-barked logs are fed into a chipper, which converts the full log into a standard size chip suitable for further processing. The created chip is then fed by conveyor onto the chip piles.

MDF is produced using chip that is pre heated with steam, refined in the refiners and then blown into the blow line once resin and wax is added into the fibre. After resin is added to the fibre it is then dried in the dryers, formed into a fibre mat by the mat formers, and put through the hot presses.

All MDF press lines are equipped with a chip wash including refiners, dryers and mat forming with a continuous press. After the panels are pressed, they are cooled in star coolers and stored in the high bay system to cure.

Energy for MDF process plant equipment is supplied from a combined energy distribution manifold. This energy is produced from the Sunds and Easteel waste wood energy plants.

When the panel has cooled it is transported from the high bay storage system to the sander. The sander is an 8 head Steinemann Sander, which can sand up to 65 metres per minute. The sanded panel is then stored in the high bay system.

Sanded packs are transported from the high bay system to the saws. The panel is then cut into finished sizes using a Schwabedissen Saw. The panels are packed and stored for transport to external customers or processed through the Value Add Mouldings line or Value Add Painted Door line.

Unsanded packs are also transported to the laminating process area where a Steinmann inline sander is used prior to decorative pressing. This sander sands up to 2500mm in working width can sand at up to 60 metres per minute.

3.2 Value Add

3.2.1 Mouldings

Value Add Mouldings produce Ultra Prime Moulding from the raw MDF panels produced in the MDF plant. The mouldings line comprises of a Paul Saw, moulder, sander, painting, drying ovens, de-nibber, packing and storage system.

The Value Add Cut to Size Line produces door jamb sets from Ultra Prime Mouldings. The cut to size line comprises of a strapper, beam saw and packaging system.

The Value Add Painted Door Line produces painted doors from the raw thin panels produced at the plant. The painted door line comprises of a roller coater, UV oven, curtain coater, IR oven, and packing and storage system.

3.3 Laminating

3.3.1 Paper Treatment

This process produces the protective decorative papers which are applied to the surface of the raw MDF to make a decorative sheet.

Liquid resins made at the Woodchem facility are soaked into rolls of paper in a continuous process using a Vits paper treatment machine. The paper treater uses heated air to suspend and dry a horizontal web of paper 2500mm wide and almost 100m long. The drying process is very sensitive as uncontrolled contact with any physical parts will result in process malfunction. Once dried to a pre-determined point, the continuous ribbon is cut to length and/or made into continuous rolls of treated paper for further processing.

3.3.2 Decorative Pressing

A Hymmen Isochoric continuous double belt press takes MDF master panels and rolls of treated paper produced on site and combines them using heat and pressure. This thermally fuses the decorative paper to the surface of the MDF board imparting a decorative finish, water resistance and some surface hardness.

The basis of this continuous process is the pioneering application of the isochoric press principle by means of air-filled pressure pads operating in dynamic machine conditions. This results in a process that is usually batch driven becoming continuous.

3.4 MDF Press

The building and facilities purchased from Jeldwen in 2012 consist of an integrated fibre preparation plant, press and ancillary process support equipment.

Chip is sourced from the MDF site and prepared using the chip steaming process and Sunds refiner. The fibre is then resinated via a blow line blending process and sent to the fibre tower at the southern end of the building.

A mat former and fibre mat pre-press prepares the continuous ribbon of fibre for an MDF press. Post pressing there is cooling racks, stacking and off-loading systems to handle panels once manufactured.

There is a segregated paint manufacturing plant consisting of an Onslow high speed dispersion mixer and various storage/blending tanks for raw materials and finished paint products. All liquids are stored within the appropriately designed tanks in bunded areas.

3.5 Particleboard

The Development has approval under SSD 7016 to product up to 500,000m³ of particleboard per calendar year.

Plantation timber logs are bought to site and processed through the timber yard. This includes processing the timber through an enclosed debarker and chipper to reduce the timber to a consistent particle size. This chip is then stored in one of two chip silos. From there the chip is screened on a conveyor to remove any foreign ferrous contaminants using magnets before being further reduced in size using knife ring flakers within the flaker building. These knife ring flakers are designed to produce the optimum macro sized particles for the processing methods. These particles are stored in additional silos prior to being fed into the drier. Recycled boards and reclaimed timber from pre-approved off-site sources under the Urban

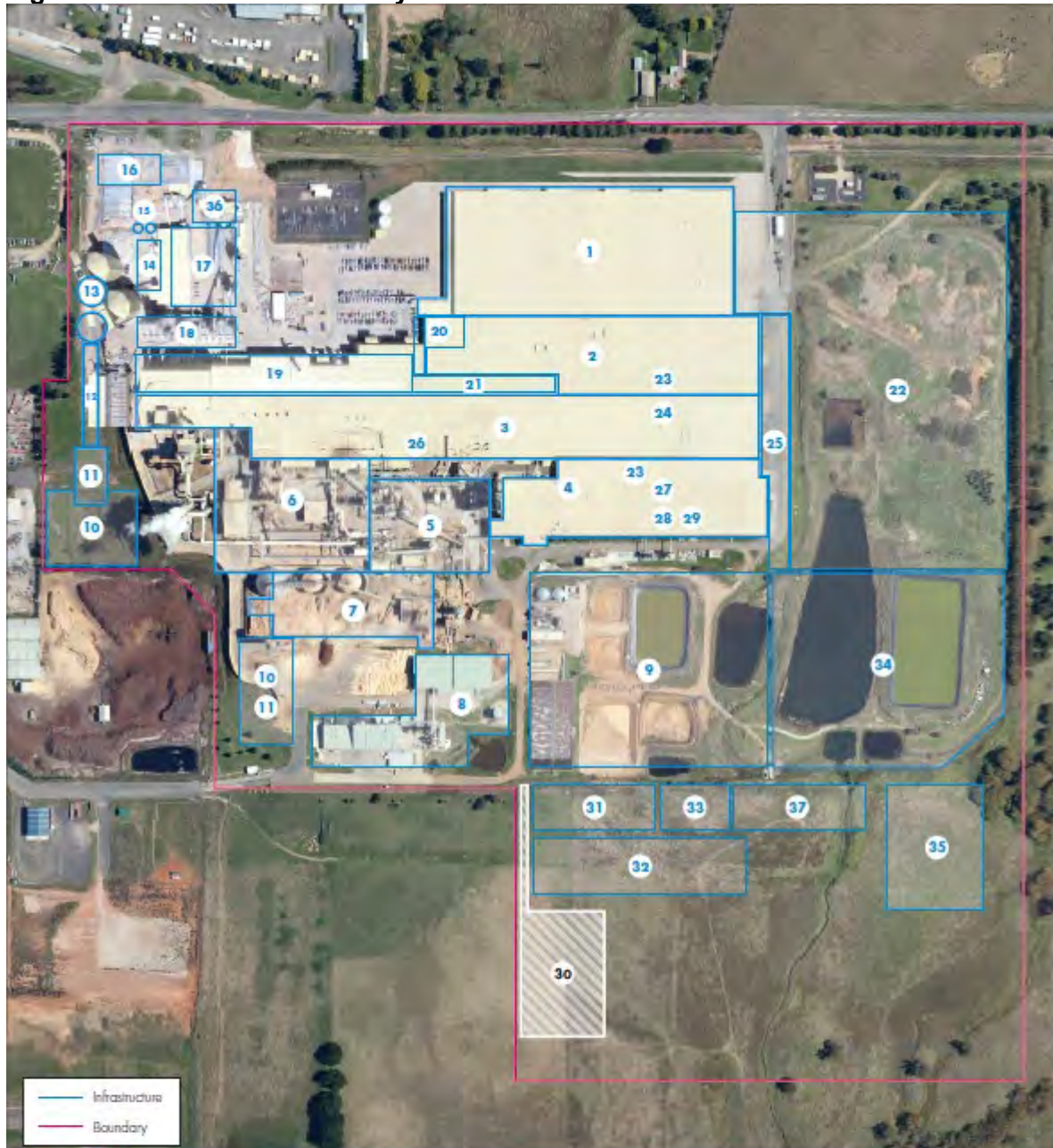
Wood Residue scheme which have been chipped to size as well as timber fines are introduced at this point.

The saw dust and wood particles are then dried in a rotating drum drier. Any small particles generated during the drying process which are smaller than required are removed using cyclone extractors. Any surplus air generated which is not required for the drying process is cleaned using a Wet Electrostatic Precipitator (WESP) prior to being released to the atmosphere as clean air. Once dry and processed in this manner, the particles are screened for quality with appropriately sized particles and dust continuing on the manufacturing process whilst any oversize particles are sent to the grinding mill to reduce them to an appropriate size.

The particles are then blended with glue and additives (a blend of urea formaldehyde with a paraffin wax emulsion and a catalyst to accelerate the reaction) in a specifically designed ribbon blender. After blending, the resinated particles are sent to the appropriate mat forming stations. The forming stations are designed to ensure that there is an even distribution of particles across both the width and the thickness of the board. The mat is then weighed and adjusted electronically to ensure that the finished product has a consistent density.

The forming line then transports the layered mat in a continuous format to the press, while simultaneously measuring moisture and removing any remaining ferrous material. The forming line is able to reject and recycle the mat before pressing if the specified product parameters are not of a suitable standard. Any rejected material is reused on site. The press then applies the specified heat and pressure required to cure and consolidate the board in order to meet or exceed the relevant Australian Standards. This process is remotely controlled from the press control room.

Once processed, the pressed board is then cut square, checked to ensure it meets the required standards, cooled and stored in an automated storage system. Once cooled and cured, the boards are removed from storage and processed through the sander to ensure they meet final surface quality and thickness standards.

Figure 1: Porta Products Facility Oberon**Infrastructure Key**

1 Warehouse	14 Flaking Building	27 Automated Paper Storage
2 Mouldings Plant	15 Silos	28 Impregnated Paper Trailer
3 Existing Manufacturing Plant	16 Building for Fines and Sawdust Storage	29 Impregnated Paper Trailer
4 Existing Manufacturing Plant	17 Dryer Area	30 Proposed Hardland
5 Heat Plant	18 Screening Area	31 Effluent Storage
6 Manufacturing and Processing Plant	19 New Press Production Hall	32 First Flush Basin
7 Log Yard	20 New Administration Area	33 Emergency Catchment
8 Lot 22 DP1017457 – (not included in submission)	21 Automated Particle Board Warehouse	34 Hardland Include Western Area
9 Water Recycling Plant	22 Automated Storage Warehouse System	35 Hardland Include Eastern Area
10 Log Yard	23 Automated Storage Warehouse System	36 Gas Turbine
11 Enclosed Chipper / Debarber	24 Additional laminating Line	37 Effluent Storage
12 Conveyor	25 Building Extension	
13 Silos	26 Additional Sanding Line	

4 Roles and Responsibilities

4.1 OEMP Implementation

The role, responsibility, authority and accountability of all key personnel involved in the environmental management of the facility is detailed in **Table 2**.

Table 2 – Roles and Responsibilities

Role	Responsibility	Authority and Accountability
Porta Products group Managing Director	Establish environmental policy that forms part of the organisations culture, values, performance standards and corporate citizenship	Communicate environmental responsibility throughout the organisation
Porta Products Operations Manager	Overall environmental performance of Porta Products facility	Ensure adequate resources are available to implement the OEMP
Porta Products Environmental Manager	Oversee the environmental performance of the operation and compliance with legislative and regulatory requirements	Reports to Operations Manager and Environment and Regulatory Compliance Manager Implementation of OEMP and sub-Plans, including environmental reporting, monitoring, auditing, incident investigation and complaints handling Review and update environmental management plans Liaise with Regulator
Porta Products Environment and Regulatory Compliance Manager	Provide support and guidance to the Environment Manager	In consultation with the Operations Manager, ensure the Environmental Manager has the resources available to implement the OEMP and fulfil Porta Products environmental commitments Liaise with Regulator
Porta Products Staff and Employees	Manage operations in an environmentally responsible manner and report any incidents or take actions to minimise impacts from site operations	Report all environmental incidents to the Environment Manager. Undertake environmental awareness training through the site induction process.
Porta Products Contractors	Manage operations in an environmentally responsible manner and report any incidents or take actions to minimise impacts from site operations	Report all environmental incidents to the Environment Manager. Undertake environmental awareness training through the site induction process.

4.2 Environmental Awareness Training

The OEMP requires all employees receive an appropriate level of environmental awareness training. This training is designed to suit the various needs and levels. Training covers

environmental legislation, due diligence, performance criteria, reporting requirements and emergency response procedures. All employees are made aware of the Company's Environmental Policy and the need to meet its obligations.

Environmental awareness training is undertaken as part of staff, employees and contractor's induction training.

Training and Assessment Manuals will be reviewed as necessary and where site conditions change to ensure they accurately reflect site operations and training requirements.

5 Identification & Management of Environmental Aspects

Operation of the facility has the potential to cause environmental impacts as outlined below. Management of each environmental aspect is documented in the corresponding Management Plan (refer **Appendices A - E**).

5.1 Air Quality

Operation of the facility has the potential to effect the general health and amenity of the community and the surrounding environment if not managed. Emissions from the plant with potential to cause environmental impacts include particulate matter, nitrogen dioxide, formaldehyde and volatile organic compounds.

The Operational Air Quality Management Plan (OAQMP) defines the strategies and procedures to be implemented to ensure operation of the facility does not result in any unacceptable off site impacts resulting from air emissions.

The OAQMP is included as **Appendix A** to this OEMP.

5.2 Noise

Noise from operation of the facility has the potential to affect sensitive receivers if not managed. The Operational Noise Management Plan (ONMP) addresses potential noise impacts on sensitive receivers by identifying measures that will be implemented to minimise noise. Additionally, all noise attenuation measures installed for the facility are to be maintained in good working order.

Furthermore, operation of the mobile wood chippers has been identified as the highest noise emitters on site by a significant margin. Operation of mobile chippers does not form part of 'normal' operations. They are typically only used during breakdown of electric plant.

The Mobile Wood Chipper Operation Management Plan (MWCOMP) documents mitigation and management measures to assist the Development in meeting noise limits. Exceedances can be avoided through monitoring weather conditions and restricting use of mobile chipping plant during periods of meteorological enhancement.

The ONMP is included as **Appendix B** and the MWCOMP is included as **Appendix C** to this OEMP.

5.3 Surface Water

Surface water management at the Development can be broken down into both process water management and stormwater management.

Process water is sourced from the town water supply, recycled water from the water treatment plant, Spring Dam water and harvested stormwater. Once used through the process the water is then sent to the water treatment plant, which utilises filtration and biological degradation to remove contaminants from the water for re-use, capturing over 400kL per day from the site for reusing in the manufacturing process. The water treatment plant produces brine, a waste product from the Reverse Osmosis (RO) system, which is high in dissolved solids. Brine solids are currently recycled within the water treatment plant and reused by way of dilution in the MDF and particleboard manufacturing process.

Stormwater management on site aims to convey and treat stormwater from both the Development and upstream sites. Stormwater is managed in two distinct collection systems separating clean and 'dirty' water. 'Dirty' stormwater is either harvested for reuse in the manufacturing process or treated via a series of swales and ponds prior to discharge from site. Clean stormwater is conveyed around the perimeter of the site and discharged to Kings Stockyard Creek.

The Surface Water Management Plan (SWMP) defines the strategies and procedures implemented to ensure the facility does not result in unacceptable off-site impacts on surface water systems or downstream users.

The SWMP is included as **Appendix D** to this OEMP.

5.4 Waste

Waste products are generated during operation of the facility. A Waste Management Plan has been prepared to document the requirements for management of waste, identify potential sources of waste and risks related to waste management, and describe the environmental controls to be implemented to meet regulatory requirements.

The Waste Management Plan is included as **Appendix E** to this OEMP.

6 Community

6.1 Community Involvement

Condition B58 of Schedule 2 in Development Consent SSD 7016 requires:

“B58. The Applicant must consult with the community as required under Conditions C1 and C4 for the Development, including consultation with the nearby sensitive receivers, relevant regulatory authorities, Registered Aboriginal Parties and other interested stakeholders.”

Close community liaison is maintained to ensure local residents are kept up to date on operation of the facility, and to provide an avenue for communication with the site. Consultation with the community may include:

- Community Consultative Committee (**Section 6.1.1**);
- Presentations to the Oberon Business and Tourism Association Meetings;
- Consultation with the Oberon High School Principal regarding any rock or concrete breaking activities that may occur at the facility (refer Construction Environmental Management Plan); and
- Particle Board Project updates including information on the Porta Products website, local area advertisements, letterbox notifications and/or Project information sheets.

6.1.1 Community Consultative Committee

The Development has an established joint Community Consultative Committee (CCC) that meets nominally quarterly to discuss environmental and operational aspects of the Porta Products site. The CCC meeting also provides a forum for feedback to Porta Products in relation to the environmental management of the facility.

6.1.2 Opportunities for Information Exchange

The Development has in place the following avenues to register inquiries and complaints related to operational activities:

- A 24-hour free call community liaison line (1800 802 795)
- Postal address for written complaints (Porta Products, Private Mail Bag 1, Oberon NSW 2787)
- Email address for electronic complaints (oberon_site@borgs.com.au)

The telephone number, postal and email address are included on public information, which may include the website, local area advertisements and letterbox notifications.

6.2 Complaint Protocol

The Environmental Manager is to be notified of any received complaints. The Environment Manager is to follow the Development complaints handling procedure (**Section 6.2.1**) and notify the Operations Manager as soon as practicable. The Operations Manager will notify the Porta Products Managing Director, as appropriate.

6.2.1 Inquiry and Complaints Handling Process

Porta Products community and stakeholder management system includes procedures for recording, investigating, tracking and handling of all inquiries and complaints. Once the Development has received verbal or written inquiries and/or complaints via telephone, email or post, the Environmental Manager or their nominated delegate will:

- Undertake an immediate investigation into the nature/cause of the inquiry and/or complaint;
- Make initial contact with the community or stakeholder representative within 48 hours to clarify the reason for the inquiry and/or complaint and to notify of the investigation process including an appropriate re-notification time;
- Record the enquiry and/or complaint on the Community Complaints register. This register includes the following details:
 - Complaint date and time;
 - Site;
 - Title;
 - Category;
 - Description;
 - Caller details;
 - Action;
 - Status;

- Follow-up;
 - Complaint validity; and
 - Attachments.
- Further investigate the inquiry and/or complaint and provide the community or stakeholder representative with an explanation of the cause and details of any actions taken to mitigate its effect.

It should be noted that if the inquiry and/or complaint is classified as an incident (refer **Section 7**) the Environment Manager must follow the incident reporting process and ensure appropriate resolution and sign-off.

Records of complaints will be maintained in the complaints register database for at least four years after the complaint was made.

6.3 Dispute Resolution

If following investigation of a community complaint the complainant remains dissatisfied with the findings of the investigation and a dispute ensues, the following procedure is to be implemented:

- The Environmental Manager and/or Operations Manager are to meet with the complainant to further define the issue;
- The Environmental Manager will then further assess the facilities compliance with all relevant approvals, licences and monitoring criteria. Assessment may include further environmental monitoring if appropriate; and/or engagement of specialist third party consultants/advisors;
- If the facility is compliant with all relevant approvals, licences and monitoring criteria, provide the findings and/or results to the complainant. No further action is required.
- If the facility is non-compliant with relevant approvals, licences and monitoring criteria provide the findings and/or results to the complainant. Further investigation, remediation/rectification works (if required), and monitoring is to be undertaken until it can be satisfactorily demonstrated that compliance has been achieved. Advise the complainant of the achieved compliance and no further action is required.

7 Incident Response

7.1 Pollution Incident Response Management Plan

Porta Products Pollution Incident Response Management Plan (PIRMP) is to be immediately implemented in the event that a pollution incident occurs at the Development such that material harm to the environment is caused or threatened.

7.2 Pollution Incident Definition

A 'pollution incident' includes a leak, spill or escape of a substance, or circumstances in which this is likely to occur.

According to the POEO Act definition:

pollution incident means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to

occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.

Pollution incidents causing or threatening material harm to the environment trigger the incident response measures below (including notification) and detailed in the Pollution Incident Response Management Plan.

Harm to the environment is material if:

- 1. it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or*
- 2. it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000. Loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.*

‘Material harm’ includes on-site harm, as well as harm to the environment beyond the premises where the pollution incident occurred.

Examples of environmental pollution incidents threatening material harm to the environment include – hydrocarbons, untreated process water, chemical substances, or hazardous materials which have, or threaten to enter either clean water systems on site or possibly be released from site.

Examples of environmental incidents which may not threaten material harm to the environment include: spills which are contained, minor hydrocarbon or other substance spills to land, sediment basin discharge where greater than design rainfall has been received and no other material pollutants are in the surface runoff.

7.3 Incidents Causing or Threatening Material Harm to the Environment

Part 5.7 of the *Protection of the Environment Operations Act 1997* (POEO Act) specifies requirements relating to the notification of pollution incidents.

Under Part 5.7, the occupier of premises, the employer or any person carrying on the activity which causes a pollution incident must **immediately notify** each relevant authority when material harm to the environment is caused or threatened.

7.3.1 Internal Notification Protocol

All employees and contractors are legally required to assist the Development to meet EPA’s notification requirement. Under the internal notification protocol, it is intended that the Environmental Manager or Operations Manager undertake external notification. The internal notification protocol allows external notification by other parties in the case that the Environmental Manager or Operations Manager cannot be immediately contacted.

In the event that a potential material harm pollution incident is identified, the person that discovered the potential material harm pollution incident must:

- 1. Immediately notify your Porta Products Supervisor. The Supervisor should then immediately notify:**

- a. Environmental Manager; or
- b. Operations Manager.

Note: This can be any time 24 hours per day.

2. In the event that the Supervisor cannot be immediately contacted, contact the Environmental Manager or Operations Manager **immediately**.
3. In the event that the Environmental Manager or Operations Manager cannot be immediately contacted, the EPA require that the Supervisor/employee/contractor must notify the EPA **immediately**.

Note: In this instance, the Environmental Manager and/or Operations Manager should be contacted as soon as possible after notifying the EPA.

7.3.2 External Notification Protocol

After the internal notification protocol has been followed, the person undertaking external notification must immediately follow the below protocol:

1. Firstly, call **000** if the incident presents an **immediate threat** to **human health** or **property**. (Fire and Rescue NSW, the NSW Police and the NSW Ambulance Service are the first responders, as they are responsible for controlling and containing incidents).
2. If the incident does not require an initial combat agency, or once the 000 call has been made, notify the relevant authorities in the following order. The 24-hour hotline for each authority is given where available:
 - a) the EPA Environment Line **131 555** (the appropriate regulatory authority (ARA) for the activity under the POEO Act)
 - b) the Ministry of Health via the local Public Health Officer – phone 6336 **7200**
 - c) Fire and Rescue NSW – phone **6336 0331** (Note: If the situation warranted calling 000 as a first point of notification, there is no need to ring Fire and Rescue NSW again)
 - d) SafeWork NSW – phone **131 050**
 - e) Oberon Council - phone **6329 8100**

The Secretary, Department of Planning, Industry and Environment shall also be notified as soon as practicable, by calling Senior Planning Officer – Industry Assessments on **02 9274 6386**.

7.3.3 Relevant Information

The relevant information about a pollution incident required under section 150 of the POEO Act consists of the following:

- the time, date, nature, duration and location of the incident;
- the location of the place where pollution is occurring or is likely to occur;
- the nature, the estimated quantity or volume and the concentration of any pollutants involved, **if known**;
- the circumstances in which the incident occurred (including the cause of the incident, **if known**); and
- the action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, **if known**.

Importantly, with the notification required to be made immediately, information on the three last points may not be known at the time of reporting. Information only that is known at the time of notification will be provided.

7.3.4 Notification to Surrounding Property Owners

In the event there is an incident which poses a potential threat to surrounding property owners and occupiers, the Development will notify those likely to be affected as soon as practicable. Depending on the nature of the incident, this may be in conjunction with or undertaken by emergency services. See the PIRMP for a contacts list of surrounding property owners and occupiers.

7.3.5 Porta Products Incident Report

The Porta Products Incident Reporting procedure will be undertaken for all environmental incidents, including those in this section.

Environmental incidents are recorded in DataStation, Porta Products incident management system. Each incident report will detail the issue, the corrective and preventative actions proposed, and the responsibilities and timing for completion of the actions. The report will include any comments and the completion date of corrective actions.

The Environmental Manager shall review the Environmental Incidents Register monthly to ensure actions are completed and that controls are performing effectively. The Environmental Manager shall also review the OEMP to determine if any incidents identify opportunities for improvement in mitigations or work practices.

7.3.6 Written Report to EPA & DPIE

The Development must provide written details regarding the incident to relevant government departments including DPIE and the EPA within 7 days of the date on which the incident occurred. The Environmental Manager is responsible for completing the written report in accordance with Development Consent SSD 7016 and EPL 3035.

7.4 Incidents *Not* Causing or Threatening Material Harm to the Environment

Environmental incidents which are identified as *not* causing or threatening material harm to the environment should be contained if safe to do so, then the Porta Products Incident Reporting procedure undertaken.

7.5 Emergency Response

In the event of an emergency the *Porta Products – Oberon Emergency Response Plan* is to be executed. The Emergency Response Plan includes the Pollution Incident Response Management Plan (PIRMP).

8 Monitoring, Review and Improvement

8.1 Monitoring

Environmental monitoring is used to check the performance of the operation against legislative and regulatory requirements. Records of all environmental monitoring and results are kept on site and made readily available.

In accordance with Section 66(6) of the POEO Act and Condition C18 of Development Consent SSD 7016 the results from Porta Products various monitoring programs are published on the Porta Products website: <https://www.borgs.com.au/locations/oberon-nsw/>

Regular environmental monitoring is integral to the successful implementation of the OEMP. The measurement and evaluation of criteria allows for the assessment of performance against quantitative and qualitative standards and assists in the identification of any non-conformances or areas that may require additional attention.

Environmental monitoring requirements for the Porta Products site are documented in the environmental management plans in **Appendices A – E**.

8.2 Analysis and Reporting Procedures

The Environmental Manager (or delegate) will review all environmental monitoring results on a regular basis to ensure compliance with all statutory, legislative and approval requirements, and to identify where results or trends indicate a risk of future non-compliance to the development consent criteria or EPL conditions.

The results of the environmental monitoring compared to approval requirements will be included in the Annual Review which is prepared in accordance with Schedule 2, condition C11 of SSD 7016. The Annual Review will also identify any trends and non-conformances over the year as well as describing any actions currently implemented or planned to ensure compliance with the appropriate criteria. The Annual Review will be provided to the relevant authorities including DPIE, EPA and Oberon Council. It will also be available on the Porta Products website (link above) along with a summary of environmental monitoring results.

The EPA will be provided with an Annual Return including statement of compliance, monitoring data and summary of complaints.

Porta Products compliance with the development consent and licence conditions is assessed by a three (3) yearly independent environmental audit, as required by Condition C15 of Development Consent SSD 7016. The first independent environmental audit (IEA) for the period 29 May 2017 to 30 June 2018 was completed in September 2018 by Umwelt Australia Pty Ltd. The audit report was submitted to DPIE on 21 September 2018. The second IEA for the period 1 July 2018 to 29 May 2021 was conducted by Molino Stewart Pty Ltd. This audit report was submitted to DPIE on the 18th of October 2021.

8.3 Procedure for Exceedance of Criteria or Threshold

Development Consent SSD 7016 defines an incident as:

A set of circumstances causing or threatening material harm to the environment, and/or an exceedance of the limits or performance criteria in this consent.

Condition 12 of Development Consent SSD 7016 requires notification of the Secretary DPIE and any other relevant agencies of any incident or potential incident with actual or potential significant off-site impacts on people or the biophysical environment associated with the development immediately after the Proponent becomes aware of the incident. Furthermore, within seven days of the date of the incident, the Proponent must provide the Secretary and any relevant agencies with a detailed report on the incident.

Should environmental monitoring show that the relevant criteria or threshold has been exceeded, the Development will conduct an investigation into the potential sources and/or causes. The investigation will consider any plant operation or other factors that may have

resulted in the exceedance. If the Development is responsible for the exceedance further actions will be taken to address the matter as follows:

- a) If the exceedance is deemed to have actual or potential significant off-site impacts on people or the biophysical environment, follow the procedures in **Section 7.3 Incidents Causing or Threatening Material Harm to the Environment**.
- b) If the exceedance does not have actual or potential significant off-site impacts follow the procedures in **Section 7.4 Incidents Not Causing or Threatening Material Harm to the Environment**. For these exceedances, the exceedance and results of the investigation will be reported in the Annual Review.
- c) DPIE and EPA are to be notified of any exceedance of discharge limits set out in EPL 3035.

8.4 Implementing Corrective Actions

Corrective and preventative actions will be implemented as identified. The implementation of the corrective and preventative actions will be reviewed internally and procedures developed for addressing non-conformances with the OEMP or subordinate plans.

9 Review and Continual Improvement

Operational activities will be subject to regular review to ensure conformance with the commitments made in the OEMP and subordinate plans.

In accordance with Schedule 2, Condition C10 of Development Consent SSD 7016, the OEMP and subordinate plans will be reviewed, and if necessary revised, within three (3) months of:

- a) Approval of a modification;
- b) Submission of an incident report under Condition C13;
- c) Approval of an Annual Review under Condition C11; or
- d) Completion of an audit under Condition 15.

New activities or changes to the operation that may result in environmental impacts will be assessed to determine if changes are required to manage the impacts, and if any revision to a subordinate plan is required.

The review process will include independent audits, or consultation with relevant specialists where required. Porta Products compliance with the development consent and EPL is assessed by a three yearly independent environmental audit.

Revisions of the OEMP will be undertaken to the satisfaction of the Secretary DPIE where appropriate.

Appendix A – Operational Air Quality Management Plan

EMS0004

Operational Air Quality Management Plan

Porta Products

124 Lowes Mount Road, Oberon NSW

Porta Products Pty Ltd

31 October 2024

This document should be read in conjunction with EMS0001 Operational Environment Management Plan

EMS0004 Rev 11

When printed this document is an uncontrolled version and should be checked against the electronic version for validity

Revision History

Rev No.	Revision Date	Author	Details	Authorised	
				Name	Signature
0	10/11/17	Carly McCormack	Draft	Victor Bendeovski	
1	27/11/17	C McCormack	Final Draft	V Bendeovski	
2	28/11/17	C McCormack	Final	Aleks Todoroski	
3	02/11/18	Jacqueline Blomberg	Review as per SSD7016 C10(d)	V Bendeovski	
4	11/04/19	J Blomberg	Review as per SSD7016 C10(a)	V Bendeovski	
5	23/03/20	J Blomberg	Update as per SSD7016 B6	V Bendeovski	
6	10/02/21	J Blomberg	Review as per SSD7016 C10(a) Update to sections 1.1, 2.2, 2.4, 3.5, 6.1, 7.2.1, 7.3.1	V Bendeovski	
7	21/10/2021	Andrew Brady	Review as per SSD7016 C10 (b) & (d). No updates necessary.	V Bendeovski	
8	16/08/22	A Brady	Review as per SSD7016 C10 (a) & (c) Name change and inclusion of MOD4	V Bendeovski	
9	25/08/23	A Brady	Review as per SSD7016 C10 (a) & (c) addition of variation to license	V Bendeovski	
10	5/09/24	A Brady	Review as per SSD7016 C10 (a) & (c) Name change and inclusion of MOD5	A Brady	
11	31/10/25	A Brady	Review as per SSD7016 C10 (c) Name change	A Brady	

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1 Introduction

1.1 Background

This Management Plan has been prepared for the Porta Products Pty Ltd (Formally Borg Manufacturing, Borg Panels, Australian Panels) Oberon site (and will be referred to herein as the 'Development').

The Development operates as a medium density fibreboard (MDF) and particleboard facility in Oberon NSW manufacturing a range of Customwood MDF and particleboard products including:

- Standard MDF;
- Moisture resistant MDF;
- E0 (low formaldehyde emitting) MDF;
- Ultraprime MDF mouldings;
- Standard particleboard;
- Moisture resistance particleboard;
- Particleboard flooring products for structural applications;
- Decorative laminated MDF and particleboard; and
- Treated paper for the lamination of MDF and particleboard

On 29 May 2017 Development Consent SSD 7016 was granted by the Minister for Planning to construct a particleboard manufacturing facility, modify the existing MDF manufacturing facility and undertake general site works (the Project) at the existing site located at 124 Lowes Mount Road, Oberon.

Conditions contained within the Consent require Porta Products to provide for the ongoing environmental management of the Development. Though initially developed to satisfy conditions B5, C4 and C9, and updated to satisfy condition B6, this Operational Air Quality Management Plan has been updated as per condition C10(a) which states that the Plan is to be reviewed and if necessary revised due to the approval of a modification to SSD 7016.

1.2 Local Setting

As described in the *Air Quality Impact Assessment* (Todoroski Air Sciences, February 2017), the facility is situated in an industrial precinct directly north of the township of Oberon, located approximately 39km southeast of Bathurst and approximately 36km southwest of Lithgow. The surrounding land use in the wider area is characterised as predominantly agricultural land, with residential areas of Oberon to the south of the industrial precinct.

Figure 1 presents the location of the Development in relation to the potentially most affected sensitive receptors identified in the *Assessment*. Also shown are the other facilities in the industrial precinct that are similar in nature to the Development and include Woodchem, Structaflor and AKD (formally Highland Pine Products).

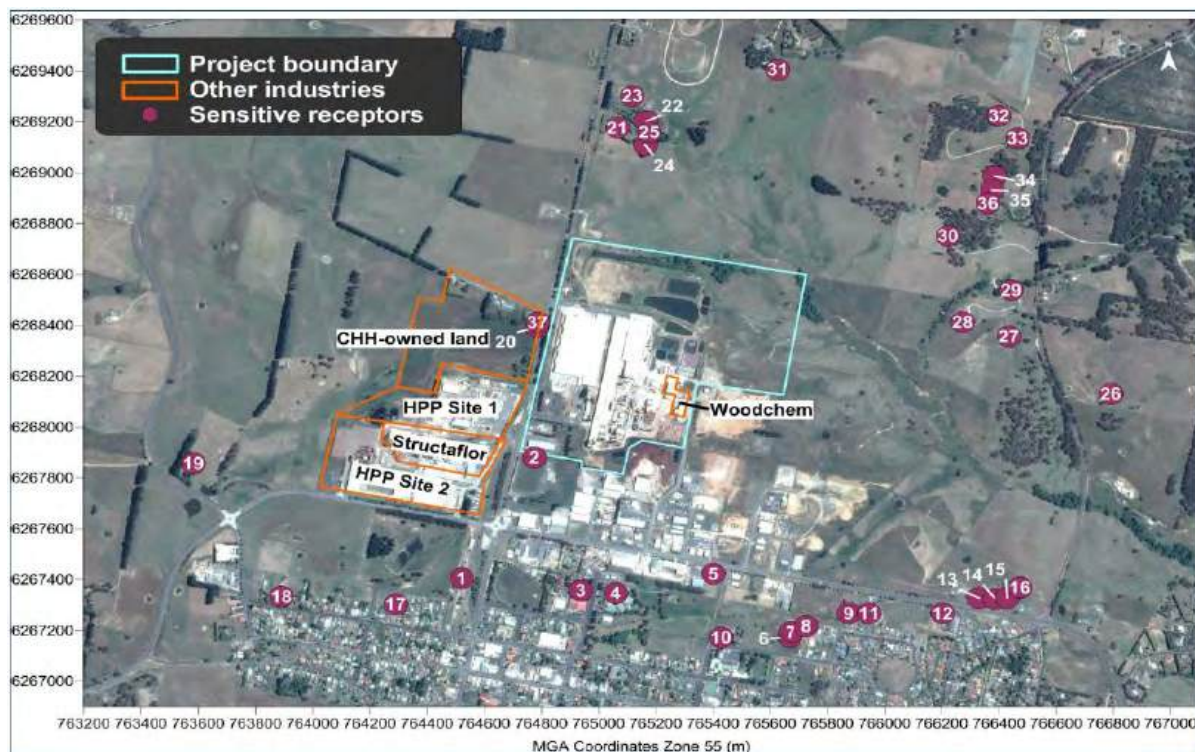


Figure 1 – Facility Location (Source: Todoroski Air Sciences, February 2017)

Figure 2 presents a pseudo three-dimensional (3D) visualisation of the topography in the area. The facility is located at a high altitude with dipping complex terrain sloping down to the nearby creeks and up to some receptor locations. The terrain features of the surrounding area would have an effect on the local wind distribution patterns and flows (Todoroski Air Sciences, February 2017).

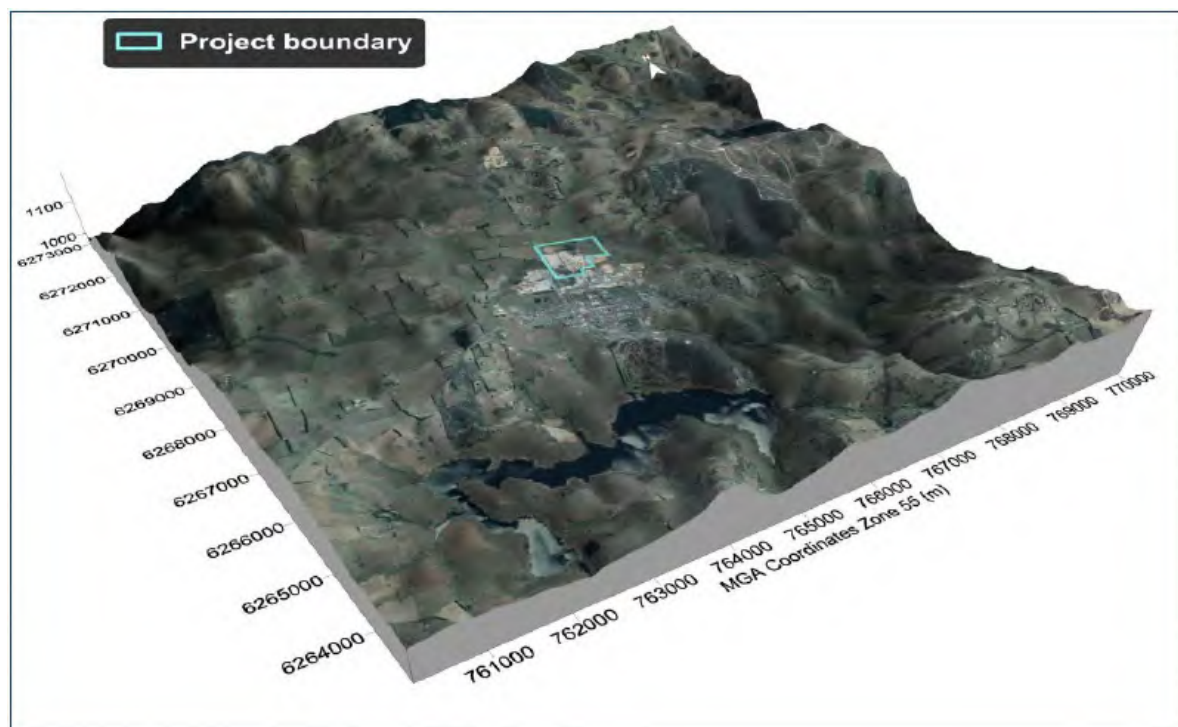


Figure 2 – Representative View of the Surrounding Topography (Source: Todoroski Air Sciences, February 2017)

1.4 Structure of this Management Plan

This Operational Air Quality Management Plan (OAQMP) has been developed to manage air emissions at the Oberon facility and to satisfy the requirements set out in Conditions B5, B6 and C9 of Development Consent SSD 7016, and includes information on the following:

- Section 2 – Legislative and Regulatory Compliance
- Section 3 – Air Quality Criteria
- Section 4 – Emissions
- Section 5 – Baseline Air Quality Data
- Section 6 – Management Measures
- Section 7 – Air Quality Monitoring
- Section 8 – Contingency Plan for Unpredicted Impacts
- Section 9 – Reporting
- Section 10 – OAQMP Review
- Section 11 – References

1.5 Consultation

In accordance with condition C4, the OAQMP (dated 28 November 2017) was provided to the EPA for review and consultation and submitted to the Secretary of the Department of Planning and Environment (DP&E) for approval on 29 November 2017. DP&E were satisfied that the OAQMP met with the terms of the relevant conditions of consent and issued approval on 21 December 2017.

As required under condition B6, the OAQMP was re-submitted to the EPA and the Secretary on 23 March 2020. As per SSD 7016 Condition C10, subsequent revised versions of the OAQMP will be submitted to the Secretary for approval.

1.6 Training

Training and Assessment Manual *EMS0019 Environmental Standard Awareness Air* has been developed and will continue to be delivered to all Supervisors and Operators on site. The Standard outlines employee's responsibilities to assist with managing potential pollution to air across the site, how to maintain regulatory compliance and mitigate against any nuisance to the local community. Training records are maintained in DataStation, Porta Products information management system.

2 Legislative and Regulatory Compliance

This OAQMP has been developed to ensure compliance with the requirements of the *Protection of the Environment Operations Act 1997* (POEO Act) and other relevant legislation as listed below.

2.1 Relevant Legislation

Key environmental legislation relating to air quality management for the operation of the facility includes:

- *Protection of the Environment Operations Act 1997*;
- *Protection of the Environment Operations (Clean Air) Regulation 2022*;
- *National Environment Protection Council (NEPC) Act 1994*; and
- *Environmental Planning and Assessment Amendment Act 2017*

2.2 Conditions of Consent

the Development operations are subject to the conditions contained in Development Consent SSD 7016 dated 29 May 2017, and the following modifications:

- SSD 7016 MOD 1 – site layout changes (approved 20 November 2018)
- SSD 7016 MOD 2 – installation of an electricity generation gas turbine and ancillary equipment (approved 29 November 2019)
- SSD 7016 MOD 3 - additional materials handling equipment, extension to northern warehouse, changes to the site surface water system and construction of further hardstand (approved 22 May 2020)
- SSD 7016 MOD 4 – Additions and alterations to the existing timber processing facility including reclamation of the remaining spring fed dam, relocation and expansion of the existing mechanic's workshop and improvements to the site's water treatment plant (approved 20 August 2022)
- SSD 7016 MOD 5 – Minor update to the approved mechanical workshop including additional workshop bays, additional first floor storage and minor updates to the office plus removal of the refuelling system and automated truck washing machine. The proposed development will also result in the increase in length of the stormwater management system to cover an additional 11m length of the mechanics workshop building.
(approved 23 April 2024)

No additional conditions specific to air quality were included in MOD 1, MOD 2, MOD 3, MOD 4 or MOD.

The specific requirements for an OAQMP (Schedule 2, Condition B5 and B6) and general requirements for environmental management plans (Schedule 2, Condition C9) are detailed in **Table 1**.

Table 1 – Development Consent Conditions

No.	Requirement	Document Ref.
	AIR QUALITY	
	Operational Air Quality Management Plan	
B5.	Within 6 months of the date of this consent, the Applicant must prepare an Operational Air Quality Management Plan (OAQMP) for the Existing Development to manage air quality to the satisfaction of the Secretary. The OAQMP must form part of the OEMP required by Condition C4 and be prepared in accordance with Condition C9. The OAQMP must:	This Plan
	a) be prepared by a suitably qualified expert and be prepared in consultation with the EPA;	Revision History Section 1.5
	b) detail and rank all emissions from all sources of the Existing Development, including particulate and formaldehyde emissions;	Section 3 Section 4
	c) describe a program that is capable of evaluating the performance of the Existing Development and determining compliance with key performance indicators;	Section 7
	d) identify the control measures that will be implemented for each emission source;	Section 6

No.	Requirement	Document Ref.
	e) outline options/strategies for reducing formaldehyde emissions;	Section 6.2
	f) nominate the following for each of the proposed controls: (i) key performance indicator; (ii) monitoring method; (iii) location, frequency and duration of monitoring; (iv) record keeping; (v) complaints register; (vi) response procedures; and (vii) compliance monitoring.	Section 3 Section 7 Section 7 Section 9 Section 9 Section 8 Section 7
B6	Prior to commencement of operation of the Project, the Applicant must update the OAQMP as required by Condition B5 to incorporate the Project and its management to the satisfaction of the Secretary. The updated plan must be prepared in accordance with the requirements of Condition B5 and must incorporate the following:	This Plan
	(a) details of emissions from all sources of the Development;	Section 3 Section 4
	(b) description of the air quality monitoring to measure the performance of the Development against this consent and the EPL; and	Section 7
	(c) description of any additional measures that would be implemented to ensure the Development complies with this consent and the EPL.	Section 6
	MANAGEMENT PLAN REQUIREMENTS	
C9	The Applicant must ensure that the environmental management plans required under Condition C4 of this consent are prepared by a suitably qualified person or persons in accordance with best practice and include:	
	a) detailed baseline data;	Section 5
	b) a description of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); (ii) any relevant limits or performance measures/criteria; and (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;	Section 2 Section 3 Section 6
	c) a description of the management measures that would be implemented to comply with the relevant statutory requirements, limits or performance measures/criteria;	Section 6
	d) a program to monitor and report on the: (i) impacts and environmental performance of the Development; and (ii) effectiveness of any management measures (see (c) above);	Section 9
	e) a contingency plan to manage any unpredicted impacts and their consequences;	Section 8
	f) a program to investigate and implement ways to improve the environmental performance of the Development over time;	Section 6

No.	Requirement	Document Ref.
	g) a protocol for managing and reporting any: (i) incidents; (ii) complaints; (iii) non-compliances with statutory requirements; and (iv) exceedances of the impact assessment criteria and/or performance criteria; and	Section 9
	h) a protocol for periodic review of the plan.	Section 10
	Note: These requirements also apply to the preparation or updates of management plans for the Existing Development and the Project.	

2.3 Development Consent SSD 7016 Mitigation Measures

Appendix B Applicant's Management and Mitigation Measures to Development Consent SSD 7016 details the reasonable and practical measures to avoid or minimise impacts to the environment that may arise as a result of the Project. There are no mitigation measures relating to the Existing Development as unmodified.

2.4 Environment Protection Licence

Environment Protection Licence 3035 (EPL 3035) specifies air emission discharge points, air concentration limits and monitoring requirements for operation of the Existing Development and the Project.

Variation to EPL 3035 (licence variation date 4 September 2019) included the following variations relating to air quality:

- The addition of new licence discharge and monitoring points 29, 30, 31 and 32
- The renaming of licence point 27 to better reflect its configuration
- The removal of redundant licence point 13 and associated monitoring requirements
- The removal of monitoring requirements for points 11 and 17 (and removal of volatile organic compound monitoring from points 7, 8, 9 and 10)
- The removal of monitoring requirements for dormant licence discharge points 18 and 19
- The addition of monitoring conditions for licence points 29, 30, 31 and 32
- The addition of a Special Condition E1.1 relating to the receipt, storage and processing of Urban Wood Residue in the particleboard factory at the premises

Variation to EPL 3035 (licence variation date 2 February 2022) included the following variation related to air quality for the Project:

- The update to Special Condition E1.1 for a second trial of the receipt, storage and processing of urban wood residue in the particleboard factory at the premises, specifically, the sampling and testing specified in condition M2.2 when UWR input is at its maximum processing rate of 20% (or 6 tonnes/hour) to monitor for worst case emissions.

Variation to EPL 3035 (licence variation date 2 August 2023) included the following variation related to air quality:

- Variation to condition O3.1 "The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.", replaced with "All areas in or on the premises must be maintained in a condition that prevents or minimises the emission into the air of air pollutants (which includes dust)."

Cyclone Upgrades 'Conti 1'

- U1.1 By 14 July 2023, the Licensee must submit in writing to the EPA a proposed construction schedule, including completion timeframes for the upgrade works to be undertaken on Conti 1 (as labelled in Borg response to EPA SR-360 19_4_2023" - Annexure (D)).
- U1.2 By 21 July 2023, the Licensee must submit to the EPA, a qualitative assessment or manufacturer's guarantee that the proposed works to be undertaken as per U1.1 will be able to satisfy the requirements of the Protection of the Environment Operations (Clean Air) Regulation 2022.
- U1.3 Commencing on 28 July 2023, the Licensee must submit a quarterly 'Progress Report' in writing to the EPA until works are completed. The report/s must contain at a minimum but not be limited to the following:
 - a. A progress report of works identified in U1.1,
 - b. Any documentation or photographic evidence to support the report,
 - c. Any known or perceived delays that may affect the projects final completion date
- The Licensee must notify the EPA in writing within 7 days of the completion of works identified in U1.1.

Variation to EPL 3035 (licence variation date 5 May 2025) included the following variation related to air quality:

Pollution Studies and Reduction Programs U1 Air Emissions Audit Report U1.1 By 14 March 2025, the licensee must provide the EPA with an Air Emissions Audit Report (AEAR).

The AEAR must consider all plant and equipment operated at the Premises that has the potential to discharge any air pollutants into the environment (including the points identified within this licence). The Report must at a minimum include, but not be limited to the following:

A. An identification of all plant and equipment with the potential to discharge air pollutants, including: Environment Protection Authority - NSW Page 23 of 29 Licence version date: 5-May-2025 Section 55 Protection of the Environment Operations Act 1997 Environment Protection Licence Licence - 3035

- i. the air pollutants emitted,
- ii. discharge parameters (eg. stack height, diameter),
- iii. date plant installed/commissioned,
- iv. date of any control technology installed/commissioned, and
- v. a map with GPS points showing the location of each discharge point.

B. For all the discharge points identified in A., a summary of all emissions testing data for the last 2 years and a comparison against the licence and Protection of the Environment Operations (Clean Air) Regulation 2022 limits. All original stack test reports should be provided. Where no testing has been undertaken, the Licensee must provide an emissions estimate (with supporting justification).

C. For all the discharge points identified in A., a description of all control and mitigation measures currently implemented to reduce potential air pollution.

D. For all emission controls installed, provide records of maintenance, management and monitoring of control equipment, including any future scheduled maintenance and upgrades.

3 Air Quality Criteria

Air quality criteria are benchmarks set to protect the general health and amenity of the community in relation to air quality.

3.1 Approved Methods for the Modelling and Assessment of Air Pollutants in NSW

Air quality goals relevant to the operation of the facility as outlined in the NSW EPA *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (EPA 2016) are shown in **Table 1**.

Table 1 – NSW EPA Air Quality Impact Assessment Criteria

Pollutant	Averaging Period	Impact	Criteria
TSP	Annual	Total	90 µg/m ³
PM ₁₀	Annual	Total	30 µg/m ³
	24 hour	Total	25 µg/m ³
Deposited Dust	Annual	Incremental	2 g/m ² /month
		Total	4 g/m ² /month
NO ₂	1-hour		246
	Annual		62
Formaldehyde	1-hour		21.8 (20*)

Source: EPA 2016

* The applicable criterion for formaldehyde is presented as 20 µg/m³ at 25°C in the Approved Methods (EPA 2016). To be consistent with the other pollutant criteria (and hence the modelling results), the table above presents the criterion at 0°C which is 21.8 µg/m³.

With the exception of formaldehyde, all other air pollutants are assessed against their applicable criteria using the maximum predicted concentrations at the sensitive receptors. For formaldehyde, the 99.9th percentile predicted concentrations are assessed against the criteria at or beyond the site boundary. The criteria outlined in **Table 1** are used for assessment against air dispersion modelling results for the site, which assesses potential air quality impacts in the air shed surrounding the site and estimates potential air emissions associated with the development.

3.2 National Environment Protection (Ambient Air Quality) Measure

The *National Environment Protection Council (NEPC) Act 1994* and subsequent amendments define the National Environment Protection Measures (NEPMs) as instruments for setting environmental objectives in Australia.

The Ambient Air Quality NEPM specifies national ambient air quality standards and goals for air pollutants including PM₁₀ and PM_{2.5}. The standard for PM₁₀ and PM_{2.5} is outlined in **Table 2**. The Ambient Air Quality NEPM allows for exceedance above the 24-hour average criterion in exceptional events such as bush fires and regional dust storms. As with each of the NEPM goals, these apply to the average, or general exposure of a population, rather than to "hot spot" locations or to individual industry projects. The criteria in **Table 2** are used for assessment against air dispersion modelling results for the site.

Table 2 – Standard for PM₁₀ and PM_{2.5} Concentrations

Pollutant	Averaging Period	Maximum Concentration (µg/m ³)
PM ₁₀	24 hour	50
	Annual	25
PM _{2.5}	24 hour	25
	Annual	8

Source: NEPC, 2016

3.3 World Health Organisation Guidelines

Table 3 presents the formaldehyde guideline recommended by the World Health Organisation (WHO) to prevent sensory irritation in the general public. The WHO Guideline is based on current knowledge of health impacts and is generally less stringent than the NSW EPA Criterion. The criteria outlined in **Table 3** are used for assessment against air dispersion modelling results for the site.

Table 3 – Applicable Air Quality Guideline for Formaldehyde

Pollutant	Averaging Period	Guideline (µg/m ³)
Formaldehyde	30-minute	100

Source: WHO, 2010

3.4 Protection of the Environment Operations (Clean Air) Regulation 2022

The Protection of the Environment Operations (Clean Air) Regulation 2022 (POEO, 2022) outlines standards of concentrations for air emissions emitted from various plant. The emission limits applicable to the facility are summarised in **Table 4**. Emissions to air monitoring results are assessed against the criteria in **Table 4** for the existing plant to determine compliance with concentration limits.

Table 4 – Standards of Concentration for Scheduled Premises

Pollutant	Group 4 Standard of Concentration (mg/m ³)
	Existing Sources
TSP	250
NO _x as NO ₂ equivalent	2,500

Source: POEO, 2010

3.5 NSW EPA Licence Limits

Environment Protection Licence 3035 contains air concentration limits for several of the existing emission points at the facility. The emission limits are summarised in **Table 5**. Emissions to air monitoring results are assessed against the criteria in **Table 4** for the existing plant to determine compliance with concentration limits.

Table 5 – EPL 3035 Air Concentration Limits Point 7, 8, 9, 10

Pollutant	Units of Measure	100 Percentile Concentration Limit
Solid Particles	mg/m ³	200
Formaldehyde	mg/m ³	5

All plant and equipment must comply with the relevant concentration standards listed in Schedule 2, 3 and 4 of the *Protection of the Environment Operations (Clean Air) Regulation 2022* if pollutant limits are not specified in the table above.

4 Emissions

The emissions considered in this Plan are those identified in the *Air Quality Impact Assessment* (Todoroski Air Sciences, February 2017) that have potential to affect the general health and amenity of the community and the surrounding environment.

4.1 Particulate Matter

Particulate matter consists of dust particles of varying size and composition. Air quality goals refer to measures of the total mass of all particles suspended in air defined as the Total Suspended Particulate matter (TSP). The upper size range for TSP is nominally taken to be 30 micrometres (µm) as in practice particles larger than 30 to 50µm will settle out of the atmosphere too quickly to be regarded as air pollutants.

Two sub-classes of TSP are also included in the air quality goals, namely PM₁₀, particulate matter with equivalent aerodynamic diameters of 10µm or less, and PM_{2.5}, particulate matter with equivalent aerodynamic diameters of 2.5µm or less.

Particulate matter, typically in the upper size range, that settles from the atmosphere and deposits on surfaces is characterised as deposited dust. The deposition of dust on surfaces is considered a nuisance and can adversely affect the amenity of an area by soiling property in the vicinity.

The greatest source of PM₁₀ emissions are from the Conti 2 Stage 1 Dryer Cyclones and Conti 4 Press Exhaust Vents (dormant). The next highest emitters of PM₁₀ emissions are the Conti 1 Dryer Cyclones and Conti 2 Heat Plant. The Conti 1 Heat Plant, press vents, baghouses and the WESP emit the least PM₁₀ emissions.

Fugitive particulate matter emissions are also generated through the disturbance of soils and wood dust, and the chipping of raw wood and fuels for the heat plants.

4.2 Nitrogen Dioxide

Nitrogen Dioxide (NO₂) is one of a group of highly reactive gases known as oxides of nitrogen or nitrogen oxides (NO_x). Other nitrogen oxides include nitrous acid and nitric acid. NO₂ is used as the indicator for the larger group of nitrogen oxides. NO₂ is a by-product from the burning of fuel (United States Environment Protection Agency, September 2017).

NO₂ goals relevant to the operation of the facility as outlined in the NSW EPA document *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (EPA 2016) are outlined in **Section 3.1**.

NO₂ along with other NO_x compounds react with other chemicals in the air to form both particulate matter and ozone. The environmental effects of NO₂ and other NO_x include the formation of acid rain, reduced visibility and haze, and nutrient pollution in waterways (United States Environment Protection Agency, September 2017).

From an analysis of historical stack emissions monitoring data, the primary sources of NO_x emissions from the facility are from the heat plants and Conti 1 Dryer Cyclone.

The press vents, baghouses and WESP are minor emitters of NO_x.

4.3 Formaldehyde

Formaldehyde is a colourless, flammable gas at room temperature and has a strong odour. Exposure to formaldehyde may cause adverse health effects, which can include irritation of the skin, eyes, nose, and throat. High levels of exposure may cause some types of cancers (United States Environment Protection Agency, September 2017). Formaldehyde is not a persistent pollutant and is readily broken down in air by sunlight, with a half-life of approximately 30-50 minutes.

Formaldehyde is emitted from the press vents and dryer cyclones, and originates from the setting by heat of the adhesive resins used in the manufacture of MDF and particleboard on-site.

From an analysis of historical stack emissions monitoring data, the primary sources of formaldehyde emissions from the facility are from the Conti 2 Stage 1 Dryer Cyclones, Conti 1 Dryer Cyclones and Conti 1 & 2 Press Vents.

The baghouses, WESP and Conti 1 & 2 Heat Plants are smaller emitters of formaldehyde.

4.4 Volatile Organic Compounds

Volatile organic compounds (VOCs) are a large group of organic chemicals that include any compound of carbon (excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate). VOCs participate in atmospheric photochemical reactions that contribute to ozone formation, they play a role in formation of secondary organic aerosols, which are found in airborne particulate matter, and are known to be harmful to human health (United States Environment Protection Agency, September 2017).

Sources of VOC emissions at the facility are from the Conti 1 and Conti 2 Heat Plants, press exhaust vents, the WESP, the two Cogen units and the paper oven duct.

5 Baseline Air Quality Data

Baseline environmental air quality data collected from emissions monitoring and depositional dust monitoring for the period between 2008 to 2017 is summarised in the sections below. Also included is a summary of typical wind patterns for Oberon taken from data for period June 2016 to May 2017. **Section 7** of this Plan details the requirements for air quality monitoring at the facility.

5.1 Emissions Monitoring Data

Figures 3 – 7 provide stack emission monitoring results for EPA monitoring points for the period 2008 to 2017. Tables of the monitoring results from 2008 to 2017 are included in **Appendix A**.

5.1.1 Total Suspended Particulate Matter and PM₁₀

Conti 1 Heat Plant exceeded the Group 4 Standard of Concentration for TSP of 250 mg/m³ in the 2013 and 2015 reporting years due to a fire in the multi-cyclones affecting their performance, as such, the data are considered spurious, and not representative of normal operation and hence are not plotted. The plant has since been repaired and recorded TSP emissions of 190 mg/m³ in the 2015-16 reporting period, as shown.

In the 2016-17 reporting period the plant was modified to divert exhaust gas from Conti 1 Heat Plant back in to the Conti 1 production system.

EPA Identification Points 9 Conti 1 Dryer Cyclone #1 (south), 10 Conti 1 Dryer Cyclone #2 (north), 11 Conti 2 Heat Plant and 17 Conti 1 Heat Plant have an EPL air concentration limit for TSP of 200 mg/m³. With the exception of the exceedance described above, all monitoring points complied with the EPL limits.

There are no operational limits in either the *POEO (Clean Air) Regulation 2022* or EPL 3035 for PM₁₀ emissions for the facility.

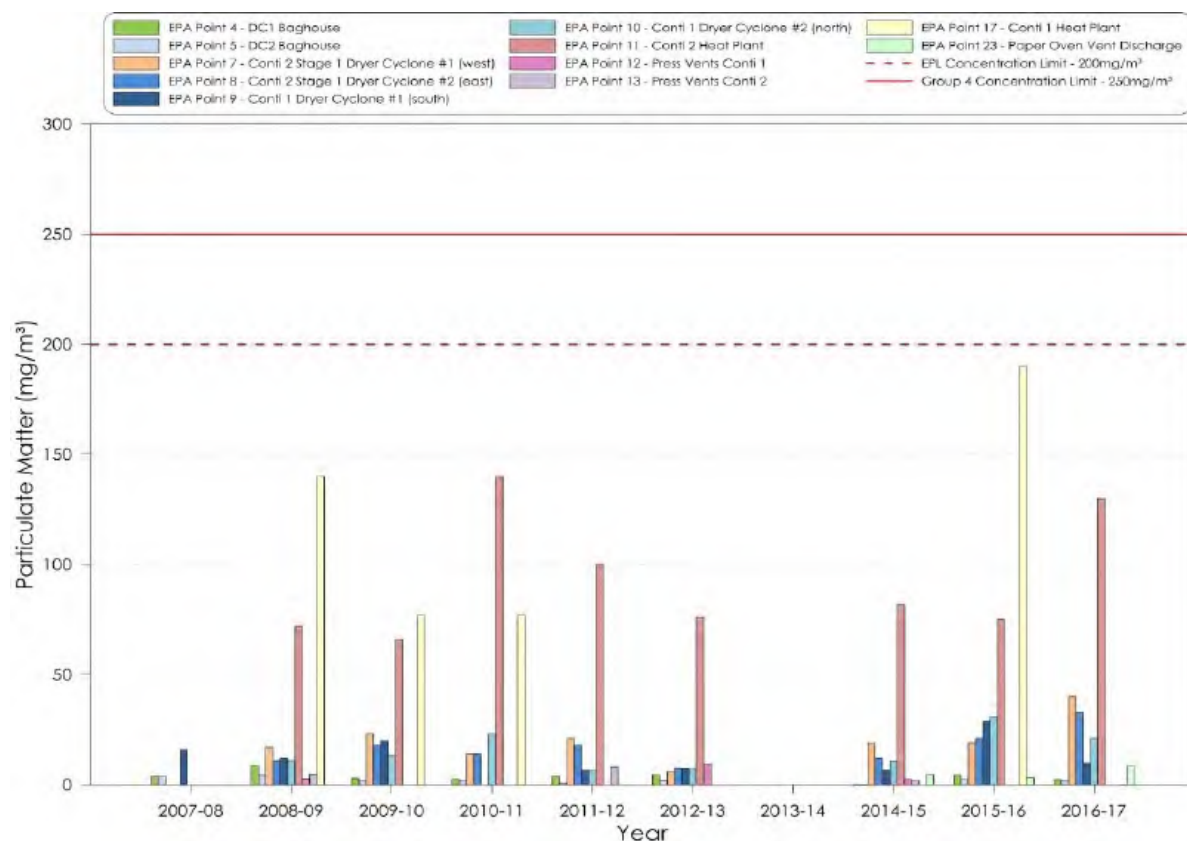


Figure 3 – Total Suspended Particulate Matter (TSP) Monitoring Results

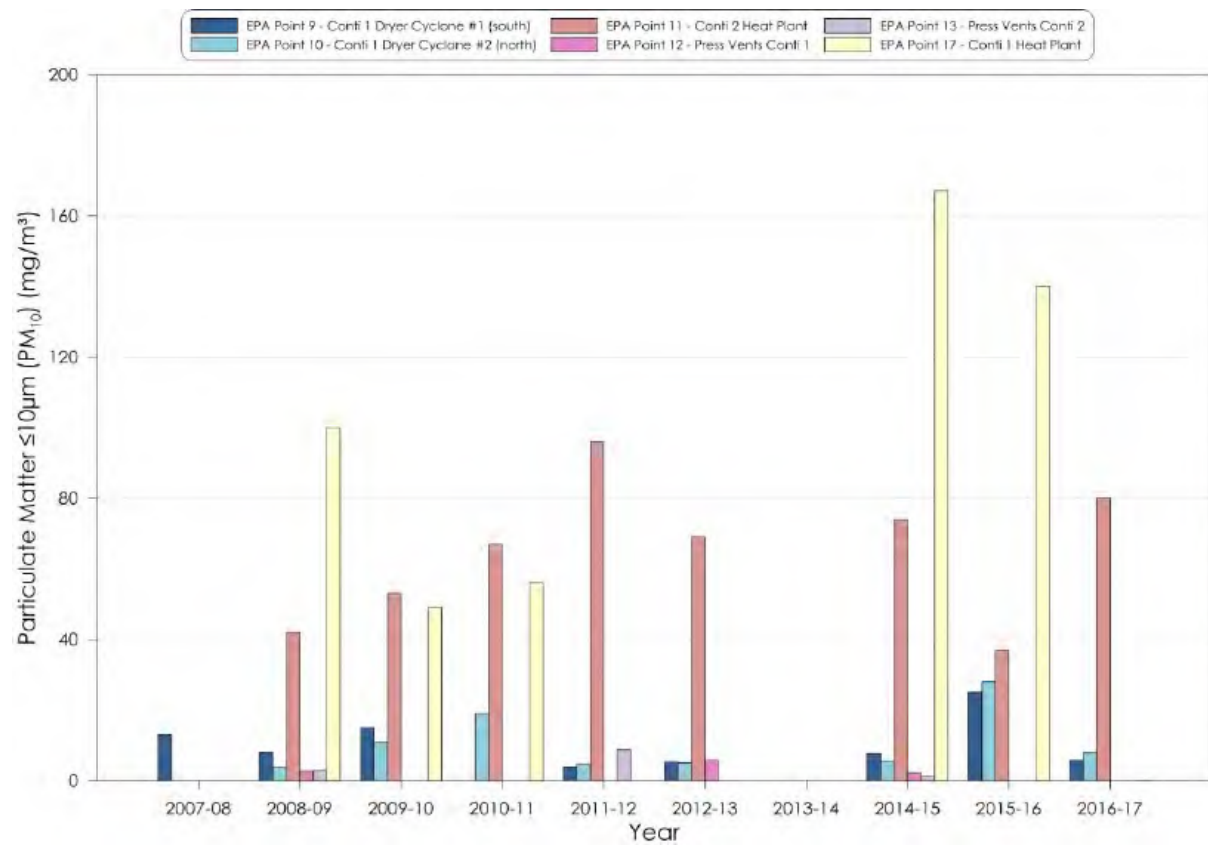


Figure 4 – PM₁₀ Monitoring Results

5.1.2 Nitrogen Oxides

The *POEO (Clean Air) Regulation 2022* concentration limits for NO_x as NO₂ equivalent is 2,500 mg/m³ for Group 4 plant. All monitoring points complied with the specified limits.



Figure 5 – NO_x Monitoring Results

5.1.3 Formaldehyde

EPA Identification Points 11 Conti 2 Heat Plant and 17 Conti 1 Heat Plant have an EPL air concentration limit for formaldehyde of 5 mg/m³. In the 2011-12 reporting period Point 11 Conti 2 Heat Plant exceeded this limit with a result of 7.4 mg/m³ for formaldehyde. This result is considered to be anomalous, and likely to be a measurement error. All other monitoring results for both heat plants complied with the EPL limits.

EPA Identification Point 23 Paper Oven Vent Discharge no longer requires monitoring as the flow has been redirected to the Conti 2 Heat Plant. Point 23 has been removed from EPL 3035.

While formaldehyde emissions are monitored at additional EPA Identification Points as presented in in **Figure 6**, no emission concentration limits are applicable to these additional monitoring locations.

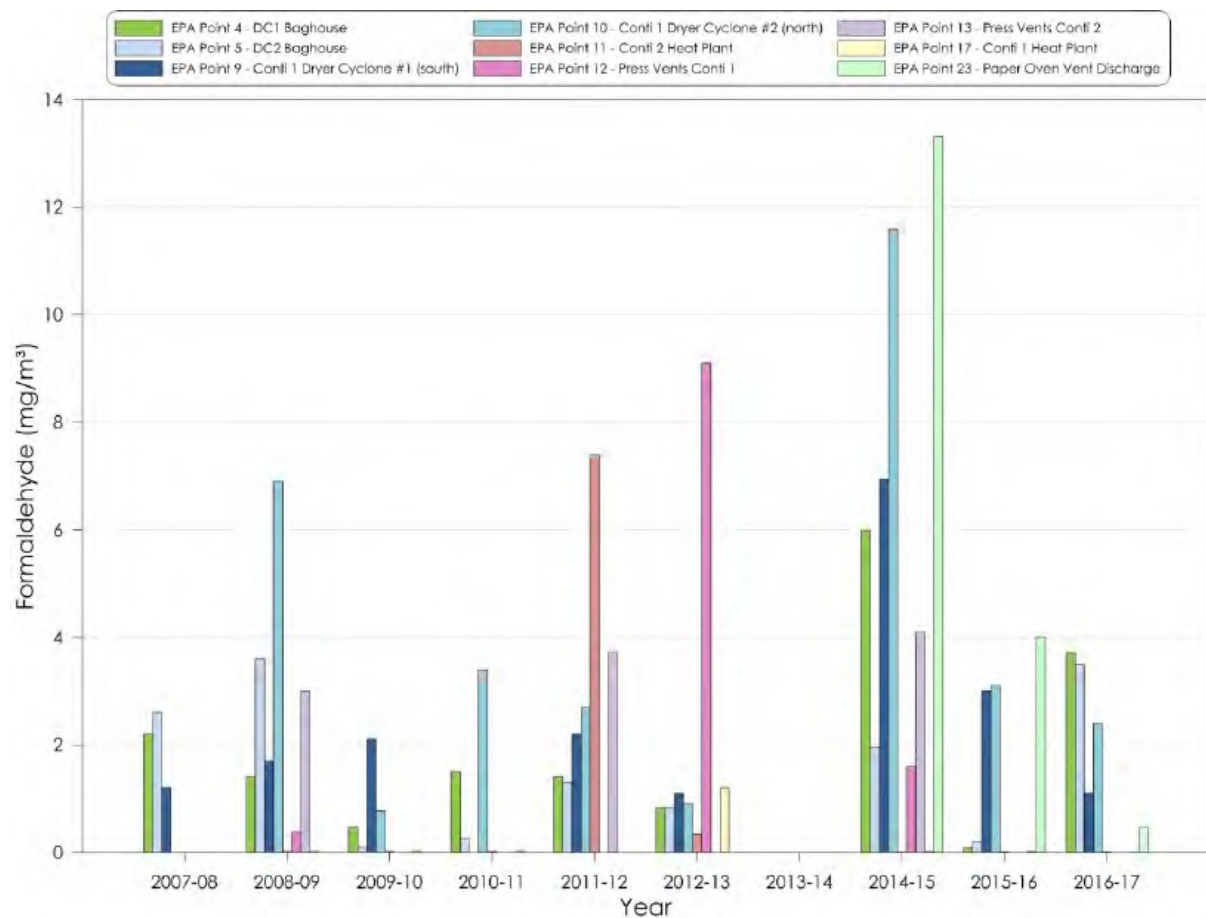


Figure 6 – Formaldehyde Monitoring Results

5.1.4 Volatile Organic Compounds

EPA Identification Points 9 Conti 1 Dryer Cyclone #1 (south), 10 Conti 1 Dryer Cyclone #2 (north), 11 Conti 2 Heat Plant and 17 Conti 1 Heat Plant have an EPL air concentration limit for volatile organic compounds of 10 mg/m³. All monitoring locations complied with EPL limits for VOC emissions.

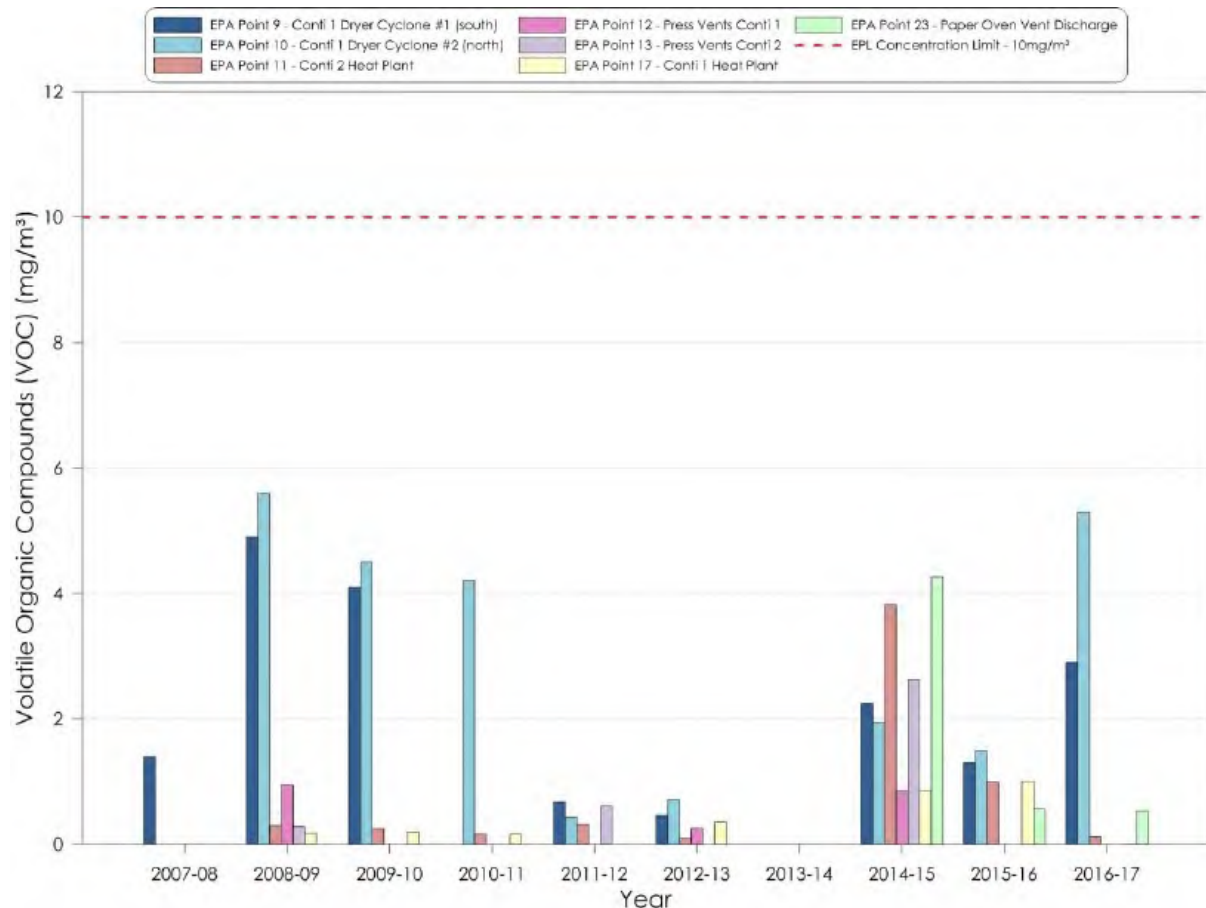


Figure 7 – Volatile Organic Compounds Monitoring Results

5.2 Depositional Dust Monitoring Data

Whilst there are no site limits, depositional dust monitoring is conducted to assist with site management. **Figure 8** shows depositional dust rolling averages and **Figure 9** shows depositional dust annual averages from 2015 when the Development commenced depositional dust gauge monitoring, to 2017.

DDGs 1-4 (in blue colours) are located on-site. DDG 5 and DDG 6 (pink and red colours) are located at off-site sensitive receiver locations. See **Figure 11** in Section 7 for dust gauge locations.

DDG 1 is located within the operational boundary of the site immediately adjacent to an unsealed laydown area and in general proximity of an unsealed road. During the monitoring periods included in this Plan (i.e. 2015 – 2017) DDG 2 was located immediately adjacent an active construction site. Though the location of DDG 2 remains the same, the construction activities associated with this area were complete by November 2019.

Note that the dust deposition criterion does not apply to the on-site dust levels, only off-site levels.

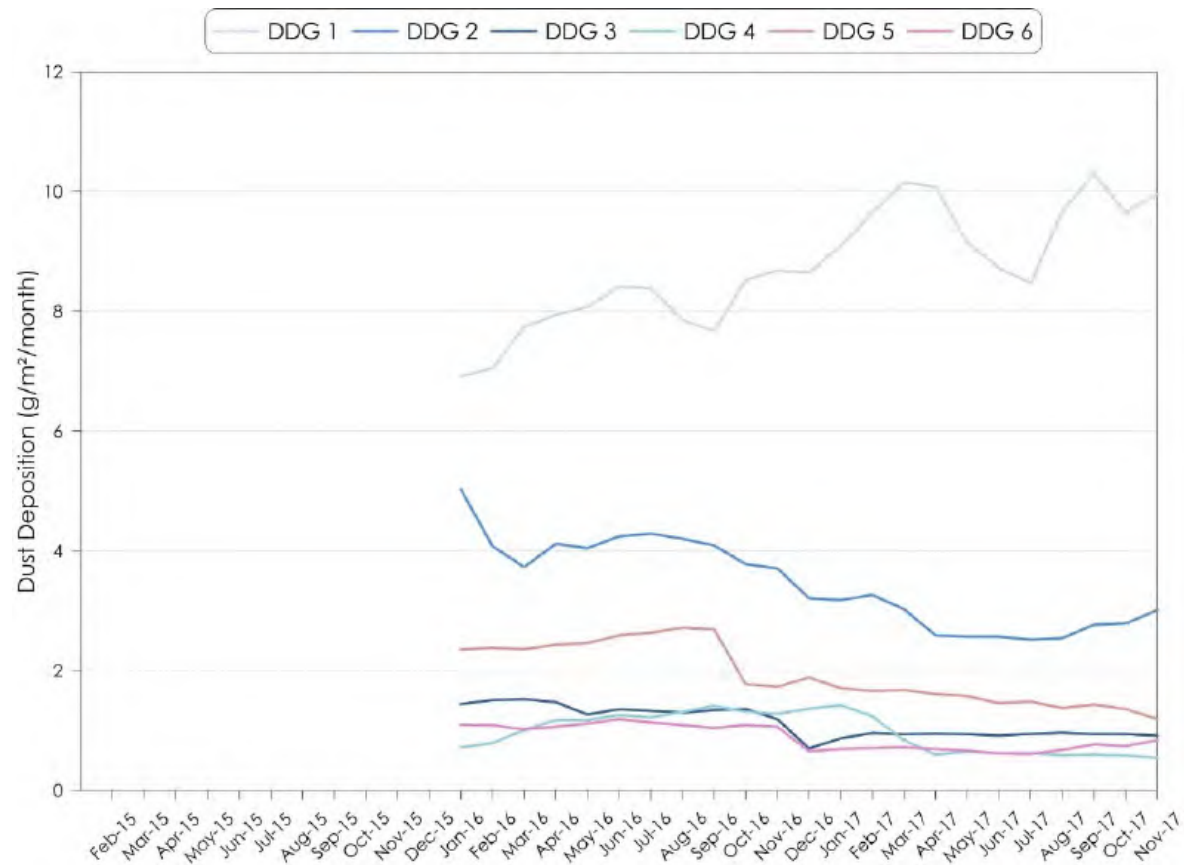


Figure 8 – Depositional Dust Rolling Averages

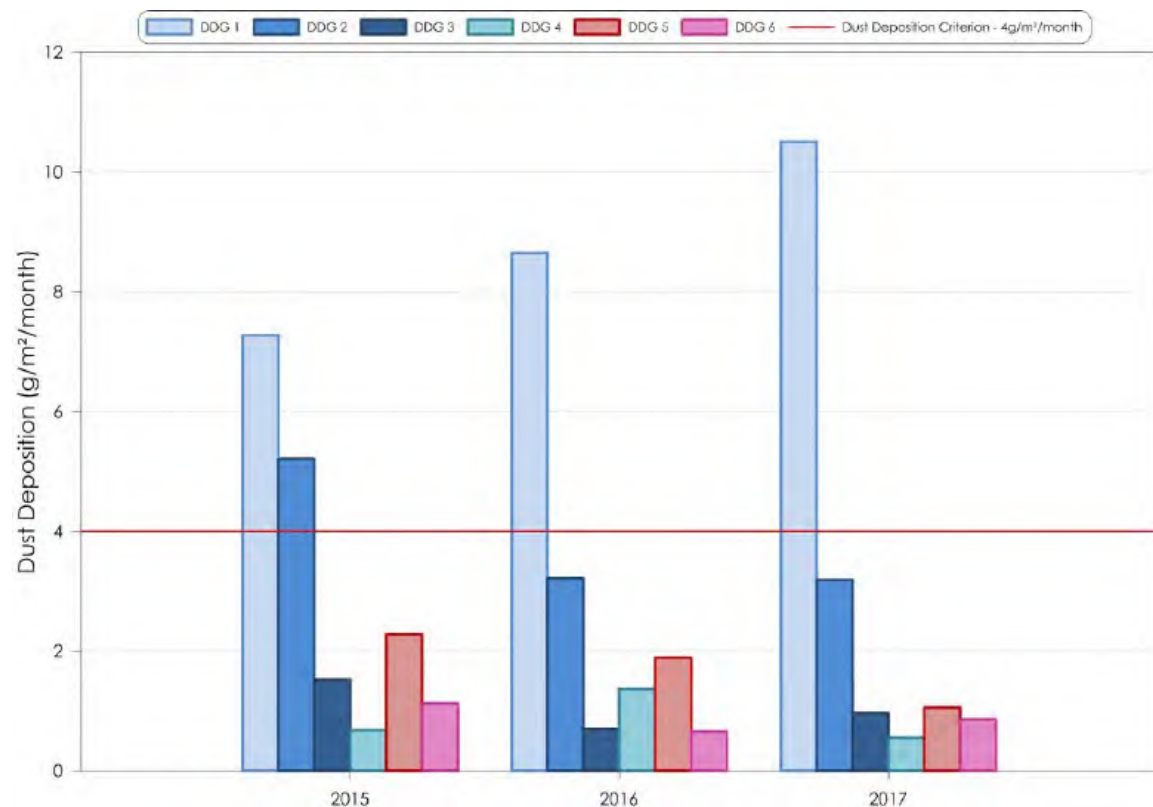


Figure 9 – Depositional Dust Annual Average Results (criterion applies to DDG 5 & 6)

5.3 Meteorological Monitoring

Meteorological monitoring is undertaken on-site using the site meteorological weather station (monitoring Point 26) in accordance with EPL 3035 requirements. Annual and seasonal wind roses prepared from data collected between June 2019 and May 2017 is presented in **Figure 10**. The wind roses indicate typical wind patterns for Oberon with winds predominantly along a west-west north west and east-east south east axis with few winds from the north and south quadrants.

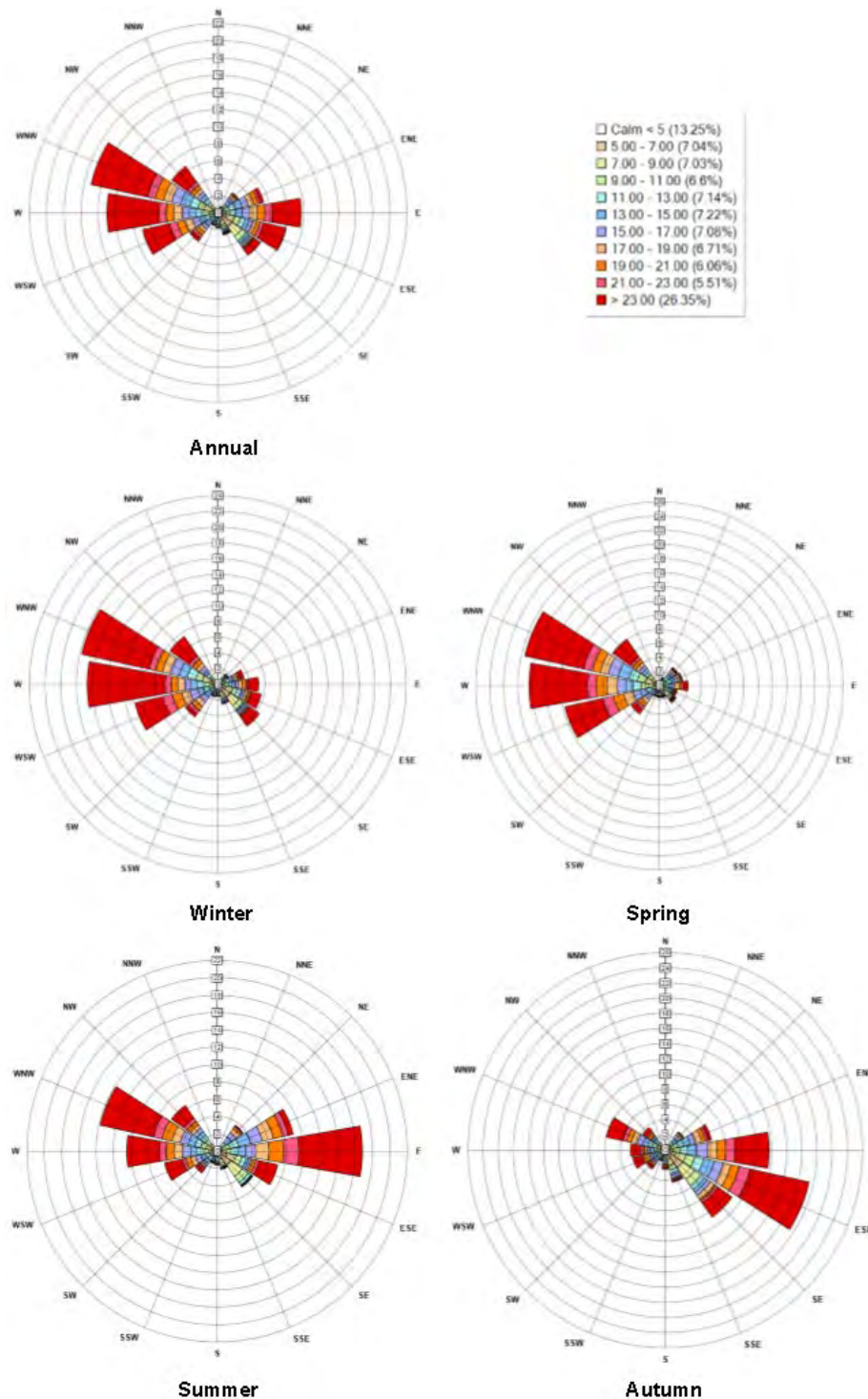


Figure 10 – Annual and Seasonal Wind roses for the Development (June 2016 – May 2017)

6 Management Measures

6.1 Air Quality Management Measures

The air quality management measures described in this section are designed to minimise the impact of the operation's site activities on the surrounding environment. Air emissions are generally constant and are being emitted from a fixed point resulting from an established process. The primary measures to control air emissions for the facility are set out in **Table 6**.

Table 6 – Summary of Air Quality Mitigation Measures

EPA Identification Point No.	Location Description	Control measure (described further in Section 6.2, per pollutant controlled)
4	DC1 Baghouse	Differential pressure monitoring to indicate bag performance, failure or leak Resin formulation to minimise VOC emissions
5	DC2 Baghouse	Differential pressure monitoring to indicate bag performance, failure or leak Resin formulation to minimise VOC emissions
7	Conti 2 Stage 1 Dryer Cyclone #1 (west)	Cyclone particle separation to minimise emitted particulate Resin formulation to minimise VOC emissions Temperature to optimise clean combustion
8	Conti 2 Stage 1 Dryer Cyclone #2 (east)	Cyclone particle separation to minimise emitted particulate Resin formulation to minimise VOC emissions Temperature to optimise clean combustion
9	Conti 1 Dryer Cyclone #1 (south)	Cyclone particle separation to minimise emitted particulate Resin formulation to minimise VOC emissions Temperature to optimise clean combustion
10	Conti 1 Dryer Cyclone #2 (north)	Cyclone particle separation Resin formulation to minimise VOC emissions Temperature to optimise clean combustion
11	Conti 2 Heat Plant	Fuel type control. Fuels are chosen to ensure correct size, type and moisture level is maintained. Operational measures to limit furnace temperature. Cyclone particle separation to minimise emitted particulate
12	Press Vents Conti 1	Resin formulation to minimise VOC emissions
17	Conti 1 Heat Plant	Fuel type control. Fuels are chosen to ensure correct size, type and moisture level is maintained. Operational measures to limit furnace temperature Cyclone particle separation to minimise emitted particulate
18	Conti 4 Press exhaust vents discharge	Resin formulation to minimise VOC emissions
19	Conti 4 Dryer stack	Cyclone particle separation to minimise emitted particulate
20	Conti 4 Reject cyclone DC 11	Cyclone particle separation to minimise emitted particulate

EPA Identification Point No.	Location Description	Control measure (described further in Section 6.2, per pollutant controlled)
21	Conti 4 Reject cyclone DC 12	Cyclone particle separation to minimise emitted particulate
22	Conti 4 Reject cyclone DC 13	Cyclone particle separation to minimise emitted particulate
27	Combined Conti 2 Press Vent	Press vapour water scrubber to capture solid particles, water soluble VOC's and formaldehyde
29	Forming Line baghouse	Differential pressure monitoring to indicate bag performance, failure or leak Resin formulation to minimise VOC emissions
30	Form station baghouse	Differential pressure monitoring to indicate bag performance, failure or leak Resin formulation to minimise VOC emissions
31	Particleboard press extraction	Capture and direct emissions into scrubber oxidation system for treatment
32	Wet Electrostatic Precipitator (WESP)	Removes fine particles Reduces VOC emissions
33	Cogeneration Unit 1	Combustion control – gas powered unit
34	Cogeneration Unit 2	Combustion control – gas powered unit

6.2 Control Measures for Each Emission Source

Process control measures are implemented to reduce emissions to air. These measures incorporate various plant and process operational procedures, pollution control equipment, maintenance and monitoring regimes, as outlined below.

6.2.1 Particulate Matter (Total Solid Particles)

The main processes in the production of MDF that generate particulate matter emissions include drying of fibre following the addition of resin and wax, sanding and sawing of pressed board, and burning of wood fuels in the heat plants. The production of particleboard uses similar processes to MDF production. The following process control measures are implemented to reduce particulate matter emissions:

- Baghouse filtration used for particle or fibre conveying processes, which are low temperature and or not moisture laden.
- Cyclonic separation for large air flow volumes which are hot and or wet at the dryer cyclones, heat plants and reject cyclones.
- Site maintenance to control fugitive dusts, including manual and mechanical sweeping.
- Wet Electrostatic Precipitator (WESP) filtration device.
- Press fume extraction system replacing roof ventilators at Conti 2 press line.

6.2.2 Nitrogen Dioxide

NO_x emissions are generated from all site combustion activities, including operation of both heat plants, and in smaller volumes from gas burners around the site.

The following process control measures are implemented to reduce NO_x emissions:

- Furnace control methods including excess over fire air to control the formation of NO_x.

- Fuel type, quality and solid fuel size is controlled to assist in maintaining consistent combustion characteristics.
- Dedicated energy plant operators monitoring furnace temperature and operating conditions to optimise combustion and hence emissions.
- Press fume extraction system replacing roof ventilators at Conti 2 press line.

6.2.3 Formaldehyde Emissions

Formaldehyde emissions are generated from various activities around the site, these include drying of the resinated fibre, processing fibre and pressing of the board. Smaller quantities are generated in heat plant operation and as fugitive emissions.

The following process control measures are implemented to reduce the formaldehyde emissions:

- Resin reformulation is controlled to ensure free formaldehyde levels are low.
- Dryer temperatures are maintained low to reduce volatilization of formaldehyde from the polymer.
- Press temperatures are maintained at lower levels to reduce resin hydrolysis and escape of formaldehyde.
- Heat plants are operated to ensure maximum residence time ensuring complete oxidation of formaldehyde.
- WESP/scrubber system exposing gases to high temperatures resulting in the oxidation of formaldehyde.
- Press fume extraction system replacing roof ventilators at Conti 2 press line.

6.2.4 Volatile Organic Compounds

Volatile Organic Compounds are generated when naturally occurring light organic oils within the wood fibre are volatilised. Processes on site that generate VOCs include drying fibre and pressing of the board. Smaller quantities of VOCs are also generated in the heat plants. The following process control measures are implemented to reduce the VOC emissions:

- Low temperatures used in the fibre drying process to reduce quantity of VOCs escaping from the wood fibre.
- Heat Plant temperatures and residence times are maintained to ensure complete combustion of escaped VOCs.

7 Air Quality Monitoring

The Development conducts air emissions monitoring to assess compliance with the approval criteria performance indicators and to meet the monitoring requirements of EPL 3035. Additionally, the Development also monitors for depositional dust and meteorological conditions.

7.1 Monitoring Methods

7.1.1 Emissions to Air

Emissions to air monitoring is performed in accordance with the methodologies recommended by the NSW EPA document *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (EPA 2016) and the requirements of EPL 3035. USEPA Method GD-008 is the approved method for determining flow rate and sampling for particulate matter in cyclonic flow from licenced discharge points 7, 8, 9, 10.

7.1.2 Dust Deposition

Deposited dust is assessed as insoluble solids as defined by *Standards Australia AS/NZS 3580.10.1:2003: Methods for sampling and analysis of ambient air – Determination of particulate matter – Deposited matter – Gravimetric Method*. Samples are also analysed for ash residue and combustible matter to the Australian Standard to assist in determining dust sources.

7.1.3 Meteorological Monitoring

The site meteorological weather station is capable of continuously monitoring rainfall, relative humidity, sigma theta (the standard deviation of horizontal wind directions), temperature, wind direction and wind speed. This monitoring is conducted in accordance with the requirements of the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (EPA 2016).

7.2 Monitoring Locations

7.2.1 Emissions to Air

The locations of air emissions monitoring are listed in **Table 8**.

Table 8 – Location of Air Emissions Monitoring

EPA Identification Point No.	Location Description
4	DC1 Baghouse
5	DC2 Baghouse
7	Conti 2 Stage 1 Dryer Cyclone #1 (west)
8	Conti 2 Stage 1 Dryer Cyclone #2 (east)
9	Conti 1 Dryer Cyclone #1 (south)
10	Conti 1 Dryer Cyclone #2 (north)
11	Conti 2 Heat Plant
12	Press Vents Conti 1
17	Conti 1 Heat Plant
18	Conti 4 Press exhaust vents
19	Conti 4 Dryer stack
20	Conti 4 Reject cyclone DC 11
21	Conti 4 Reject cyclone DC 12
22	Conti 4 Reject cyclone DC 13
27	Combined Stack venting Conti 2 Press Vents and DC1 and DC2 Baghouses
29	Forming Line baghouse
30	Form station baghouse
31	Particleboard press extraction
32	Wet Electrostatic Precipitator (WESP)
33	Cogeneration Unit 1
34	Cogeneration Unit 2

While EPA Identification Points 20, 21 and 22 (reject cyclones) are recognised as discharge points in EPL 3035, there is no requirement to monitor the concentration of pollutants discharged at these points as this plant is dormant.

Redundant EPA Identification Point 23 was removed from EPL 3035 in the licence variation on 9 October 2017. Exhaust from Point 23 Paper Treater Vent Discharge is discharged through the Conti 4 Press exhaust vents EPA Identification Point 18.

Variations to EPL dated 4 September:

- Removal of redundant licence Point 13 and associated monitoring requirements;
- The addition of new licence discharge and monitoring points 29, 30, 31 and 32, and the addition of monitoring conditions for these points;
- The renaming of 'Particulate' matter to 'Total Solid Particles';
- The removal of monitoring requirements for points 11 and 17 (and removal of volatile organic compound monitoring from points 7, 8, 9 and 10); and
- The removal of monitoring requirements for dormant licence discharge points 18 and 19.
- The addition of new licence discharge and monitoring points 33 and 34 Cogeneration Units 1 and 2

Note, variations to EPL 3035 can occur without update to this Plan. The electronic version of EPL 3035 should be checked for validity.

7.2.2 Dust Deposition

The locations of dust depositional gauges are listed in **Table8** and shown on **Figure 11**.

Table 8 – Location of Dust Depositional Gauges

Dust Depositional Gauge	Location Description	Locale
DDG 1	The Development eastern boundary with Woodchem	On-Site
DDG 2	South West of Conti 2	On-Site
DDG 3	Water treatment plant (east of Spring dam)	On-Site
DDG 4	Water treatment plant (northern boundary)	On-Site
DDG 5	Highlands Motor Inn	Off-Site
DDG 6	Albion Street (south east of the Development)	Off-Site



Figure 11 – Location of Depositional Dust Gauges and Meteorological Station

7.2.3 Meteorological Monitoring

The meteorological monitoring station is identified as *Weather Station* on **Figure 11**.

7.3 Monitoring Frequency

7.3.1 Emissions to Air

The frequency of monitoring of emissions to air is detailed in **Table 9**.

Table 9 – Frequency of Monitoring

EPA Identification	Pollutant	Units	Frequency
Point 4	Total Solid Particles	mg/m ³	Yearly
	Formaldehyde	mg/m ³	Yearly
Point 5	Total Solid Particles	mg/m ³	Yearly
	Formaldehyde	mg/m ³	Yearly
Point 7	Total Solid Particles	mg/m ³	Yearly
Point 8	Total Solid Particles	mg/m ³	Yearly
Point 9	Total Solid Particles	mg/m ³	Yearly
	Formaldehyde	mg/m ³	Yearly
	Nitrogen Oxides	mg/m ³	Yearly
	PM ₁₀	mg/m ³	Yearly
	Smoke Emissions	percent Opacity	Every 6 months
Point 10	Total Solid Particles	mg/m ³	Yearly
	Formaldehyde	mg/m ³	Yearly
	Nitrogen Oxides	mg/m ³	Yearly

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EPA Identification	Pollutant	Units	Frequency
	PM ₁₀	mg/m ³	Yearly
	Smoke Emissions	percent Opacity	Every 6 months
Point 12	Total Solid Particles	mg/m ³	Every 3 years
	Formaldehyde	mg/m ³	Every 3 years
	Nitrogen Oxides	mg/m ³	Every 3 years
	PM ₁₀	mg/m ³	Every 3 years
Point 27	Total Solid Particles	mg/m ³	Yearly
	Formaldehyde	mg/m ³	Yearly
	Nitrogen Oxides	mg/m ³	Yearly
	PM ₁₀	mg/m ³	Yearly
Point 29	Formaldehyde	mg/m ³	Yearly
	Nitrogen Oxides	mg/m ³	Yearly
	PM ₁₀	mg/m ³	Yearly
	Smoke Emissions	mg/m ³	Yearly
	Total Solid Particles	mg/m ³	Yearly
Point 30	Formaldehyde	mg/m ³	Yearly
	Nitrogen Oxides	mg/m ³	Yearly
	PM ₁₀	mg/m ³	Yearly
	Smoke Emissions	mg/m ³	Yearly
	Total Solid Particles	mg/m ³	Yearly
Point 31	Formaldehyde	mg/m ³	Yearly
	Nitrogen Oxides	mg/m ³	Yearly
	PM ₁₀	mg/m ³	Yearly
	Smoke Emissions	mg/m ³	Yearly
	Total Solid Particles	mg/m ³	Yearly
Point 32	Formaldehyde	mg/m ³	Yearly
	Nitrogen Oxides	mg/m ³	Yearly
	PM ₁₀	mg/m ³	Yearly
	Smoke Emissions	mg/m ³	Yearly
	Total Solid Particles	mg/m ³	Yearly
	Type 1 and Type 2 substances in aggregate	mg/m ³	Quarterly
Point 33	Nitrogen Oxides	mg/m ³	Yearly
	Volatile organic compounds	mg/m ³	Yearly
Point 33	Nitrogen Oxides	mg/m ³	Yearly
	Volatile organic compounds	mg/m ³	Yearly

7.3.2 Dust Deposition

Depositional dust gauge samples are collected every 30 +/- 2 days.

7.3.3 Meteorological Monitoring

The meteorological monitoring station is a continuous weather recording station with data available in real time.

8 Contingency Plan for Unpredicted Impacts

In the event of previously unpredicted air quality impacts, resulting from either an exceedance of criteria, a valid complaint, or site staff observations, the following process will be implemented:

- The Environment Manager is to be notified;
- Environment Manager to determine if the unpredicted impact constitutes an environmental incident that requires external reporting (**Section 9**);
- Investigate to evaluate the contributing factors to the event. The investigation may include (where applicable):
 - o Assessment of weather conditions for the period of monitoring, including wind speed and direction;
 - o Visual assessment of the area surrounding the monitoring location to identify any potential sources of dust generation (on-site and off-site);
 - o Review of operational activities during the period of monitoring;
- Implement remedial response and/or adaptive management measures, dependant on the outcomes of the above investigation; and
- Implement the Review component (**Section 10**) of this Plan as required.

9 Reporting

The Development will manage all internal and external reporting requirements in accordance with the Operational Environmental Management Plan (OEMP). Specific reporting functions relevant to this Plan are detailed below.

9.1 Internal Review

The Environmental Manager will review dust deposition monitoring results monthly and emissions to air monitoring results annually. Results of investigations of any complaints and any exceedances of the air quality impact assessment criteria will be reported to senior management promptly.

9.2 Scheduled Reporting

Air quality emissions performance is reported externally as follows:

- Annual emissions to air compliance monitoring reports, which include a comparison of measured air emissions with operational air quality criteria conditioned in EPL 3035;
- Annual updates of monitoring results on the Porta Products website;
- Annual Review. A copy of the Annual Review is sent to relevant stakeholders, including DPIE, EPA and Oberon Council and is available on the company website; and
- EPA Annual Return, statement of compliance and a monitoring and complaints summary annually as required by EPL 3035.

9.3 Exceedance of Criteria / Environmental Incident Management

Notification procedures and actions upon identification of an exceedance of any impact assessment criteria or management levels will be as per the Operational Environmental Management Plan (OEMP), and any specific requirements of the relevant management plan or monitoring program.

In the event that a pollution incident causes or threatens material harm to the environment, the Porta Products Pollution Incident Response Management Plan (PIRMP) is to be immediately implemented, including immediate notification of authorities as outlined in the OEMP and PIRMP

Where an exceedance of the impact assessment criteria and/or performance criteria outlined in the *Air Quality Impact Assessment* (Todoroski Air Sciences, February 2017) and any subsequent updated impact assessments (e.g., from SSD 7016 modifications) continually occurs:

- A detailed examination of the existing processes to identify the potential for emissions reduction will be undertaken; and
- Where practicable and economically feasible to do so measures may be put in place to further reduce emissions.

9.4 Complaints

Community complaints will be managed in accordance with the procedures in the Operational Environmental Management Plan (OEMP). The 24-hour free call community liaison line contact number is included in the OEMP.

10 Review

In accordance with Development Consent SSD 7016 Condition C10, this Plan will be reviewed and if necessary revised within 3 months of an:

- Approval of a modification;
- Submission of an incident report under Condition C13;
- Approval of an Annual Review under Condition C11; or
- Completion of an audit under Condition C15.

This is a dynamic Plan which will also be reviewed, and if necessary revised, where any modification to site procedures that have the potential to impact air emissions are needed, or for example to be current following any updates or amendments to legislation.

Revisions to the Operational Air Quality Management Plan will be submitted to the Secretary DPIE for approval.

11 References

National Environment Protection Council (NEPC) Act 1994

National Environment Protection (Ambient Air Quality) Measure 2016. National Environment Protection Council, Canberra, February 2016.

NSW DEC (2005) *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW*. Department of Environment and Conservation, August 2005.

Protection of the Environment Operations (Clean Air) Regulation 2022

Todoroski Air Sciences (16 February 2017) *Air Quality Impact Assessment Revised Borg Manufacturing Timber Panels Processing Facility Expansion*. Prepared by Todoroski Air Sciences Pty Ltd for Borg Manufacturing.

United States Environment Protection Agency: <https://www.epa.gov/environmental-topics/air-topics>

WHO (2010) *WHO guidelines for indoor air quality: selected pollutants*, World Health Organisation, 2010.

Appendices

Appendix A – Emissions Monitoring Data

EPA Identification Point 4 - DC1 Baghouse												
Pollutant	Units	Frequency	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Particulate Matter	mg/m3	Yearly	3.8	8.4	3	2.4	3.9	4.6		0.15	4.3	2.3
Formaldehyde	mg/m3	Yearly	2.2	1.4	0.47	1.5	1.4	0.82		5.99	0.09	3.7

EPA Identification Point 5 - DC2 Baghouse												
Pollutant	Units	Frequency	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Particulate Matter	mg/m3	Yearly	3.8	4.3	2	2	0.93	1.6		0.1	2.4	2
Formaldehyde	mg/m3	Yearly	2.6	3.6	0.099	0.26	1.3	0.83		1.96	0.19	3.5

EPA Identification Point 7 - Conti 2 Stage 1 Dryer Cyclone #1 (west)												
Pollutant	Units	Frequency	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Particulate Matter	mg/m3	Yearly		17	23	14	21	5.9		18.93	19	40

EPA Identification Point 8 - Conti 2 Stage 1 Dryer Cyclone #2 (east)												
Pollutant	Units	Frequency	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Particulate Matter	mg/m3	Yearly		11	18	14	18	7.7		11.98	21	33

EPA Identification Point 9 - Conti 1 Dryer Cyclone #1 (south)												
Pollutant	Units	Frequency	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Particulate Matter	mg/m3	Yearly	16	12	20		6.6	7.6		6.7	29	9.8
Formaldehyde	mg/m3	Yearly	1.2	1.7	2.1		2.2	1.1		6.94	3	1.1
Nitrogen Oxides	mg/m3	Yearly	99	86	100		5.2	8.6		49	250	150
PM10	mg/m3	Yearly	13	8	15		3.9	5.3		7.6	25	5.9
Volatile Organic Compounds	mg/m3	Yearly	1.4	4.9	4.1		0.67	0.46		2.25	1.3	2.9

EPA Identification Point 10 - Conti 1 Dryer Cyclone #2 (north)												
Pollutant	Units	Frequency	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Particulate Matter	mg/m3	Yearly		11	13	23	6.4	7.3		10.8	31	21
Formaldehyde	mg/m3	Yearly		6.9	0.77	3.4	2.7	0.9		11.59	3.1	2.4
Nitrogen Oxides	mg/m3	Yearly		69	88	110	6.7	7.8		44	250	170
PM10	mg/m3	Yearly		3.9	11	19	4.6	5.1		5.46	28	8
Volatile Organic Compounds	mg/m3	Yearly		5.6	4.5	4.2	0.43	0.72		1.94	1.5	5.3

EPA Identification Point 11 - Conti 2 Heat Plant													
Pollutant	Units	Frequency	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Concentration Limit
Particulate Matter	mg/m3	Yearly		72	66	140	100	76		81.7	75	130	200
Formaldehyde	mg/m3	Yearly		0.02	0.02	0.017	7.4	0.34		0.005	0.01	0.01	5
Nitrogen Oxides	mg/m3	Yearly		640	660	410	440	630		663	530	530	No Limit
PM10	mg/m3	Yearly		42	53	67	96	69		73.97	37	80	No Limit
Volatile Organic Compounds	mg/m3	Yearly		0.3	0.25	0.16	0.32	0.095		3.82	0.99	0.12	10
Smoke Emissions	percent Opacity	Every 6 months		0	0	0	0	0		0	0	0	No Limit
Notes: * Particulate Matter and PM10 corrected to 6.5% CO2 mg/m3													

EPA Identification Point 12 - Press Vents Conti 1													
Pollutant	Units	Frequency	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	
Particulate Matter	mg/m3	Every 3 years	-	2.84	-	-	-	9.47	-	2.35	-	-	
Formaldehyde	mg/m3	Every 3 years	-	0.38	-	-	-	9.1	-	1.59	-	-	
Nitrogen Oxides	mg/m3	Every 3 years	-	4.1	-	-	-	4.1	-	3.2	-	-	
PM10	mg/m3	Every 3 years	-	2.68	-	-	-	5.83	-	2.2	-	-	
Volatile Organic Compounds	mg/m3	Every 3 years	-	0.95	-	-	-	0.26	-	0.85	-	-	
Notes: Mean of results for 5 press vents reported													

EPA Identification Point 13 - Press Vents Conti 2													
Pollutant	Units	Frequency	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	
Particulate Matter	mg/m3	Every 3 years	-	4.88	-	-	8.18	-	-	1.896	-	-	
Formaldehyde	mg/m3	Every 3 years	-	3	-	-	3.72	-	-	4.092	-	-	
Nitrogen Oxides	mg/m3	Every 3 years	-	4.1	-	-	4.1	-	-	2.2	-	-	
PM10	mg/m3	Every 3 years	-	2.86	-	-	8.68	-	-	1.094	-	-	
Volatile Organic Compounds	mg/m3	Every 3 years	-	0.28	-	-	0.61	-	-	2.636	-	-	
Carbon Dioxide	mg/m3	Every 3 years	-		-	-		-	-		-	-	
Carbon Monoxide	mg/m3	Every 3 years	-		-	-	2.5	-	-	2.5	-	-	
Notes: EPA Point 13 due for sampling in 2018													

EPA Identification Point 17 - Conti 1 Heat Plant													
Pollutant	Units	Frequency	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17~	Concentration Limit
Particulate Matter	mg/m3	Yearly		140	77	77	-	1200	-	994	190	0	200
Formaldehyde	mg/m3	Yearly		0.02	0.02	0.02	-	1.2	-	0.017	0.017	0	5
Nitrogen Oxides	mg/m3	Yearly		890	550	270	-	500	-	868	1000	0	No Limit
PM10	mg/m3	Yearly		100	49	56	-		-	167	140	0	No Limit
Volatile Organic Compounds	mg/m3	Yearly		0.18	0.2	0.16	-	0.36	-	0.85	1	0	10
Smoke Emissions	percent Opacity	Every 6 months		0	0	0	-	0	-	0	0	0	No Limit
Notes: ~ No flow. Exhaust from Conti 1 Heat Plant now ducted back into the Conti 1 production system													
* Particulate Matter and PM10 corrected to 6.5% CO2 mg/m3													

EPA Identification Point 18 - Press Exhaust Vents Discharge												
Pollutant	Units	Frequency	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Particulate Matter	mg/m3	Every 3 years						Dormant	Dormant	Dormant	Dormant	Dormant
Formaldehyde	mg/m3	Every 3 years						Dormant	Dormant	Dormant	Dormant	Dormant
Volatile Organic Compounds	mg/m3	Every 3 years						Dormant	Dormant	Dormant	Dormant	Dormant
Velocity	mg/sec	Every 3 years						Dormant	Dormant	Dormant	Dormant	Dormant

EPA Identification Point 19 - Dryer Stack												
Pollutant	Units	Frequency	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Particulate Matter	mg/m3	Yearly						Dormant	Dormant	Dormant	Dormant	Dormant
Nitrogen Oxides	mg/m3	Yearly						Dormant	Dormant	Dormant	Dormant	Dormant
Volatile Organic Compounds	mg/m3	Yearly						Dormant	Dormant	Dormant	Dormant	Dormant
Velocity	mg/sec	Yearly						Dormant	Dormant	Dormant	Dormant	Dormant

EPA Identification Point 23 - Paper Oven Vent Discharge												
Pollutant	Units	Frequency	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Particulate Matter	mg/m3	Yearly								4.5	3.1	8.5
Formaldehyde	mg/m3	Yearly								13.31	4	0.46
Volatile Organic Compounds	mg/m3	Yearly								4.26	0.57	0.53

Appendix B – Operational Noise Management Plan

EMS0005

Operational Noise Management Plan

Porta Products

124 Lowes Mount Road

Oberon

Porta Products Pty Ltd

14 August 2025

This document should be read in conjunction with the EMS0001 Operational Environmental Management Plan, EMS0029 Mobile Wood Chipper Operation Management Plan

Revision History

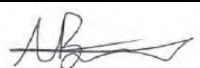
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				Name	Signature
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Definitions and Abbreviations

Abbreviation	Description
ABL	Assessment background level (ABL), the 10th percentile background noise level for a single period (day, evening or night) of a 24 hour monitoring period.
Ambient Noise	The all-encompassing noise associated within a given environment at a given time, usually composed of sound from all sources near and far.
Background Noise	Background noise is the term used to describe the underlying level of noise present in the ambient noise, measured in the absence of the noise under investigation, when extraneous noise is removed.
Day	The period from 7:00am to 6:00pm on Monday to Saturday, and 8:00am to 6:00pm on Sundays and Public Holidays
dB(A)	Noise level measurement units are decibels (dB). The “A” weighting scale is used to describe human response to noise.
DPIE	NSW Department of Planning, Industry and Environment
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence issued by the EPA under the POEO Act
Evening	The period from 6:00pm to 10:00pm
Existing Development	The continuation of the existing MDF facility, located at 124 Lowes Mount Road, Oberon (Lot 26 DP 1200697), comprising the main production hall, warehouse, moulding plant, sawing plant, thin MDF plant and outdoor infrastructure, as described in the EIS and RTS, and the documents, drawings and plans in Appendix C of Development Consent SSD 7016
Incident	A set of circumstances causing or threatening material harm to the environment, and/or exceedance of the limits of performance criteria in Development Consent SSD 7016
L _{Aeq} (15 min)	The average noise energy during a 15 minute period.
Night	The period from 10:00pm to 7:00am on Monday to Saturday, and 10:00pm to 8:00am on Sundays and Public Holidays
MDF	Medium Density Fibreboard
Mod/MOD	Modification
OEMP	Operational Environmental Management Plan
ONMP	Operational Noise Management Plan

Abbreviation	Description
Project	The construction and operation of a particle board facility and alterations and additions to the Existing Development, as described in the EIS and RTS, and as generally depicted on the plans in Appendix A of Development Consent SSD 7016
RBL	Rating background level (RBL), the background noise level for a period (day, evening or night) determined from ABL data.
Sound Level Meter (SLM)	An instrument consisting of a microphone, amplifier and indicating device, having a declared performance and designed to measure sound pressure levels.

1 Introduction

1.1 Background

This Management Plan has been prepared for the Porta Products Pty Ltd (Formally Borg Manufacturing, Borg Panels, Australian Panels) Oberon site (and will be referred to herein as the '**Development**')

The development operates as an existing Medium Density Fibre (MDF) and particleboard production facility in Oberon, NSW, manufacturing a range of Customwood MDF products and particleboard products including:

- Standard MDF;
- Moisture resistant MDF;
- E0 (low formaldehyde emitting) MDF;
- Ultraprime MDF mouldings;
- Standard particleboard;
- Moisture resistance particleboard;
- Particleboard flooring products for structural applications;
- Decorative laminated MDF and particleboard; and
- Treated paper for the lamination of MDF and particleboard

On 29 May 2017 Development Consent SSD 7016 was granted by the Minister for Planning to construct a particleboard manufacturing facility, modify the existing MDF manufacturing facility and undertake general site works (the Project) at the existing site located at 124 Lowes Mount Road, Oberon. Since that date, the Minister for Planning has approved four modifications to SSD 7016:

- SSD 7016 MOD 1 on 20 November 2018;
- MOD 2 on 29 November 2019;
- MOD 3 on 22 May 2020: and
- MOD 4 on 20 May 2022.
- MOD 5 on 23 April 2024

Conditions contained within the Consent require The Development to provide for the ongoing environmental management of the Development. Though initially developed to satisfy conditions B18, C4 and C9, this Operational Noise Management Plan has been updated as per condition B19.

See section 2.2 Conditions of Consent for further detail.

1.2 Purpose and Objectives

This Plan has been developed to:

- Ensure that operational noise generated by the facility is managed;
- Maintain compliance with conditions of approval and legislation relating to noise;
- Provide a protocol for monitoring and evaluation of noise impacts on surrounding private residences and sensitive receivers;
- Communicate with the local community and regulators regarding The Developments activities.

1.3 Structure of the ONMP

This ONMP has been developed to manage operational noise at the facility and to satisfy the requirements set out in Conditions B18, B19 and C9 of Development Consent SSD 7016, and includes information on the following:

- Section 2 – Legislative and Regulatory Compliance
- Section 3 – Sensitive Receivers
- Section 4 – Noise Criteria
- Section 5 – Noise and Vibration Impact Assessment
- Section 6 – Impact Management Measures
- Section 7 – Noise Monitoring
- Section 8 – Contingency Plan for Unpredicted Impacts
- Section 9 – Reporting
- Section 10 – ONMP Review
- Section 11 – References

1.4 Consultation

The ONMP (28 November 2017) was provided to the EPA for review and consultation and submitted to the Secretary of the Department of Planning and Environment (DPIE) for approval on 29 November 2017 in accordance with SSD 7016 condition C4. DPIE were satisfied that the ONMP met with the terms of the relevant conditions of consent and issued approval on 21 December 2017.

As required under condition B19, this ONMP was re-submitted to the Secretary of the Department of Planning, Industry and Environment (DPIE) 7 October 2020.

As per condition C10, subsequent revised versions of the ONMP will be submitted to the Secretary for approval.

1.5 Training

Training and Assessment Manual *EMS0018 Environmental Standard Awareness Noise* has been developed and will continue to be delivered to all Supervisors and Operators on site. The Standard outlines employee's responsibilities to assist with managing noise at the facility to ensure regulatory compliance, and to mitigate against noise nuisance to the local community. Training records are maintained in DataStation, The Developments information management system. The Training and Assessment Manual will be reviewed as necessary where site conditions change to ensure it accurately reflects site operations and training requirements.

2 Legislative and Regulatory Compliance

2.1 Relevant Legislation

Key environmental legislation relating to noise management for the facility includes:

- *Protection of the Environment Operations Act 1997*; and
- *Environmental Planning and Assessment Amendment Act 2017*

2.2 Conditions of Consent

The Development operations are subject to the conditions contained in Development Consent SSD 7016 dated 29 May 2017, and the following modifications:

- SSD 7016 MOD 1 – site layout changes (approved 20 November 2018)
- SSD 7016 MOD 2 – installation of an electricity generating gas turbine and ancillary equipment (approved 29 November 2019)
- SSD 7016 MOD 3 – additional material handling equipment, extension to northern warehouse, changes to the site surface water system and construction of further hardstand (22 May 2020)
- SSD 7016 MOD 4 – Additions and alterations to the existing timber processing facility including reclamation of the remaining spring fed dam, relocation and expansion of the existing mechanic's workshop and improvements to the site's water treatment plant (20 August 2022)
- SSD 7016 MOD 5 – Minor update to the approved mechanical workshop including additional workshop bays, additional first floor storage and minor updates to the office plus removal of the refuelling system and automated truck washing machine. The proposed development will also result in the increase in length of the stormwater management system to cover an additional 11m length of the mechanics workshop building.
(approved 23 April 2024)

No additional conditions were imposed by the Minister during the assessment and approval of MOD 1. MOD 2 contains new condition B19(c) and MOD 3 new condition B19(d). No additional conditions were imposed for MOD 4 or MOD 5. See Table 1 for consent condition details. Approved hours of operation, operational noise limits and noise mitigation measures for the facility are listed in Table 1 Development Consent Conditions. Specific requirements for an ONMP (Schedule 2, Condition B18) and general requirements for environmental management plans (Schedule 2, Condition C9) are also detailed in Table 1.

Table 1 Development Consent Conditions

No.	Requirement	Document Reference									
	NOISE										
	Hours of Work										
B13	The Applicant must comply with the hours detailed in Table 1, unless otherwise agreed in writing by the Secretary. Table 1: Hours of Work <table> <tr> <th>Activity</th><th>Day</th><th>Time</th></tr> <tr> <td>Earthworks and Construction</td><td>Monday – Friday Saturday</td><td>7 am to 7 pm 8 am to 1 pm</td></tr> <tr> <td>Operation</td><td>Monday – Sunday</td><td>24 hours</td></tr> </table>	Activity	Day	Time	Earthworks and Construction	Monday – Friday Saturday	7 am to 7 pm 8 am to 1 pm	Operation	Monday – Sunday	24 hours	Section 4
Activity	Day	Time									
Earthworks and Construction	Monday – Friday Saturday	7 am to 7 pm 8 am to 1 pm									
Operation	Monday – Sunday	24 hours									
	Operational Noise Limits										

No.	Requirement	Document Reference								
B16	The Applicant must ensure that noise generated by the Development does not exceed the noise limits in Table 2. Table 2: Noise Limits dB(A) <table><tr><th>Location</th><th>Day LAeq(15 minute)</th><th>Evening LAeq(15 minute)</th><th>Night LAeq(15 minute)</th></tr><tr><td>All sensitive receivers</td><td>55</td><td>50</td><td>45</td></tr></table> Note: Noise generated by the Development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.	Location	Day LAeq(15 minute)	Evening LAeq(15 minute)	Night LAeq(15 minute)	All sensitive receivers	55	50	45	Section 4
Location	Day LAeq(15 minute)	Evening LAeq(15 minute)	Night LAeq(15 minute)							
All sensitive receivers	55	50	45							
	Noise Mitigation									
B17	The Applicant must ensure all noise attenuation measures already installed for the Existing Development are maintained in good working order for the life of the Development.	Section 6								
	Operational Noise Management Plan									
B18	Within 6 months of the date of this consent, the Applicant must prepare an Operational Noise Management Plan (ONMP) for the Existing Development, to manage operational noise to the satisfaction of the Secretary. The ONMP must form part of the OEMP required by Condition C4 and be prepared in accordance with Condition C9. The ONMP must:	This Plan								
	a) be prepared by a suitably qualified and experienced noise expert;	Revision History								
	b) describe the measures that will be implemented to minimise noise from the Existing Development including: 1. (i) all reasonable and feasible measures being employed on site; 2. (ii) maintain equipment to ensure it is in good order; 3. (iii) traffic noise is effectively managed; 4. (iv) the noise impacts of the Existing Development are minimised during any meteorological conditions when the noise criteria in this consent do not apply; 5. (v) compliance with the relevant conditions of this consent;	Section 6								
	c) includes a noise monitoring program that: 1. (i) must be carried out until otherwise agreed to in writing by the Secretary; 2. (ii) is capable of evaluating the performance of the Existing Development; and 3. (iii) includes a protocol for determining exceedances of the relevant conditions of this consent and responding to complaints; and	Section 7 Section 9								
	d) include a procedure for implementing noise mitigation measures, should the Applicant be directed by the EPA or the Secretary, or should non-compliances be detected.	Section 8								

No.	Requirement	Document Reference
B19	Prior to the commencement of operation of the Project, the Applicant must update the ONMP required under Condition B18, to incorporate the Project and its management, to the satisfaction of the Secretary. The updated plan must be prepared in accordance with the requirements of Condition B18, and must incorporate the following:	This Plan
	a) description of the noise monitoring program to measure the performance of the Development against this consent and the EPL;	Section 7
	b) description of any additional measures that would be implemented for the Development to ensure compliance with the noise limits in Condition B16 and the EPL;	Section 2.3 Section 6
	c) details of the noise attenuation measures for the gas turbine and ancillary equipment associated with the particleboard material handling area; and	Section 6
	d) details of the noise attenuation measures for the materials handling equipment approved for installation and operation under SSD-7016-MOD-3.	Section 2.3 Section 6
	MANAGEMENT PLAN REQUIREMENTS	
C9	The Applicant must ensure that the environmental management plans required under Condition C4 of this consent are prepared by a suitably qualified person or persons in accordance with best practice and include:	Revision History
	a) detailed baseline data;	Section 7.2
	b) a description of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); (ii) any relevant limits or performance measures/criteria; and (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;	Section 2 Section 4 Section 6
	c) a description of the management measures that would be implemented to comply with the relevant statutory requirements, limits or performance measures/criteria;	Section 6
	d) a program to monitor and report on the: (i) impacts and environmental performance of the Development; and (ii) effectiveness of any management measures (see (c) above);	Section 9
	e) a contingency plan to manage any unpredicted impacts and their consequences;	Section 8
	f) a program to investigate and implement ways to improve the environmental performance of the Development over time;	Section 6

No.	Requirement	Document Reference
	g) a protocol for managing and reporting any: (i) incidents; (ii) complaints; (iii) non-compliances with statutory requirements; and (iv) exceedances of the impact assessment criteria and/or performance criteria; and	Section 9
	h) a protocol for periodic review of the plan.	Section 10
	Note: These requirements also apply to the preparation or updates of management plans for the Existing Development and the Project.	

2.3 Mitigation Measures

Appendix B Applicant's Management and Mitigation Measures to Development Consent SSD 7016 details the reasonable and practical measures to avoid or minimise impacts to the environment and community that may arise as a result of activities at Australian Panels Oberon. The Development is committed to providing further noise attenuation to certain items of plant to achieve sufficient sound power reductions to allow additional noise sources to be added to the site. This includes the following:

- the air intake for the Conti 1 dryer fan was redesigned and fan speed reduced;
- additional insulation was installed to the housing of the booster fan and fan speed reduced;
- a concrete enclosure constructed around the fibre transport fan;
- locating fan units in between buildings/structures and acoustically treating (insulating) them;
- acoustically treating (insulating) the blowers; and
- enclosing the cyclops' and roller screen within sheet metal housing.

The Development continually revise design of plant and equipment housing to reduce noise emissions as far as is reasonably practicable. Management measures have also been implemented for the mobile chipping plant to minimise noise impacts on nearby sensitive receivers (see EMS0029 Mobile Wood Chipper Operation Management Plan). Management and mitigation measures are detailed in Section 5.1.

2.4 Environment Protection Licence

Environment Protection Licence 3035 (EPL3035) specifies noise limits for operation of the facility. L4 Noise Limits provides for limit conditions, which are reproduced below:

L4 Noise limits

L4.1 Noise from the premises must not exceed:

- a) 55 dB(A) $L_{Aeq(15 \text{ minute})}$ during the day (7am to 6pm); and
- b) 50 dB(A) $L_{Aeq(15 \text{ minute})}$ during the evening (6pm to 10pm); and
- c) at all other times 45 dB(A) $L_{Aeq(15 \text{ minute})}$, except as expressly provided by this licence.

Where L_{Aeq} means the equivalent continuous noise level – the level of noise equivalent to the energy-average of noise levels occurring over a measurement period.

L4.2 To determine compliance with condition L4.1, noise must be measured at or computed for Oberon High School or any other noise sensitive locations (such as a residence/school). A modifying factor correction must be applied for tonal, impulsive or intermittent noise in accordance with the "NSW Industrial Noise Policy (EPA, January 2000)".

L4.3 The noise limits set out in condition L4.1 apply under all meteorological conditions except for the following:

- a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or
- b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
- c) Stability category G temperature inversion conditions.

L4.4 For the purpose of condition L4.3:

- a) Data recorded by the meteorological station identified as EPA Licence Point 26 must be used to determine meteorological conditions; and
- b) Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.

2.5 Guidelines and Standards

The guidelines and standards relevant to noise management for the facility include:

- EPA 2017, *Noise Policy for Industry (NPfI)*, Environment Protection Authority. Sydney NSW.
- EPA 2000, *NSW Industrial Noise Policy (INP)*, Environment Protection Authority: Sydney NSW.
- DECCW 2011, *NSW Road Noise Policy*, Department of Environment, Climate Change and Water NSW. Sydney NSW.
- DEC 2006, *Assessing Vibration: A Technical Guideline*, Department of Environment and Conservation. Sydney NSW.

3 Sensitive Receivers

The subject land is located on the northern outskirts of Oberon, to the east of Lowes Mount Road. As per the Oberon Local Environmental Plan (LEP) 2013, the land zoning classification of the subject site is IN1 General Industrial. The Development operations are part of the larger Oberon Timber Complex (OTC) which are operated by a number of separate companies and generally involve timber product manufacture.

The Oberon LEP 2013 identifies a designated buffer area that aims:

- a) to protect the operational environment of industries operating within the OTC; and
- b) to control development near the OTC and waste disposal facilities to minimise land use conflict.

Before granting development consent to development on land to which is identified as being within the designated buffer area, the consent authority must consider the following:

1. a) the impact that any noise, odour or other emissions associated with existing land uses may have on the development;
2. b) any proposed measures incorporated into the development that limit the impact of such noise and other emissions associated with the existing land use;
3. c) any opportunities to relocate the development outside the designated buffer area; and
4. d) whether the development is likely to adversely affect the operational environment of any existing development within the designated buffer area.

Land use north, east and west of the subject site is generally agricultural. Land use to the immediate south is industrial / recreational, and further south residential and the township of Oberon.

For the purpose of identifying and managing noise impacts representative noise sensitive receivers (NSR) have been selected, including the nearest and potentially most affected residences to the site, the Oberon Christian Life Centre and Oberon High School. The following NSRs are considered representative of all potentially affected receivers and are referred to in this Plan. Refer to Figure 1 for details.

Table 2 Noise Sensitive Receivers

Receiver ID	Receiver Location
R01	32 O'Connell Road
R02	6 Herborn Street
R03	Oberon High School
R04	10 Tasman Street
R05	127 Hazelgrove Road
R06	26 Cunynghame Street
R07	131 Hazelgrove Road
R08	2 Herborn Street
R09	15-19 Albion Street
R10	Jenolan Holiday Park
R11	Oberon Christian Life Centre



Figure 1 Noise Sensitive Receivers

4 Noise Criteria

4.1 Hours of Operation

The Development is approved to operate 7 days per week 24 hours per day.

4.2 Operational Noise Limits

Relevant limits are detailed in Table 3. Monitoring locations are detailed in Table 6.

Table 3 Noise Limits dB(A)

Location	Day L _{Aeq} (15 minute)	Evening L _{Aeq} (15 minute)	Night L _{Aeq} (15 minute)
All sensitive receivers	55	50	45

Note: Noise generated by the Development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.

EPL3035 Condition L4.2 specifies:

To determine compliance with condition L4.1 [Table 3 above], noise must be measured at or computed for Oberon High School or any other noise sensitive locations (such as a residence/school). A modifying factor correction must be applied for tonal, impulsive or intermittent noise in accordance with the “NSW Industrial Noise Policy (EPA, January 2000)”.

In October 2017 the EPA released the *Noise Policy for Industry* (EPA, 2017). The *Noise Policy for Industry* (EPA, 2017) replaces the *NSW Industrial Noise Policy* (EPA, 2000). Implementation and transitional arrangements have been developed to ensure that there is an orderly and transparent transition from the *NSW Industrial Noise Policy* (2000) to the *Noise Policy for Industry* (2017).

Section 8 of the *Implementation and Transitional Arrangements for the Noise Policy for Industry* (2017) states:

The NSW Industrial Noise Policy (2000) will continue to apply where it is referenced in existing statutory instruments (such as consents and licences), except for the NSW Industrial Noise Policy Section 4 modifying factors, which will be transitioned to the Noise Policy for Industry (2017) Fact Sheet C through a NSW Industrial Noise Policy application note. This approach has been taken because the Noise Policy for Industry (2017) modification factor approach reflects more recent understanding of the impact of tonal and low-frequency noise on the community.

The *Industrial Noise Policy* (2000) application notes state:

Section 4 of the INP is withdrawn and the modifying factor adjustments outlined in the Noise Policy for Industry (2017) – Fact Sheet C are to be used when assessing the characteristics of a noise source. Fact Sheet C provides approaches to modifying factors that are supported by contemporary science and policy considerations.

As such, modifying factors will now be assessed in accordance with the *Noise Policy for Industry* (2017) as detailed in Section 4.3.

The noise limits set out in Table 3 apply under all meteorological conditions except for the following:

- a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or
- b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
- c) Stability category G temperature inversion conditions.

Data recorded by the on-site meteorological station must be used to determine meteorological conditions.

Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the *NSW Industrial Noise Policy* (2000) (EPL 3035 Condition L4.4). Again, the procedure for use of sigma-theta data has been updated in Section D1.4 of the *Noise Policy for Industry* (EPA, 2017). This new method for estimating stability class will be used.

4.3 Modifying Factors

As detailed in Section 4.2, the *Noise Policy for Industry* (2017) *Fact Sheet C: Corrections for Annoying Noise Characteristics* will be used to assess modifying factors that may apply.

This section outlines the correction factors to be applied to the source noise level at the receiver before comparison with the project noise levels specified in Table 3, to account for the additional annoyance caused by these noise characteristics.

As defined in the *Noise Policy for Industry* (2017):

Tonal noise: noise containing a prominent frequency and characterised by a definite pitch.

Low-frequency noise: noise with an unbalanced spectrum and containing major components within the low-frequency range (10–160 Hz) of the frequency spectrum.

Intermittent noise: noise where the level suddenly drops/increases several times during the assessment period, with a noticeable change in source noise level of at least 5 dB(A); for example, equipment cycling on and off. The intermittency correction is not intended to be applied to changes in noise level due to meteorology.

Correction for duration: this is applied where a single-event noise is continuous for a period of less than two and a half hours in any assessment period. The allowable exceedance of the $L_{Aeq,15min}$ equivalent noise criterion [is detailed] for the duration of the event. This adjustment is designed to account for unusual and one-off events, and does not apply to regular and/or routine high-noise level events.

Maximum correction: the maximum correction to be applied to the predicted or the measured level where two or more modifying factors are present. The maximum adjustment is 10 dB(A) where the noise contains two or more modifying factors (excluding the duration correction).

The facility typically operates with relatively continuous noise emission levels, and low frequency, intermittent and tonal noise characteristics have not been identified during historical monitoring. Future monitoring will include evaluation of these noise characteristics,

and modifying penalties as defined in the *Noise Policy for Industry* (2017) will be applied to measured levels as appropriate.

5 Noise and Vibration Impact Assessment

EMM (formally Global Acoustics) was engaged by The Development to carry out a noise and vibration impact assessment for the proposed expansion of the MDF manufacturing facility and construction of a particleboard facility (SSD 7016 May 2017). The resulting *Borg Panels Timber Panel Processing Facility Oberon NSW Noise and Vibration Impact Assessment (May 2016)* considered impacts associated with noise and vibration from the existing site, and the proposed expansion.

EMM also provide updated noise models and acoustic advice for any subsequent modifications to SSD 7016.

5.1 Noise Assessment

5.1.1 Development Consent SSD 7016

Modelling undertaken for the 2016 Impact Assessment indicated the site operated close to EPL3035 criteria during periods of enhancing meteorological conditions. Management measures and noise control for some plant were recommended to both manage and reduce noise emission from the site.

Model predictions indicated:

- Compliance with existing EPL criteria was predicted for all receivers during non-enhancing meteorological conditions;
- Compliance with existing EPL criteria was predicted for all receivers for the evening and night periods during prevailing (enhancing) meteorological conditions;
- At R09 (Figure 1), a minor 1 dB exceedance was predicted for the day period during enhancing meteorological conditions when one mobile chipper is operational; and
- A minor 1 dB exceedance was predicted for R03 and R10, and a moderate exceedance of 4 dB for R09 for the day period during enhancing meteorological conditions if two mobile chippers are operated concurrently.

The following management measures were recommended:

- Mobile chipping plant should be restricted to the day period;
- Two mobile chippers should not operate concurrently during enhancing meteorological conditions;
- During periods of strong meteorological enhancement to the south, neither mobile chipper should operate; and
- Conti 1 dryer fan, main fibre transport fan, and booster fan drive should be provided with further noise control (attenuation).

5.1.2 SSD-7016-MOD-1

Acoustic advice for S96(1A) modification to Development Consent SSD 7016 (MOD 1) was provided for each of the proposed modifications, these being:

1. Materials handling building reorientation;
2. Extension to the mouldings warehouse;
3. Extension to the particleboard chipper/debarker building;

4. Northern boundary noise bund extension; and
5. Design changes to the surface water management system.

The site noise model was updated to incorporate the materials handling building reorientation and a minor 1dB increase for night period during noise enhanced meteorological conditions at R09 (see Figure 1) was predicted. The installation of an acoustic barrier (minimum 30mL x 7.8mH) on the eastern side of the building was recommended, as this will provide sufficient attenuation to mitigate the predicted noise increase. Compliance with EPL 3035 noise limits is predicted for all time periods with this barrier included.

For each of the remaining modifications under MOD 1 it was concluded that there would be no significant acoustic implications to long-term operational noise emissions from the site.

5.1.3 SSD-7016-MOD-2

Acoustic advice for S4.55 modification to Development Consent SSD 7016 (MOD 2) was provided for each of the proposed modifications, these being:

1. Remove requirement for installation of acoustic barrier as recommended in MOD 1 adjacent to the materials handling building and replace with attenuation treatment at the source for key plant items;
2. Changes to the location, orientation and construction materials of selected buildings and items of plant associated with development as approved under SSD 7016 (29 May 2017);
3. As a result of further detailed design (element 2 above), changes to noise emission data; and
4. Installation of an electricity generating gas turbine.

The site noise model was revised and updated to reflect changes proposed under MOD 2. The results showed compliance with EPL 3035 noise limits for all time periods with the exception of a 1dB exceedance at R09 (see Figure 1) during the day period if a mobile chipper is operational. SSD 7016 provides restrictions for the operation of mobile chippers that will prevent this exceedance (see EMS0029 Mobile Wood Chipper Operation Management Plan).

Overall, a reduction in site noise emissions is predicted due to these modifications relative to MOD 1 assessment, with development considered substantially the same as no increase to site noise emissions is expected.

5.1.4 SSD-7016-MOD-3

Acoustic advice for S4.55 modification to Development Consent SSD 7016 (MOD 3) was provided for each of the proposed modifications, these being:

1. Addition of an enclosed awning on the northern end of the northern warehouse extension to optimise loading and unloading activities;
2. Addition of plant items in the materials handling area and a sorting tower to improve the efficiency of material flow in these areas; and
3. Addition of hardstand areas and improved drainage infrastructure. Though these changes will not affect ongoing operational noise emissions from site, construction activities have the potential to cause nuisance. These activities will be conducted and managed in accordance with the site Construction Noise Management Plan.

Modelled predictions were updated by EMM to reflect the changes proposed under MOD 3 by allocating sound power for equivalent plant items modelled in the original project EIS for the items of equipment under MOD 3. For the northern warehouse extension, door openings (located on the east, north and west sides of the enclosed awning) were modelled as fully open to consider the worst-case scenario. Three forklifts and three prime mover trucks were

modelled within the awning enclosure. Conservatively, EMM assumed all equipment operates concurrently, with trucks operating at 1500rpm, a scenario that is unlikely to occur.

Overall, only a minor 1 dB increase is predicted for select receptors due to the proposed changes under MOD 3. In all cases, the predicted increase is due to rounding, with actual change being less than 1 dB. EMM concluded that continued compliance with noise limits shown in Table 3 is predicted for all receptors.

5.1.4 SSD-7016-MOD 4

Acoustic advice for S4.55 (1A) modifications to Development Consent SSD 7016 (MOD 4) included key elements of modification 4 that relate to noise, these are:

- Relocation of the mechanics workshop, truck wash and refuelling station to the eastern end of the proposed hardstand. The new workshop location will result in an increased number of truck movements in the area. Operational noise of the workshop and wash bay have also been considered;
- Addition of new asphalted access road along the eastern end of the site. Additional vehicle movements along the new access road are expected; and
- Extension of hardstand areas and construction of new access roads and buildings. These changes should not affect ongoing operational noise emission from the site. Construction activities should be conducted utilising best practise construction noise reduction methods and be managed in accordance with the site Construction Noise Management Plan.

For the assessment, EMM revised and updated the site noise model to reflect the proposed changes associated with modification 4. Based on this revised assessment, EMM concluded that the modifications should not result in any change to site noise emission levels from those predicted for modification 3. Continued compliance is predicted for all receptors during all time periods.

5.2 Vibration Assessment

EMM concluded that for the facilities manufacturing operations, there would be no measurable vibration impact to surrounding residences due to:

- The equipment and processing of material does not involve blasting or generate any vibration of significance; and
- The separation distance from the plant to residences being significantly large enough for any vibrations to be damped out.

Therefore, there will be no further discussion regarding vibration impacts in this Plan.

6 Mitigation & Management Measures

Model predictions indicated reductions of up to 5 dB at receiver locations may result from implementation of noise control. Table 4 describes the general mitigation and management measures that will be implemented at The Development to assist with meeting noise level criteria.

Section 6.1 specifically details the noise attenuation measures for the gas turbine and Section 6.2 the ancillary equipment associated with the particleboard material handling area as per SSD 7016 condition B19 (c). Section 6.3 details the changes required under MOD 3 for the northern warehouse extension works.

Table 4 Operational Noise Impact Mitigation Measures

Measure	Timing	Responsibility
Administrative Controls		
Provide an induction to site personnel addressing the requirements of this ONMP and their responsibilities with regard to noise management.	Prior to starting work on site	WHS and/or Environment Manager
Ensure truck drivers are informed of designated vehicle routes, parking locations, delivery hours, and minimising engine exhaust braking and idling.	Prior to starting work on site	Management
Provide education to supervisors, operators and sub-contractors on the need to minimise noise through Toolbox meetings	As needed	WHS and/or Environment Manager
Deliver Training and Assessment Manual <i>EMS0018 Environmental Standard Awareness Noise</i> to site personnel	Prior to starting work on site	Environment Manager, Supervisors
Procedures for handling noise complaints (Section 9) will be implemented including recording, reporting and acting on complaints.	As needed	Environment Manager
Operational Controls		
Select low noise emission plant where possible.	When new plant introduced to site	Management
Ensure all equipment is equipped with reasonable and feasible noise control (e.g. mufflers, acoustic enclosures, flashing lights or 'quackers' as an alternative to traditional reversing beepers) and is turned off when not in use.	Daily	Management
Ensure equipment is operated in the correct manner and adequately maintained - including replacement of engine covers, repair of defective silencing equipment, tightening of rattling components, repair of leakages in air lines and shutting down equipment not in use.	Daily	Management, WHS and/or Environment Manager
Where practicable, maintenance work on all plant will be carried out away from noise sensitive receivers.	Daily	Management
Ensure all noise attenuation measures are maintained in good working order.	Daily	Management
Minimise noise impacts during any meteorological conditions when noise criteria do not apply (refer Section 2.4 L4.3).	As needed	Management, Environment Manager
Mobile Wood Chipper operation is to be in accordance with EMS0029 Mobile Wood Chipper Operation Management Plan.	Daily	Management, Environment Manager

Measure	Timing	Responsibility
Conti 1 dryer fan, main fibre transport fan, and booster fan drive to be provided with further noise control (attenuation).	Prior to operation of the particleboard line	Operations Manager
Operational Noise Monitoring		
Monitor operational noise levels to verify compliance with the ONMP.	As needed	Environment Manager
Report any exceedance of limits to DPE and EPA in accordance with Development Consent SSD 7016 and EPL 3035.	As needed	Environment Manager/Corporate Manager/Operations Manager
Engage a suitable qualified consultant to undertake annual noise monitoring.	Annually	Environmental Manager

6.1 Gas Turbine

The primary noise source for this plant is the turbine unit. All noise generating equipment associated with the turbine, other than the air intake, is housed within an acoustic enclosure of dimensions 14.7 x 4.79 x 4.65m. This has a maximum sound pressure level (SPL) of 85 dB (A) at 1m.

The air intake is located on top of the turbine enclosure and includes an acoustic silencer. The exhaust is ducted back into the main plant, resulting in negligible noise emission during normal operation.

The emergency stack will only be used in emergencies at which time the main plant will not be operating.

The acoustic enclosure and silencer are proprietary items from the turbine supplier and have been specifically designed to maximise noise reduction for this unit.

A Noise Verification Study was undertaken to demonstrate compliance with noise limits set in EPL 3035. This Study was conducted in accordance with SSD 7016 condition B20A. DPIE concluded that the Study demonstrated compliance with the relevant noise impact assessment criteria in their letter dated the 28th of September 2021.

6.2 Materials Handling Area

Under the approval granted as MOD 1, Australian Panels had proposed to install an acoustic barrier at the Materials Handling area to mitigate against the 1dB exceedance predicted in the noise model due to reorientation of the Materials Handling building. The requirement for this barrier was able to be removed under MOD 2 as further design changes including alterations and additions to existing structures at the facility now affording sufficient acoustic treatment. These changes include:

- Increase to building extents
- Increase to silo height
- Construction of concrete enclosures to plant
- Installation of roller doors to external access areas
- Reduction in number of plant items
- Plant locations revised and relocated where applicable

Noise verification monitoring has been undertaken to demonstrate compliance with noise limits set in EPL 3035.

6.3 Northern Warehouse & Material Handling Equipment

Truck loading and unloading has been identified as a bottleneck for the site. The extension (awning) proposed under MOD 3 to the northern warehouse allowed segregation between these activities, further improving these operations. The enclosed awning typically allows these truck activities to occur within the enclosed area. It was expected that this addition to site would reduce noise from the loading/unloading activities by reducing the need to perform these activities outside. Ongoing annual operational noise monitoring and quarterly construction noise monitoring will demonstrate compliance with EPL3035 noise limits.

Modification 3 included the installation of additional equipment at the material handling area located at the south western section of the facility. The noise attenuation measures for this component are discussed in Section 2.3 above.

This equipment was commissioned on 1 June 2022 and the noise verification monitoring was undertaken by EMM on 28 and 29 June 2022. This verification monitoring demonstrated compliance with EPL 3035 noise limits.

7 Noise Monitoring

7.1 Overview

Noise monitoring is conducted at the nearest sensitive residential receptors in accordance with the *NSW Industrial Noise Policy (2000)*, *Noise Policy for Industry (2017)* and *Australian Standard AS1055 Acoustics, Description and Measurement of Environmental Noise*.

Operational noise monitoring will be undertaken to:

- Verify compliance with the noise criteria for the facility as specified in Development Consent SSD 7016 and EPL 3035;
- In response to any exceedance of limits; and
- In response to complaints where this is considered appropriate.

7.2 Baseline Data

During the 2014-15 reporting period, Vipac Engineers and Scientists Ltd (Vipac) undertook an Environmental Noise Survey (Vipac, 30 January 2015) of the facility. The purpose of that survey was to measure and quantify the overall ambient noise levels and noise contribution from industrial operations in accordance with relevant Australian Standards and procedures. The findings of the report included:

- The survey determined the internal noise level monitored at Oberon High School was within the prescribed limit.
- It is apparent from the results of both the attended noise surveys and the unattended noise logging surveys that noise emission from the Development, in addition to the other industrial sites in the area, including the Carter Holt Harvey site and the Australian Pine Products site are notable contributory sources to the ambient noise levels in the area.
- The noise emissions from the industrial sites however are not generally the dominant noise source during the daytime or evening due to the masking effect of

other extraneous noise sources in the area. The contribution of industrial noise sources is more influential during the night-time due to the reduction in road traffic noise levels in the area during the night-time.

EMM prepared a Noise and Vibration Impact Assessment for the proposed expansion of the MDF facility (May 2016). This assessment included both attended noise surveys and unattended noise logging surveys. Attended monitoring results were compliant with EPL3035 criteria. Compliance with the EPL¹ night period operational noise criterion was demonstrated. Day and evening periods were not monitored.

During May to July 2016 The Development undertook an Environmental Noise Survey of the facility as existing to measure and quantify the influence of mobile chippers on the overall ambient noise levels measured at a noise sensitive receptor within the Oberon community. The survey included both attended noise survey and unattended noise logging. The key findings of this report included:

- The mobile chippers were found to have no discernible impact on the OTC's compliance to the established EPL noise limits; and
- The noise monitoring survey confirmed that the Oberon Industrial Area was compliant to EPL3035 levels ~98% of the time. It is worth noting that this is a conservative assessment of the entire OTC, and not just The Development. The non-compliance outcomes were largely due to:
 - o Engine idle noise;
 - o Trucks entering and leaving factories;
 - o General urban noises; and
 - o Non OTC industry noises.

In summary, the facility typically operates with relatively continuous noise emission levels, and low frequency, intermittent and tonal noise characteristics have not been identified during historical monitoring.

7.3 Attended Noise Monitoring

Attended noise monitoring is preferred to the use of noise loggers when determining compliance with prescribed limits as it allows the most accurate determination of the contribution, if any, to measured noise levels by the source of interest.

Operational noise impacts are potentially greatest at night when background levels are typically low and the allowable levels are correspondingly low, and, this is the period when noise propagation enhancement is most likely.

The Environmental Manager can, in certain circumstances for verification purposes, undertake attended noise monitoring. A suitably qualified noise expert will undertake annual attended noise monitoring (see 7.3.1 below).

7.3.1 Compliance Monitoring

Compliance monitoring at each location identified in Table 6 will be undertaken once per year during the day, evening and night periods (pending weather and operational constraints) with results compared to noise criteria in Table 3. Compliance monitoring should be conducted during the winter period as this season represents the likely worst-case season due to temperature inversions.

¹ EPL 3035 licence version date: 08-Apr-2016

Any exceedance of a noise criterion recorded during annual compliance noise monitoring is to be investigated. The acoustic consultant undertaking the attended monitoring is to contact the Environment Manager as soon as practicable to advise of the recorded results. If exceedance of limits is demonstrated follow-up monitoring is to be undertaken within one week of the exceedance. The regular monitoring frequency will be resumed if no further exceedances are measured.

Annual compliance monitoring is to be undertaken by a suitably qualified noise expert. Appropriate techniques should be applied to determine noise contributions from the facility in isolation (in the absence of all extraneous noise sources). These techniques could include, but are not limited to:

- Pausing the sound level meter during extraneous noise events, for example, when a dog is barking or road traffic noise is clearly audible and affecting the measurements;
- Using frequency filtering techniques where certain frequencies of noise are excluded from the measurements; or
- Using other noise descriptors such as L_{A90} or L_{A50} to filter extraneous noise events.

The facility should be fully operational at the time of monitoring.

Operational noise performance is reported as detailed in Section 9.

7.3.2 Complaints Monitoring

In the event of a noise complaint being received, the complaint is to be investigated (refer Section 9.4). As soon as practicable following receipt and validation of the complaint follow-up monitoring is to be undertaken. If exceedance of limits is demonstrated further follow-up monitoring is to be undertaken within one week of the exceedance. The regular monitoring frequency will be resumed if no further exceedances are measured.

7.4 Monitoring Locations

Four representative locations have been chosen for monitoring as summarised in Table 6. Refer to Figure 2 for these locations.

Table 5 Noise Monitoring Locations

Location ID	Monitoring Location
NM1	Oberon Caravan Park
NM2	Intersection Pine Street and Herborn Street
NM3	127 Hazelgrove Road
NM4	Intersection Tasman Street and Earl Street

Noise management levels for each monitoring location are provided in Table 3. Where these are exceeded from operational noise sources, the exceedance should be investigated (as discussed in Section 9) to determine the cause and any necessary mitigation.

7.5 Meteorological Conditions

Monitoring should be undertaken on days of light winds (<5 m/s) and no rain. Wind speed is to be monitored using a hand held wind speed monitor or can be sourced from the site meteorological weather station. Rain and too much wind will elevate the noise level. If there is no choice but to monitor in inclement weather, note the conditions.

Meteorological data is obtained from The Development's weather station (EPA Point 26). This data allows correlation of atmospheric parameters and measured noise levels. Atmospheric condition measurement at ground level is also undertaken during attended monitoring.



Figure 2 Noise Monitoring Locations

8 Contingency Plan for Unpredicted Impacts

In the event of unpredicted noise impacts, resulting from either an exceedance of criteria or valid complaint, the following process will be implemented:

- The Environment Manager is to be notified;
- Investigate to evaluate the contributing factors to the event. The investigation may include (where applicable):
 - o Assessment of meteorological conditions for the period of monitoring, including wind speed and temperature inversion conditions;
 - o Review of operational activities during the period of monitoring;
- Implement remedial response and/or adaptive management measures, dependant on the outcomes of the above investigation;
- Record exceedance/complaint and outcome from investigation in SharePoint; and
- Implement the Review component (Section 10) of this ONMP as required.

9 Reporting

The Development will manage all internal and external reporting requirements in accordance with the Operational Environmental Management Plan (OEMP). Specific reporting functions relevant to this ONMP are detailed below.

9.1 Internal Review

The Environment Manager will review noise monitoring results annually. Results of investigations of any complaints and any exceedances of the criteria outlined in Table 3 will be reported to senior management promptly.

9.2 Scheduled Reporting

Results of the annual noise compliance monitoring and any complaints investigations are reported externally as follows:

- Annual noise compliance monitoring reports, which include a comparison of measured noise emissions with operational noise criteria conditioned in Development Consent SSD 7016 and EPL 3035;
- Annual updates of monitoring results on the company website;
- Annual Review. A copy of the Annual Review is sent to relevant stakeholders, including DPIE, EPA and Oberon Council and is available on the company website; and
- EPA Annual Return, statement of compliance and a monitoring and complaints summary annually as required by EPL 3035.

9.3 Exceedance of Criteria / Environmental Incident Management

Notification procedures and actions upon identification of an exceedance of any impact assessment criteria or management levels will be as per the Operational Environmental Management Plan (OEMP), and any specific requirements of the relevant management plan or monitoring program.

Where an exceedance of the impact assessment criteria and/or performance criteria outlined in Development Consent SSD 7016 and EPL 3035 continually occurs:

-
- A detailed examination of the existing processes to identify the potential for noise emissions reduction will be undertaken; and
 - Where practicable and economically feasible to do so measures may be put in place to further reduce noise emissions.

9.4 Complaints

Community complaints will be managed in accordance with the procedures in the Operational Environmental Management Plan (OEMP).

10 ONMP Review

In accordance with Development Consent SSD 7016 Condition C10, this ONMP will be reviewed and if necessary revised within 3 months of an:

- Approval of a modification;
- Submission of an incident report under Condition C13;
- Approval of an Annual Review under Condition C11; or
- Completion of an audit under Condition C15.

Revisions to the ONMP will be submitted to the Secretary DPE for approval.

11 References

Borg Panels (August 2016) *Borg Panels Oberon NSW In-House Noise Monitoring Survey. Survey Period May-July 2016*. Prepared by Borg Panels.

Broner 2010, *A Simple Method for Low Frequency Noise Emission Assessment*, JLFNV Vol 29-1 pp.1 to 14 2010)

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Global Acoustics (May 2016) *Borg Panels Timber Panel Processing Facility Oberon NSW – Noise and Vibration Impact Assessment*. Prepared for Borg Manufacturing.

Global Acoustics (January 2018) Borg Panels Oberon, S96(1A) modification to Development Consent SSD 7016

Global Acoustics (March 2019) Borg Panels Oberon, S96(1A) modification to Development Consent SSD 7016

Global Acoustics (March 2020) Borg Panels Oberon, Modification 3 to Development Consent SSD 7016

Vipac, 30 January 2015 *Borg Oberon Environmental Noise Survey*. Prepared for Borg Manufacturing. Vipac Engineers and Scientists, Toronto NSW.

Appendix C – Mobile Wood Chipper Operation Management Plan

EMS0029

Mobile Wood Chipper Operation

Management Plan

Porta Products

124 Lowes Mount Road, Oberon NSW

Borg Construction Pty Ltd

14 August 2025

This document should be read in conjunction with EMS0060 Construction Environment Management Plan, EMS0001 Operational Environmental Management Plan, EMS0061 Construction Noise Management Plan and EMS0005 Operational Noise Management Plan

EMS0029 Rev 9

When printed this document is an uncontrolled version and should be checked against the electronic version for validity

Revision History

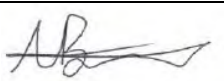
Rev No.	Revision Date	Author	Details	Authorised	
				Name	Signature
0	28/03/17	Carly McCormack	Draft for Site Consultation	Victor Bendevski	
1	27/04/17	C McCormack	Final Draft	V Bendevski	
2	01/06/17	C McCormack	Final	V Bendevski	
3	02/11/18	Jacqueline Blomberg	Review as per SSD7016 C10	V Bendevski	
4	8/07/2020	J Blomberg	Review as per SSD7016 C10 No changes	V Bendevski	
5	2/11/2021	J Blomberg	Review as per SSD7016 C10 (d) Updates to section 1 and 6	Andrew Brady	
6	16/08/2022	A Brady	Review as per SSD7016 C10 (a) & (c) Name change, include MOD 4	J Blomberg	
7	25/08/2023	A Brady	Review as per SSD7016 C10(c)	V Bendevski	
8	5/09/2024	A Brady	Review as per SSD7016 C10 (a) & (c) Name change, inclusion of MOD 5	A Brady	
9	14/08/2025	A Brady	Review as per SSD7016 C10 (c) Name change	A Brady	

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1 Introduction

This Management Plan has been prepared for the Porta Products Pty Ltd (Formally Borg Manufacturing, Borg Panels, Australian Panels) Oberon site (and will be referred to herein as the 'Development')

The purpose of this Mobile Wood Chipper Operation Management Plan is to minimise noise impacts on nearby noise sensitive receivers resulting from operation of Mobile Wood Chippers at The Development.

Mobile chipping plant are the highest noise emitters on site by a significant margin. Operation of mobile chippers does not form part of 'normal' operations. They are typically only used during breakdown of electric plant.

The Noise Impact Assessment prepared by EMM (formally Global Acoustics) in May 2016 for the initial Development Consent SSD 7016 (approved 29 May 2017) predicted minor to moderate exceedances for noise sensitive receivers south of site for the day period when mobile chipping plant is operational during prevailing (enhancing) meteorological conditions.

Subsequent noise impact assessments prepared by EMM in January 2018 for MOD 1, in January 2019 for MOD 2, in March 2020 for MOD 3 and in September 2021 for MOD 4 concluded that the modifications to the Oberon timber manufacturing facility would not materially change site noise emission levels and that continued compliance is predicted for all receptors. MOD 5 was lodged in January 2024 which included minor changes to the proposed mechanic's workshop. The noise impacts of this proposed modification were accounted for in the update of site noise model prepared by EMM and were included in the MOD 4 application.

This Mobile Wood Chipper Operation Management Plan documents mitigation and management measures to assist The Development in meeting noise limits. Exceedances can be avoided through monitoring weather and restricting use of mobile chipping plant during periods of meteorological enhancement.

Routine noise compliance monitoring is undertaken to measure compliance with noise limits.

2 Compliance Requirements

2.1 Development Consent

The Development Consent SSD 7016 conditions relevant to mobile chipper operation that have been considered in this Plan are detailed in Table 1.

Table 1 – Development Consent Conditions

No.	Requirement	Document Reference
	Mobile Wood Chippers	
B22	During construction, the Applicant must ensure that mobile wood chippers are not operating simultaneously with rock/concrete breaking activities.	Section 4.4

B23	The use of mobile wood chippers on site is restricted to the day time period only and to periods of breakdown or maintenance of the permanent wood debarkers and electric chippers, and must not operate under the following conditions: a) in the open when winds are from the north-west through to the north-east (315°, through 0°, to 45°); and b) when winds are from the west through to the east (270°, through 0°, to 90°), two or more mobile wood chippers are not to operate simultaneously.	Section 4.2 Section 4.3 Section 4.1 Section 4.1
B24	Within 6 months of the date of this consent or the commencement of construction of the Project, whichever occurs first, the Applicant must prepare a Mobile Wood Chipper Operation Management Plan for the Development. The plan must outline how the requirements under Conditions B22 and B23 will be achieved and must include any reasonable and feasible mitigation measures to limit operation to periods of breakdown or maintenance of the permanent debarkers and electric chippers.	This Plan Section 4.3

Development Consent SSD 7016 also stipulates noise limits, which are not to be exceeded, for noise generated by the Development as shown in Table 2.

Table 2 Noise Limits dB(A)

Location	Day LAeq (15 minute)	Evening LAeq (15 minute)	Night LAeq (15 minute)
All sensitive receivers	55	50	45

2.2 Environment Protection Licence

The Environment Protection Licence 3035 (EPL 3035) conditions relevant to mobile chipper operation that have been considered in this Plan are detailed in Table 2.

EPL 3035 also stipulates noise limits, which are not to be exceeded, for noise generated by the Development. These limits mirror those noted in Table 2.

Table 3– Environment Protection Licence Conditions

No.	Requirement	Document Reference
L5	Hours of Operation	
L5.1	The Hours of Operation for any mobile log chipper used on the premises are limited to 7:00am to 6:00pm Mondays to Saturdays and 8:00am to 6:00pm Sundays and Public Holidays.	Section 4.2

3 Meteorological Monitoring

Porta Products operates a meteorological monitoring station located on-site, south east of the Spring Dam. This is a real-time weather station that monitors wind speed, wind direction, air temperature, rainfall, barometric pressure, relative humidity, dew point, evaporation, peak wind gust and solar radiation.

Wind directional data clearly signifying when one or two mobile chippers may be operated, or when they are not to be operated, is to be displayed as a live feed from the meteorological station in full view of the Log Yard Supervisor. The Supervisor will review data and advise operators when wind direction prevents operation and to shut down equipment.

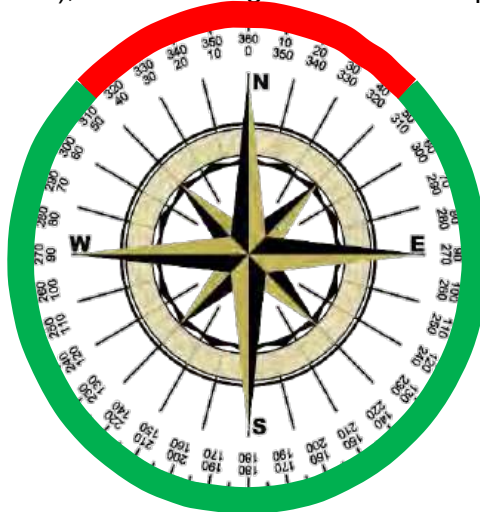
Note: If wind speed falls below 5 km/hr (1.4 m/s) the wind direction sensor (wind vane) becomes inaccurate.

4 Operating Conditions

4.1 Wind Direction

One Mobile Chipper

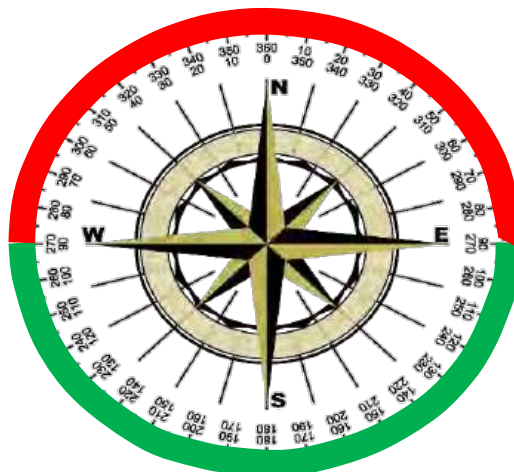
One mobile chipper **MAY** be operated when wind direction is from north-east through to north west (45°, through 180°, to 315°), as shown in green on the compass below.



One mobile chipper must **NOT** operate when wind direction is from the north-west through to the north-east (315°, through 0°, to 45°), as shown in red on the compass above.

Two Mobile Chippers

Two mobile chippers **MAY** be operated simultaneously when wind direction is from east through to west (90°, through 180°, to 270°), as shown in green on the compass below.



Two mobile chippers must **NOT** operate simultaneously when wind direction is from the west through to the east (270°, through 0°, to 90°), as shown in red on the compass above.

4.2 Timing

Mobile wood chippers are **ONLY** to be operated during the daytime period, defined as:

- 7:00am to 6:00pm Monday to Saturday
- 8:00am to 6:00pm Sundays and Public Holidays

4.3 Electric Chippers

The use of mobile wood chippers on site is restricted to periods of breakdown or maintenance of the permanent wood debarkers and electric chippers.

4.4 Rock/Concrete Breaking Permit to Work

Mobile wood chippers are not to operate simultaneously with rock/concrete breaking activities.

Construction activities involving rock/ concrete breaking require a completed Permit to Work to be submitted to both the Construction Project Manager and Log Yard Supervisor. Approval of both parties is required prior to commencement of rock/concrete breaking activities.

5 Responsibilities

Table 4 Roles & Responsibilities

Position	Responsibility
Area Manager	Ensure that the requirements of this Plan are met.
Log Yard Supervisor	Inform, instruct and train operators regarding the requirements of this Plan. Monitor and review meteorological station data and advise when mobile wood chipper operation to cease. Enforce and discipline staff for non-conformance of this plan, where necessary.
Mobile Chipper Operators	Operate mobile wood chippers in accordance with this Plan.
Environmental Manager	Review, and if necessary, revise this plan following a modification to either Development Consent SSD 7016 or EPL 3035, or submission of an incident report to either Department of Planning and Environment or Environment Protection Authority.

6 References

Global Acoustics (May 2016). *Borg Panels Timber Panel Processing Facility Oberon NSW – Noise and Vibration Impact Assessment*. Prepared for Borg Manufacturing.

Global Acoustics (January 2018) *Borg Panels Oberon, S96(1A) modification to Development Consent SSD 7016*

Global Acoustics (January 2019) *Borg Panels Oberon, S96(1A) modification to Development Consent SSD 7016*

Global Acoustics (March 2020) *Borg Panels Oberon, Modification 3 to Development Consent SSD 7016*

Global Acoustics (September 2021) *Borg Panels Oberon. Modification 4 to Development Consent SSD 7016*

Appendix D – Surface Water Management Plan

EMS0006

Surface Water Management Plan

Porta Products

124 Lowes Mount Road, Oberon NSW

Porta Products Pty Ltd

14 August 2025

This document should be read in conjunction with EMS0060 Construction Environment Management Plan and EMS0001 Operational Environment Management Plan

Revision History

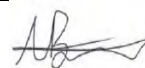
Rev No.	Revision Date	Author	Comments	Details	Authorised	
					Name	Signature
0	06/09/17	Carly McCormack		Draft	Victor Bendevski	
1	03/10/17	C McCormack		Final Draft for Consultation with DPI	V Bendevski	
2	08/11/17	C McCormack		Final Draft for Consultation with EPA	V Bendevski	
3	21/11/17	C McCormack		Final	V Bendevski	
4	13/12/17	C McCormack		Final Incorporating DP&E Comments	V Bendevski	
5	02/11/18	Jacqueline Blomberg	Remove reference to Trade Waste Licence/Service Contract	Review as per SSD7016 C10	V Bendevski	
6	27/11/20	J Blomberg		Review and update as per SSD7016 B33 & C10	V Bendevski	
7	25/11/21	Andrew Brady		Review and update as per SSD 7016 C10(d)	J Blomberg	
8	16/08/22	A Brady	Name change and inclusion of MOD4	Review and update as per SSD 7016 C10(a) & (c)	J Blomberg	
9	25/08/23	A Brady		Review and update as per SSD 7016 C10(c)	V Bendevski	
10	5/09/24	A Brady	Name change, inclusion of MOD 5	Review as per SSD7016 C10 (a) & (c)	A Brady	
11	14/08/25	A Brady	Name change	Review as per SSD7016 C10 (c)	A Brady	

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1 Introduction

1.1 Background

This Management Plan has been prepared for the Porta Products Pty Ltd (Formally Borg Manufacturing, Borg Panels, Australian Panels) Oberon site (and will be referred to herein as the '**Development**').

The development operates as an existing Medium Density Fibre (MDF) and particleboard production facility in Oberon, NSW, manufacturing a range of Customwood MDF products and particleboard products including:

- Standard MDF;
- Moisture Resistant MDF;
- E0 (Low Formaldehyde Emitting) MDF;
- Ultraprime MDF Mouldings;
- Standard particleboard;
- Moisture resistance particleboard;
- Particleboard flooring products for structural applications;
- Decorative Laminated MDF and particleboard; and
- Treated paper for the lamination of MDF and particleboard.

On 29 May 2017 Development Consent SSD 7016 was granted by the Minister for Planning to construct a Particle Board manufacturing facility, modify the existing MDF manufacturing facility and undertake general site works (the Project) at the existing facility located on 124 Lowes Mount Road, Oberon.

Conditions contained within the Consent require Australian Panels to provide for the ongoing environmental management of the Development. Though initially developed to satisfy conditions B32, C4 and C9, this Surface Water Management Plan (SWMP) has been updated to include for condition B33. Additionally, this SWMP will be reviewed and updated as per SSD 7016 condition C10.

1.2 Purpose and Objectives

The purpose of this SWMP is to:

- Consolidate and address the relevant conditions of Development Consent SSD 7016 and Environment Protection Licence (EPL) 3035 to manage surface water at the Development.

The objectives of the SWMP are to:

- Define the strategies and procedures to be implemented to ensure that the Development does not result in unacceptable off-site impacts on surface water systems and downstream users;
- Define a program to monitor and report on the impacts and environmental performance of the Development, and the effectiveness of any management measures; and
- Define a protocol for managing and reporting any incidents, complaints, non-compliances with statutory requirements, and exceedances of the impact assessment criteria and/or performance criteria.

1.3 Structure of this Surface Water Management Plan

This SWMP has been developed to manage site surface water at the Development and to satisfy the requirements set out in Development Consent SSD 7016, and includes information on the following:

- Section 2 – Legislative and Regulatory Compliance
- Section 3 – Site Water Management
- Section 4 – Stormwater Management
- Section 5 – Erosion and Sediment Control
- Section 6 – Surface Water Monitoring Program
- Section 7 – Surface Water Impact Assessment Criteria
- Section 8 – Reporting
- Section 9 – SWMP Review

1.4 Consultation

In accordance with condition C4 the SWMP (dated 28 November 2017) was provided to NSW EPA for review and consultation and submitted to the Secretary of the Department of Planning and Environment for approval on 29 November 2017. The Department were satisfied that the SWMP met with the terms of the relevant conditions of consent and issued approval on 21 December 2017.

As required under condition B33, the SWMP was re-submitted to NSW EPA, DILW and DPIE on 11 December 2020.

As per condition C10, subsequent revised versions of the SWMP will be submitted to the Secretary for approval.

1.5 Training

Training and Assessment Manual EMS0017 Environmental Standard Awareness Water was developed for the site. This training will continue to be delivered to all Supervisors and Operators on site. The Manual outlines employees' responsibilities to assist with managing potential pollution to the surface water and groundwater systems across the Development. The Training and Assessment Manual will be reviewed as necessary where site conditions change to ensure it accurately reflects site operations and training requirements.

2 Legislative and Regulatory Compliance

2.1 Relevant Legislation

Key environmental legislation relating to surface water management for the site includes:

- *Protection of the Environment Operations Act 1997*; and
- *Environmental Planning and Assessment Act 1979*.

2.2 Conditions of Consent

The Development operations are subject to the conditions contained in Development Consent SSD 7016 and the following modifications:

- MOD 1 – extension of mouldings warehouse, reorientation of materials handling building, layout change to particleboard chipper/debarker building, extension of northern noise bund, reconfiguration of elements of the surface water management system, reclamation of the Spring Dam* (approved 20 November 2018)

*MOD 1 condition B33A requires preparation of a Spring Fed Dam Reclamation Management Plan therefore details are not included in this SWMP.

- MOD 2 – installation of an electricity generation gas turbine and ancillary equipment (approved 29 November 2019)
- MOD 3 – additional materials handling equipment, extension to northern warehouse, changes to the site surface water system and construction of further hardstand
- MOD 4 – Additions and alterations to the existing timber processing facility including reclamation of the remaining spring fed dam, relocation and expansion of the existing mechanic's workshop and improvements to the site's water treatment plant (approved 20 August 2022)
- MOD 5 – Minor update to the approved mechanical workshop including additional workshop bays, additional first floor storage and minor updates to the office plus removal of the refuelling system and automated truck washing machine. The proposed development will also result in the increase in length of the stormwater management system to cover an additional 11m length of the mechanics workshop building. (approved 23 April 2024)

As noted above MOD 1 required a Spring Fed Dam Reclamation Management Plan which was developed in accordance with condition B33A. This (part) reclamation work was complete in 2021. No conditions were imposed by the Minister for MOD 2, MOD 3 or MOD 5. SSD 7016 Consent Modification 4 included new condition B33B specifying an update to the Spring Fed Dam Reclamation Management Plan required under condition B33A to incorporate the reclamation of the remainder of the spring fed dam.

The specific requirements for a SWMP (Schedule 2, Condition B32 and B33) and general requirements for environmental management plans (Schedule 2, Condition C9) are detailed in Table 1.

Table 1 Development Consent Conditions

No.	Requirement	Document Reference
	SOILS, WATER QUALITY AND HYDROLOGY	
	Surface Water Management Plan	
B32	Within 6 months of the date of this consent, the Applicant must prepare a Surface Water Management Plan (SWMP) for the Existing Development, that incorporates the <i>Oberon Stormwater Management Strategy</i> , Rev G, prepared by Parsons Brinckerhoff, dated March 2012, to the satisfaction of the Secretary. The SWMP must form part of the OEMP required by Condition C4 and be prepared in accordance with Condition C9. The SWMP must:	This Plan
	a) be prepared in consultation with the EPA and DPI;	Section 1.4
	b) detail water use, metering, disposal and management on-site;	Section 3
	c) detail the water licence requirements for the Existing Development;	Section 2
	d) describe the surface water management system on-site;	Section 4

No.	Requirement	Document Reference
	e) include a program to monitor: (i) surface water flows and quality; (ii) surface water storage and use; and (iii) sediment basin operation;	Section 6 Section 4 Section 5
	f) include a sediment and erosion control plan;	Section 5
	g) include surface water impact assessment criteria, including trigger levels for investigating and potential adverse surface water impacts; and	Section 7
	h) include a protocol for the investigation and mitigation of identified exceedances of the surface water impact assessment criteria.	Section 7
B33	Prior to commencement of operation of the Project, the Applicant must update the SWMP required under Condition B32 to incorporate the Project and its management to the satisfaction of the Secretary. The updated plan must be prepared in accordance with the requirements of Condition B32, and must incorporate the following:	This Plan
	a) details of the proposed mitigation measures outlined in Section 6.0 of Proposed Particle Board Facility Water Cycle Impact Assessment, prepared by the Sustainability Workshop and dated May 2016, in particular, the final design specifications of the additional stormwater treatment and storage pond and emergency spill basin;	Section 2.3 Section 4
	b) details of the stormwater harvesting and reuse scheme; and	Section 2.7 Section 3.2
	c) outline the surface water monitoring program to measure the performance of the Development against this consent and the EPL.	Section 4, 5 and 6
	MANAGEMENT PLAN REQUIREMENTS	
C9	The Applicant must ensure that the environmental management plans required under Condition C4 of this consent are prepared by a suitably qualified person or persons in accordance with best practice and include:	
	a) detailed baseline data;	Section 6
	b) a description of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); (ii) any relevant limits or performance measures/criteria; and (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;	Section 2 Section 6 Section 6
	c) a description of the management measures that would be implemented to comply with the relevant statutory requirements, limits or performance measures/criteria;	Sections 3, 4 and 5

No.	Requirement	Document Reference
	d) a program to monitor and report on the: (i) impacts and environmental performance of the Development; and (ii) effectiveness of any management measures (see (c) above);	Section 8
	e) a contingency plan to manage any unpredicted impacts and their consequences;	Section 7
	f) a program to investigate and implement ways to improve the environmental performance of the Development over time;	Section 7
	g) a protocol for managing and reporting any: (i) incidents; (ii) complaints; (iii) non-compliances with statutory requirements; and (iv) exceedances of the impact assessment criteria and/or performance criteria; and	Section 8
	h) a protocol for periodic review of the plan.	Section 9

2.3 Development Consent SSD 7016 Mitigation Measures

Appendix B Applicant's Management and Mitigation Measures to Development Consent SSD 7016 details the reasonable and practical measures to avoid or minimise impacts to the environment that may arise as a result of the Project. The following management and mitigation measures listed below were identified by the Sustainability Workshop in the Proposed Particle Board Facility Water Cycle Impact Assessment (May 2016):

- A new swale with a longer flow path to convey the CHH [Structaflor] runoff around the site and into a new catchment pond has been constructed. This provides for the additional reduction of TSS and remove tannins. The swale has been grassed and vegetated using spray seed to stabilise the banks.
- New swales were constructed to connect overflows from the pond to the existing creek line in accordance with any Controlled Activity guidelines/permits and conditions of consent.
- Construction of a new stormwater first flush basin with a maximum volume of 13ML. This is located downstream of the existing pond and accepts runoff for the whole of the subject site, including any overflows from the existing stormwater treatment pond.
- The 13ML water quality dam was constructed approximately 40m from the top of bank of the nearest watercourse.
- Stormwater harvesting is undertaken as part of the development. The demand for stormwater from both basins is estimated to be approximately 300m³/day with an estimated operational time of 300 days per year. The predicted yield for harvesting is estimated at up to 100ML/year.

The Project is currently operating under modification 4 (MOD 4), approval date 20 May 2022. The mitigation and management measures suggested by Sustainability Workshop in May 2016 may not all be relevant to the current site surface water management system due to modifications to the building infrastructure requiring necessary modifications to the site surface

water management system. These modifications are discussed further below sections of this SWMP.

2.4 Environment Protection Licence

Environment Protection Licence 3035 (EPL 3035) specifies discharge to waters points, water discharge concentration limits and monitoring requirements for operation at the facility.

2.5 Water Licences

The Development holds a Water Access Licence for use of groundwater in operations. Current licence details issued under the *Water Management Act 2000* are summarised in Table 2.

Table 2 Water Licences

Approval Details	Approval Number	Validity of Licence	Approval Kind	Extraction Limit
WAL28951	80WA715797	16 January 2012 – 01 March 2026	Water Extraction	28 Units

2.6 Trade Waste Licence

The Development was not offered a renewal on the Trade Waste Service Contract with Oberon Council. Further DPI Water did not provide concurrence due to the category of discharge. As such, liquid trade waste is now treated on site via the water treatment plant and does not discharge to the sewerage system.

2.7 Stormwater Harvesting

Only polluted runoff from operational areas and roof runoff is harvested for reuse. This runoff is directed via open swales and underground pipe network to the existing stormwater flush basin and to the newly constructed stormwater flush basin. The site is yet to fully realise those volumes estimated for harvesting by the Sustainability Workshop in the *Proposed Particle Board Facility Water Cycle Impact Assessment (May 2016)*.

See Figure 3 for schematic of the site stormwater/surface water management system and section 3.2 for site stormwater consumption.

No runoff from the undeveloped rural land to the west of Lowes Mount Road is harvested. This unpolluted runoff is separated from the polluted industrial runoff into its own swale.

Given that clean/unpolluted runoff is not harvested, there is no need to calculate or exercise any harvestable rights as the only water harvested is from industrial land uses.

3 Site Water Management

3.1 Overview

The following production processes use water for manufacturing:

- **Chip Wash** – Chip is washed via a water washing system, which is used to remove the contaminants (foreign particles and minerals) from the chip. This process promotes longevity of the refiner discs and improves board quality and usability.
- **Chip Squeeze Out and Steaming Bin** – After the chip washing process large steel vessels are filled with clean chip. These are heated using steam to soften the chips

making the refining process easier, this also increases the fibre length as it prevents overworking. Prior to refining, the chip is squeezed to remove excess water. This excess water is used for top up water for the chip wash process.

- **WESP** – is a system for electrostatic wet waste process gas purification which serves to purify waste gases from wood chip drying processes.
- **SAP90** – is a wet extraction system for press exhaust air purification which is used to collect and purify press exhaust vapours from the wood-based panel production line.

In addition to the MDF and particleboard production processes, water is also used:

- In the manufacture of treated paper for use as decorative laminates;
- For creation of steam used in the fibre preparation process; and
- In cooling water for the refiner seals.

Figure 1 provides an overview of the major components of the site water management system and shows metering locations.

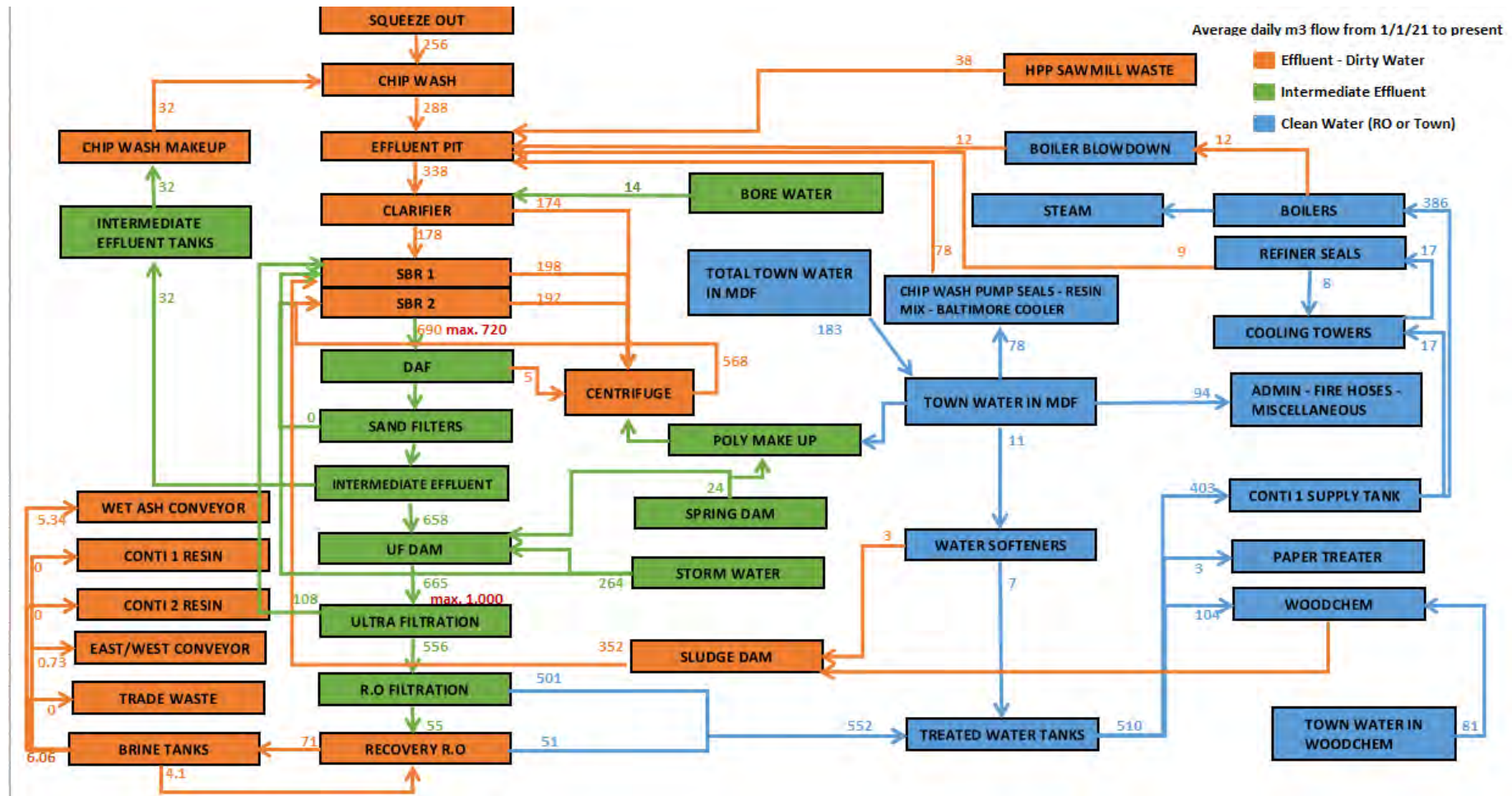
3.2 Water Consumption

Inflow water sources to the facility (refer Figure 1) include:

- Town Water – average daily flow of 345m³ metered at entry to the facility on Lowes Mount Road; and
- Recycled water from water treatment plant – average total daily flow of 550m³. Recycled water is made up of:
 - o Spring Dam Water (Ground Water Access Licence 28951 (refer Section 2.5)) – A maximum extraction of 28 mega litres per annum, metered at Spring Dam pump station;
 - o Harvested Stormwater – average daily flow of 123m³ metered at FF2 Dam meter;
 - o Process Water – average daily flow of 400m³ metered at the process locations shown on Figure 1.

The total daily site water usage for the facility is estimated at approximately 895m³. All water meters are read and recorded daily.

Figure 1 Average Daily Flow



3.3 Water Treatment

All site effluent (wastewater) is treated in the water treatment plant. Effluent is also received from HPP Sawmill Site 2 and Woodchem in the form of boiler blow down, cooling tower bleed water and wash down water.

The water treatment plant utilises filtration and biological degradation to remove contaminants from the water for re-use, capturing approximately 400kL per day from the site and reusing it in the manufacturing process.

Under SSD 7016 MOD 4, improvements and additions to the water treatment plant were approved. This included an enclosure to the water treatment biological tanks which will provide a consistently improved treatment process by reducing heat loss and evaporation and maintain optimum temperatures for biological activities to occur. This also included installation of an additional reverse osmosis system to improve production capacity of the water treatment plant.

The Development produces most of the incoming effluent and consumes a large proportion of recycled water, mainly in steam generation. Effluent is generated by the washing and squeezing of chip during the initial stages of the manufacturing process. The volume of effluent generated depends on chip volumes (production rates) and chip moisture. Moist chip will generate more waste effluent than dry chip and typically a greater volume of effluent is generated during the winter months. Air emission control devices that were installed for the particleboard line also generate effluent, these are the WESP and SAP90 purification systems. Approximately 400kL/day of effluent is generated by the facility.

High quality recycled water produced by the Reverse Osmosis (RO) system is used for the boiler (300-400kL/day approximately) and Woodchem (100-150kL/day approximately). The Paper Treater also requires a small amount of high-quality RO or soft water.

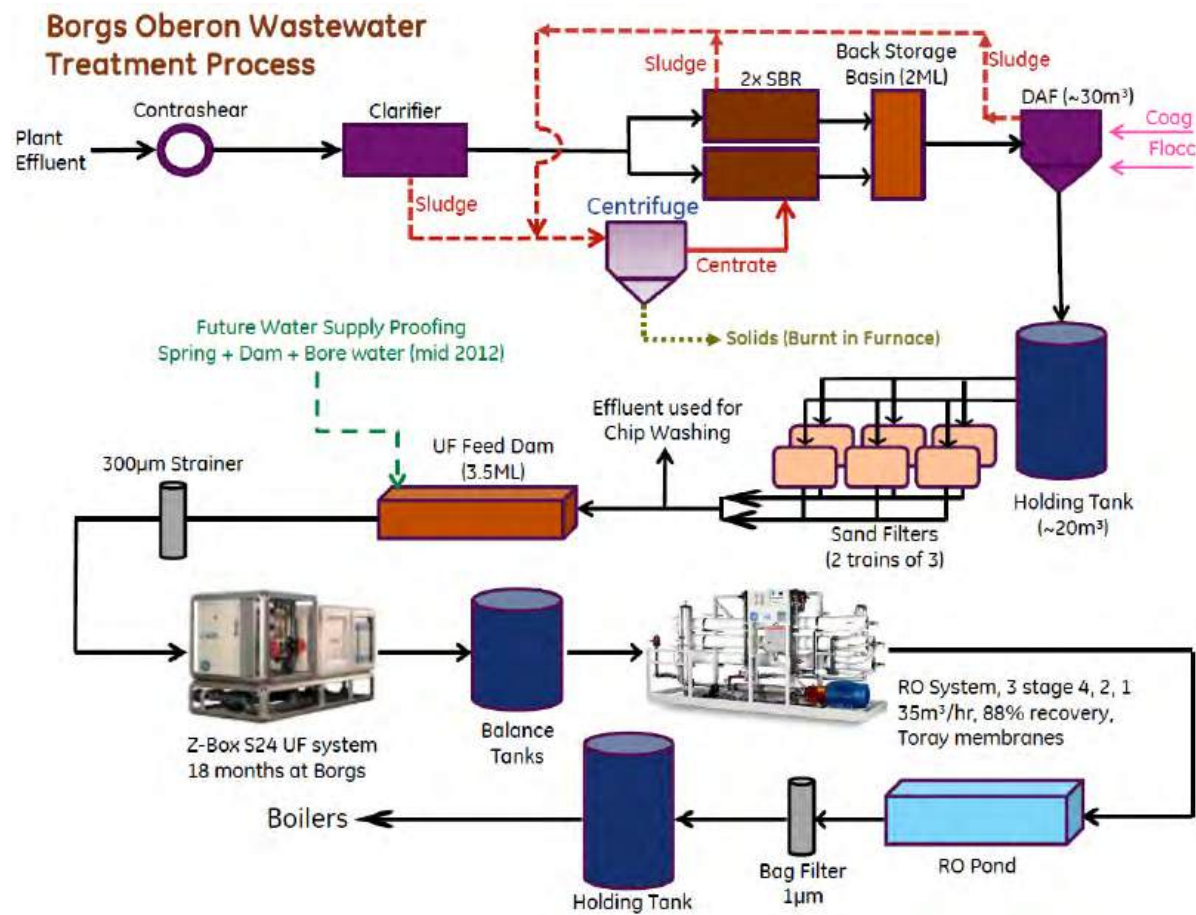
Intermediate effluent or low-quality recycled water treated by dissolved air floatation (DAF) is used for the chip wash systems (approximately 50kL/day). Dewatered waste sludge (biomass) from the centrifuge is sent to the heat plant as fuel for the furnace.

Figure 2 provides an overview of the major components of the water treatment system.

3.4 Wastewater

The water treatment plant produces brine, a waste product from the Reverse Osmosis (RO) system, which is high in dissolved solids. Brine solids are currently recycled within the water treatment plant and reused by way of dilution in the MDF and particleboard manufacturing process.

Figure 2 Major Components of Water Treatment System



4 Stormwater Management

4.1 Overview

Generally, the site grades towards the east, and the licenced discharge points to the tributary which runs to Kings Stockyard Creek are located in the north eastern corner of the site. A high ground water table is known to exist at the site and generally flows towards the north eastern corner. This fluctuating ground water table is a significant constraint of the site since excavation below this level cannot occur without consequential groundwater recharging taking place however is not expected that any excavation will occur which will intercept the groundwater table.

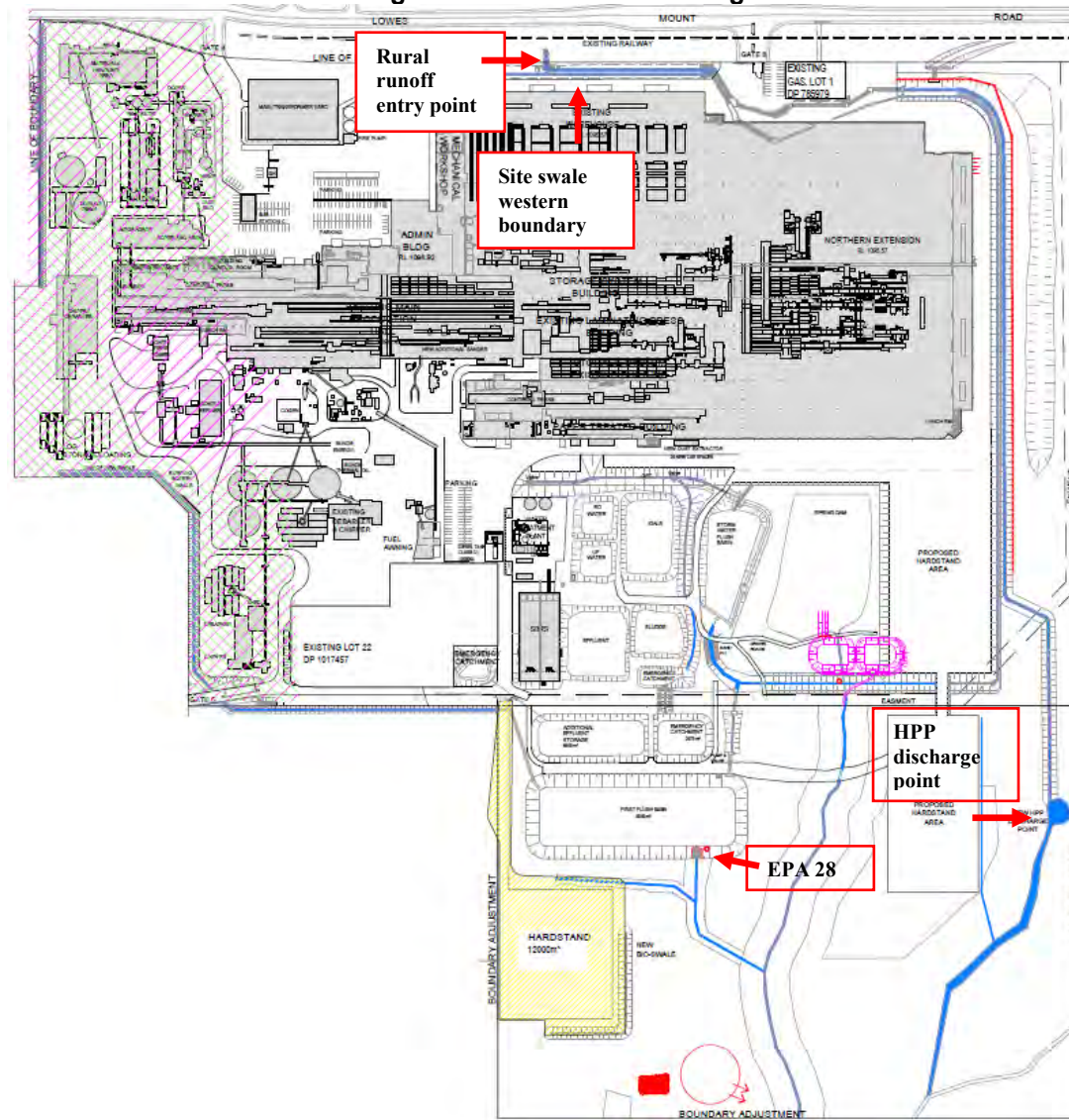
The surface water management system includes runoff from adjoining properties in the Oberon Timber Complex on the western side of Lowes Mount Road, and operates as follows:

- Runoff from Structaflor and Highland Pine Products Sawmill 2 flows across Lowes Mount Road and directed onto the site via the swale on the western boundary
- Runoff from rural parcels of land on Lowes Mount Road is also directed into the site from the western boundary, conveyed via a 'clean' water swale, which runs alongside the site swale following the northern boundary before discharging at HPP discharge point to a tributary of Kings Stockyard Creek
- The facility roof and surface runoff from the western side of the facility is directed into the boundary swale and transferred into the first flush basin
- Runoff from the eastern and open parts of the site, which contains fine fibrous wood material, is directed first to a gross pollutant trap (GPT) and then into the stormwater flush basin
- Any overflow from the existing stormwater flush basin is directed into the first flush basin
- Water captured in the basins is harvested by the site water treatment plant for reuse in the production system
- Stormwater harvesting averaged 9.7m³/day over the reporting period the largest volume of water harvested in one day was 148m³
- Runoff from construction areas is managed in accordance with Erosion Sediment Control Plans as part of the CEMP for SSD7016. Surface water from these zones is directed into the site swale then on to the stormwater basin
- Water discharges from EPL discharge Point 28, and HPP swale discharge point to a tributary of Kings Stockyard Creek (shown on Figure 6)

In accordance with EPL 3035, The Development monitors discharge from the HPP Swale and from the stormwater flush basin (EPA point 28) to the unnamed creek that discharges to Kings Stockyard Creek. The location of the HPP Swale monitoring point is on the outflow of the northern boundary HPP basin. The outflow from the stormwater flush basin (Point 28) is on the eastern side of the basin where a spill way has been constructed. Overflow from this spill way makes its way through riprap to existing grassed swales connected to the tributary which flows to Kings Stockyard Creek. This is shown on Figure 3.

Figure 3 shows the current design specifications including the additional stormwater treatment and storage basin (First Flush Basin), additional effluent storage pond and emergency spill catchments.

Figure 3 Surface Water Management



4.2 Objectives

The main objectives of the stormwater management system are to:

- Ensure water quality discharging from the site adheres to the sites various Environmental Protection Licence 3035 requirements;
- Be capable of conveying the 100-year ARI rainfall event to the discharge location on Kings Stockyard Creek;
- Provide adequately sized retention basins to allow water to be reused on-site;
- Minimise peak flow rates; and
- Maintain the separation of upstream HPP Site 1/rural runoff clean stormwater flows.

4.3 Site Strategy

The main stormwater strategy for the site is to convey and treat stormwater from both the facility and upstream sites using large, grassed and shotcrete swales, underground pipe network and stormwater flush basins. The two flush basins allow water to be captured for reuse on-site and for sediments to settle out. A detailed schematic of the stormwater system is shown in Figure 3.

A 1050 mm diameter culvert under Lowes Mount Road connects Structaflor/HPP2 with the western grass dirty water swale. A 900 mm diameter culvert connects HPP Site 1 with the western clean water swale.

Due to the flat topography of the site the western grassed swales act as elongated basins holding a significant volume of water prior to discharging into the channel systems downstream from Gate 6.

These swales are linked to the channel systems which run along the northern boundary via four (4) x 1050mm diameter culverts constructed in two separate arrangements. The inlet levels to these culverts are raised slightly higher than the upstream swale invert and a large concrete pit connects the culverts below Gate 6.

The northern boundary channel system continues to separate the Structaflor/HPP2 (herein referred to as HPP2) and The Development flows from the HPP1/rural runoff flows (herein referred to as HPP1). The culverts and swales are sized to convey the 100-year flow rates from upstream catchments. In rainfall events greater than 1-year ARI water from all sites converge.

As can be seen in Figure 3, the clean water swale conveying HPP1 is then directed into a basin/discharge point located in the north-eastern part of site. Water from the Spring Dam is currently conveyed via underground pipes into a concrete pit then from the pit via underground pipes to a grassed swale east of the aquifer.

Water from the southern and eastern parts of the site drains towards the north eastern corner and licenced discharge points through a series of swales, underground pipes and sediment basins. Water from the log yard containing fine fibrous wood material, is directed first to a gross pollutant trap and then into the stormwater flush basins.

4.4 Controls

Infrastructure for the protection of stormwater quality at the facility includes the following:

- Bunding of chemical and petroleum products tanks;
- Segregation of stormwater and process waters;
- Treatment and reuse of harvested stormwater;
- Gross pollutant trap to remove fine fibrous wood material; and
- Penstock gate valves to allow for shutting down the stormwater system in the event of a spill or fire emergency.

4.5 Maintenance

Regular cleaning, through manual sweeping and mechanical street sweeping of production areas is undertaken to help prevent dirt, wood fines and chip from entering the stormwater system. The gross pollutant trap also catches debris that is not swept up, further preventing entry to the stormwater basins. This cleaning of production areas helps ensure the final water quality discharging from the site is within EPL limits.

Regular maintenance of the penstock, headwall and other valves, trash racks, and gross pollutant trap ensure the system runs smoothly and that in the event of an emergency all items of equipment are operational. These areas are inspected at least monthly with condition and any identified actions captured on the Monthly Inspection Checklist. Action items are tracked using DataStation or MainPac.

Due to the flat longitudinal swale grades and physical controls, it is possible that sediment will build up in the swale system. The swales and basins are to be cleaned when a significant amount of sediment builds up to keep the swales operating at their optimal performance level.

Monthly inspections are undertaken which identify the need to clean any excess sediment build up.

5 Erosion and Sediment Control

5.1 Overview

Changes in land use have the potential to disturb soils, alter drainage patterns and affect environmental values both on and off site (Landcom, 2004). The operation is a MDF and particleboard manufacturing facility with limited potential for erosion and sediment generation. The facilities and surface water management system have been developed over time as the site has developed and any undeveloped areas are well vegetated.

Erosion is mostly a short-term problem that results from the removal of vegetation and ground cover for construction purposes. The MDF infrastructure areas were constructed many years ago and have become stabilised over time. The newer infrastructure constructed for the particleboard line under SDD 7016 has seen an increase in hardstand area, reducing the potential for erosion and excess sedimentation to occur across the facility.

5.2 Site Activities and Potential for Soil Erosion

The MDF manufacturing facility is well established and areas that were disturbed during the construction phase have been stabilised. Construction for the particleboard line are complete though subsequent modifications see continued additions to the original development consent under SSD 7016. Where these activities have potential to impact on erosion and sedimentation, management and mitigation measures are captured in the Construction Environmental Management Plans.

Surface water has the potential to cause erosion and is managed as part of the normal site operations. Figure 3 shows the surface water management system for the entire Development.

Several types of erosion control measures have been implemented with the aim of preventing soil erosion and the entry of sediments into any of the surrounding water bodies. An Erosion and Sediment Control Plan has been developed for the site and forms part of the Construction Environmental Management Plan.

Open swales and drains shown on Figure 3 are typically constructed with either a parabolic or trapezoidal cross section rather than a V-shape, which can be easily eroded. Channels and associated banks have been grassed or had concrete applied to assist with stability during water flows and to minimise sediment movement. Channels are periodically inspected (at least monthly or following significant rainfall events) to identify and repair damage caused by scour, sediment deposition, channel obstruction and loss of vegetative cover. Physical controls have also been implemented to assist in the slowing the velocity of water flows to allow flocculation of sediment. Physical controls include sediment fence, geofabric wrapped haybales and ballast rock check walls.

Stormwater flush basins constructed within the surface water management system shown on Figure 3 have been designed and located to contain dirty water runoff which is then typically harvested for reuse in the production process.

This infrastructure is regularly maintained and cleaned out once the capacity of the structure is deemed to have been reduced significantly. The structures are inspected after major rainfall events and repairs made as required.

5.3 Maintenance of Erosion and Sediment Controls

The facility has been operational for many years and there are relatively limited opportunities for erosion and sediment generation at this established site, including for the particleboard facility. Regardless, regular inspection and maintenance of permanent structures ensures that the water management system and erosion controls remain effective. At active disturbed areas, regular inspections are undertaken to monitor the condition and effectiveness of controls.

Measures to minimise erosion and sediment generation include:

- Identification and review of surface activities that may change surface water flows and result in erosion;
- Minimising the clearing of vegetation and where clearing is necessary site rehabilitation of disturbed areas;
- Regular checking of rehabilitated areas;
- Installation of temporary and/or additional permanent controls to manage locations that have been identified as requiring attention;
- Diversion of surface and road runoff away from disturbed areas;
- Regular inspection and cleaning of catch drains and structures following storm events or other activities such as vehicle movements that may result in damage; and
- Clearing of excessive vegetation and weeds along drainage lines.

5.4 Managing Stormwater Discharge Quality

The Development has committed to the reduction of pollution through the management of water quality and controlled discharges. A standard operating procedure has been developed for the controlled discharge of water from Flush 2 stormwater basin. Meteorological data for

the site is closely monitored and if rainfall is predicted, samples are collected from the EPA license monitoring point (Point 28). If results are below the license discharge limits capacity is obtained by pump out. If water does not comply with the licensed discharge limits for total suspended solids, water is treated by mixing micronized Gypsum with water and sprayed evenly over the surface of the dam using a water cart/cannon. Once desired laboratory results are obtained, water is pumped out to ensure suitable storage capacity for a rain event.

Another treatment method recently employed on site is the circulation and natural filtering of water between the two stormwater basins (Flush 1 and 2). Water is regularly pumped from flush 2 uphill to flush 1 where the water overtops over/under weir and is naturally treated through a swale system that has been developed to include vegetation and manmade physical controls such as rock check dams, floc blocks and geofabric covered haybales.

6 Surface Water Monitoring Program

Surface water monitoring is undertaken in accordance with the requirements of EPL 3035 issued under the *Protection of the Environment Operations Act 1997*.

6.1 Location of Monitoring/Discharge Points

Surface water is discharged from site via EPA Identification/Licensed discharge point 28 and the HPP Swale discharge point. Both points discharge to a tributary (unnamed creek) of Kings Stockyard Creek as shown on Figure 3.

The locations and type of surface water monitoring and discharge points are listed in Table 3.

Table 3 – EPL 3035 Surface Water Monitoring and Discharge Points

EPA Identification No.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Discharge to waters; Discharge quality monitoring	Discharge to waters; Discharge quality monitoring	Discharge from HPP Swale to unnamed creek that discharges to Kings Stockyard Creek.
28	Discharge to waters; Discharge quality monitoring	Discharge to waters; Discharge quality monitoring	Discharge from First Flush Basin to unnamed creek as shown on monitoring point figure provided to the EPA on 22 August 2017

6.2 Concentration Limits

The concentration of a pollutant discharged from EPA Identification/Licensed discharge point 28 and the HPP Swale discharge point must not exceed the water concentration limits specified in Table 4.

Table 4 – Water Concentration Limits EPA Identification Point 28

Pollutant	Units of Measure	50 percentile concentration limit	100 percentile concentration limit
Aldrin	µg/L		0.3
Biochemical Oxygen Demand (BOD)	mg/L		20

Pollutant	Units of Measure	50 percentile concentration limit	100 percentile concentration limit
Colour	Hazen	80	160
Dieldrin	µg/L		0.3
Methylene Blue Active Substances (MBAS)	mg/L		0.5
Nitrogen (Total)	mg/L		10
Oil and Grease	mg/L		10
pH	pH		6.5-8.5
Phosphorus (Total)	mg/L		0.3
Total Suspended Solids	mg/L		50

6.3 Requirement to Monitor and Frequency

For EPA Identification/Licensed discharge point 28 and the HPP Swale discharge point The Development must monitor, by sampling and obtaining results of analysis, the concentration of each pollutant specified in Table 4.

Sampling is undertaken in accordance with the *Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales* (DEC, March 2004). Water samples are collected by trained personnel and analysed by NATA accredited laboratories.

The frequency of sampling is weekly during any discharge.

6.4 Surface Water Monitoring Data

All surface water monitoring data is uploaded monthly to the company website:

<https://www.borgs.com.au/locations/oberon-nsw/>

7 Surface Water Impact Assessment Criteria

This section sets out the surface water response plan for the facility. Potential impacts on surface water, triggers, actions and responsibilities for addressing impacts are summarised in Table 7.

7.1 Water Quality Exceedance

Should water quality monitoring indicate that the criteria set out in EPL 3035 (Table 4) have been exceeded, The Development will conduct an incident investigation into the potential sources and/or causes.

As the limits specified in EPL 3035 are the 100-percentile concentration limit, all exceedances will generate an investigation, however the exceedance will need to be determined to be *causing or threatening material harm to the environment* to trigger the pollution incident response measures detailed in the Pollution Incident Response Management Plan.

In the event that a pollution incident causes or threatens material harm to the environment, the Pollution Incident Response Management Plan (PIRMP) is to be immediately implemented, including immediate notification to authorities as outlined in the PIRMP.

Environmental incidents which are identified as *not* causing or threatening material harm to the environment should be contained if safe to do so, then The Development's Incident Reporting procedure undertaken. Exceedances classified as not causing or threatening material harm to the environment will be reported annually in the Annual Review.

Full details on environmental incident investigation and reporting are provided in the OEMP.

7.2 Unlicensed Discharge

In the event of an unlicensed discharge, the Development will notify the EPA immediately after becoming aware of this and undertake an investigation of the discharge event. In the unlikely event that a discharge poses a threat to health of surrounding property owners and occupiers, the Development will implement the Pollution Incident Response Management Plan (PIRMP), which includes notification with those likely to be affected. A list containing surrounding property owner's and occupier's contact details is held by The Development.

The notification procedure is to be initiated by the Environmental Manager for The Development. In the absence of the Environmental Manager the notification procedure is to be initiated by the person designated as fulfilling the responsibilities of the Environmental Manager. Notification will occur within 24 hours of it becoming known to site personnel that surrounding property owners and occupiers are likely to be adversely affected by discharges from the site. A record will be kept of all property owners and occupiers contacted and this will be recorded in DataStation by the Environmental Manager.

An investigation report on the unlicensed discharge will be prepared and provided to the EPA or other relevant agency, including DPE.

7.3 Contingency Plan to Manage Any Unpredicted Impacts

Should impacts eventuate that have not been predicted or considered in the SWMP, the following contingency plan will apply:

- 1) Assess whether impacts constitute a material risk of harm to the environment, and trigger the PIRMP and reporting requirements of the OEMP if necessary;
- 2) Investigate the cause of the unpredicted impact. This may include onsite process owners or external specialists as required;
- 3) Consult with government agencies regarding the unpredicted impact if the impact is material and require additional management strategies; and
- 4) Revise the SWMP.

The scale of the unpredicted impact will inform the level of response required through this process and whether the impact is material and therefore requires external notification.

Table 7 – Surface Water Response Plan – Triggers, Actions and Responsibilities

Aspect	Trigger	Action	Timeframe	Responsibility	Further Information
Water quality impacts	Exceedance of water quality criteria set out in EPL 3035 (Table 4)	Determine if the event is a pollution incident causing or threatening material harm to the environment. If yes, implement The Development's Pollution Incident Response Management Plan (PIRMP) immediately. If not a pollution incident causing or threatening material harm to the environment, follow The Development's Incident Reporting procedure.	Material harm incidents are to be reported immediately to DPE, EPA and any other relevant agency. A written report on the incident is to be provided within 7 days. Incidents/exceedances classified as not causing or threatening material harm to the environment will be reported annually in the Annual Review.	Environmental Manager	Section 7.1
Surface water discharge	Surface water discharge that is not licenced under EPL 3035	Notify DPE, EPA and any other relevant agency and potentially affected persons (where necessary). Trigger the Pollution Incident Response Management Plan immediately if required (PIRMP material harm incident). Investigate and prepare report outlining causes, impacts and recommended mitigation measures. Supply report to agencies. Implement report recommendations.	Notify DPE, EPA and any other relevant agency immediately. Trigger PIRMP immediately if of sufficient magnitude. Provide written report within 7 days.	Environmental Manager	Section 7.2

8 Reporting

8.1 Monitoring Data Review

The Environmental Manager will review all surface water quality monitoring results following a licenced discharge and ensure corrective action is taken where results or trends indicate non-compliance or risk of future non-compliance to the development consent or EPL criteria.

The surface water results are included in the Annual Review. The Annual Review includes a summary of monitoring results during the past year, comparison against the water quality criteria specified in the EPL, and summary of the previous year's monitoring results.

The Annual Review also identifies any trends in water quality impacts and any non-conformance over the year, as well as describing any actions currently implemented or planned to ensure compliance with the water quality impact criteria. The Annual Review is available to the relevant authorities including the Department of Planning and Environment (DPE) and Environment Protection Authority (EPA). It is also placed on the company's website along with a summary of environmental monitoring results in accordance with the requirements of Development Consent SSD 7016 and EPL 3035.

The EPA is provided with an annual return, statement of compliance and a monitoring and complaints summary annually as required by EPL 3035.

The Development conducted an Independent Environmental Audit in 2018 and 2021 and will continue at three yearly intervals in accordance with SSD 7016 condition of consent C15.

8.2 Reporting

8.2.1 Annual Review

In accordance with Development Consent SSD 7016 an Annual Review report is prepared and submitted to the Secretary Department of Planning and Environment on an annual basis.

The Annual Review summarises the environmental performance of the Developments activities for the reporting year. The results of the monitoring undertaken as specified in this SWMP will be compared against the impact assessment criteria in the relevant environmental management plans or monitoring programs and/or limits contained in Development Consent SSD 7016 and EPL 3035 to assess the effectiveness of environmental management.

8.2.2 Exceedance of Criteria / Environmental Incident Management

Notification procedures and actions upon identification of an exceedance of any impact assessment criteria or management levels will be as per the Operational Environmental Management Plan (OEMP), and the Pollution Incident Response Management Plan.

8.2.3 Complaints

Community complaints will be managed in accordance with the procedures in the Operational Environmental Management Plan (OEMP).

9 SWMP Review

In accordance with Development Consent SSD 7016 Condition C10, this SWMP will be reviewed and if necessary revised within 3 months of an:

- Approval of a modification;
- Submission of an incident report under Condition C13;
- Approval of an Annual Review under Condition C11; or
- Completion of an audit under Condition C15.

The SWMP will also be updated as required to reflect any change to on-site management or monitoring programs referred to in this document, or any changes to Development Consent SSD 7016 or EPL 3035.

Revisions to the SWMP will be submitted to the Secretary DPE for approval.

Appendix E – Waste Management Plan

EMS0007

Waste Management Plan

Products

124 Lowes Mount Road, Oberon NSW

Porta Products Pty Ltd

29 November 2025

This document should be read in conjunction with EMS0060 Construction Environment Management Plan, EMS0001 Operational Environment Management Plan, EMS0006 Surface Water Management Plan, SEP Waste Storage Areas and SEP Stockpile Map

Revision History

Rev No.	Revision Date	Author	Comments	Details	Authorised	
					Name	Signature
0	24/11/17	Carly McCormack		Final	Victor Bendevski	
1	02/11/18	Jacqueline Blomberg	Update 2.4 Environment Protection Licence condition L3 & L7	Review as per SSD7016 C10(d)	V Bendevski	
1	07/12/18	J Blomberg	No updates necessary, remains as Rev. 1	Review as per SSD7016 C10(a) MOD 1 granted 20/11/18		
2	02/10/19	J Blomberg	Update Section 2.4 to include for EPL waste			
3	18/01/21	J Blomberg		Update as per SSD 7016 condition B52	V Bendevski	
4	17/12/21	Andrew Brady		Update as per SSD 7016 condition B52	J Blomberg	
5	16/08/22	A Brady	Name change and inclusion of MOD 4	Update as per SSD 7016 condition C10 (a) & (c)	J Blomberg	
6	25/08/23	A Brady		Update as per SSD 7016 condition C10(c)	V Bendevski	
7	5/09/24	A Brady	Name change and inclusion of MOD 5	Update as per SSD 7016 condition C10 (a) & (c)	A Brady	
8	29/10/2025	A Brady	Name change, updates to waste quantities	Update as per SSD 7016 condition C10 (c)	A Brady	

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1 Introduction

1.1 Background

This Management Plan has been prepared for the Porta Products Pty Ltd (Formally Borg Manufacturing, Borg Panels, Australian Panels) Oberon site (and will be referred to herein as the 'Development').

The Development operates as a medium density fibreboard (MDF) and particleboard facility in Oberon NSW manufacturing a range of Customwood MDF and particleboard products including:

- Standard MDF;
- Moisture Resistant MDF;
- E0 (Low Formaldehyde Emitting) MDF;
- Ultraprime MDF Mouldings;
- Standard particleboard;
- Moisture resistance particleboard;
- Particleboard flooring products for structural applications;
- Decorative Laminated MDF and particleboard; and
- Treated paper for the lamination of MDF and particleboard.

On 29 May 2017 Development Consent SSD 7016 was granted by the Minister for Planning to construct a Particle Board manufacturing facility, modify the existing MDF manufacturing facility and undertake general site works (the Project) at the existing facility located on 124 Lowes Mount Road, Oberon.

Conditions contained within the Consent require Porta Products to provide for the ongoing environmental management of the Development. Though initially developed to satisfy conditions B51, C4 and C9, this Waste Management Plan has been updated to include for condition B52. Additionally, this WMP will be reviewed and updated as per SSD 7016 condition C10.

1.2 Purpose and Objectives

The purpose of this WMP is to provide the management and performance requirements related to waste at the Development, and includes:

- Requirements for management of waste for operations at the facility as stipulated by regulatory approvals for the Development;
- Description of potential sources of wastes and risks related to waste management;
- Detail the 'waste' materials to be reused/recycled for production;
- Detail procedures for managing, handling and accepting the materials to be reused/recycled;
- Description of the environmental controls to meet objectives, and regulatory approval requirements; and
- Overview of the environmental monitoring programs associated with environmental controls and management actions.

The objectives of the WMP are to:

- Advise site personnel of their responsibilities in managing waste generated at the site;
- Advise site personnel of their responsibilities in managing, handling and accepting waste that will be reused on-site in the manufacturing process; and
- Ensure compliance with the conditions of approval related to waste management.

1.3 Structure of this Waste Management Plan

This WMP has been developed to manage waste generated by the facility and to satisfy the requirements set out in conditions of Development Consent SSD 7016, and includes information on the following:

- Section 2 – Legislative and Regulatory Compliance
- Section 3 – Process Overview
- Section 4 – Urban Wood Residue/Reuse Material
- Section 5 – Implementation
- Section 6 – Incidents and Complaints Management
- Section 7 – Monitoring and Review

1.4 Approval of the WMP

The WMP was submitted to the Secretary of the (then) Department of Planning and Environment (DP&E) on 30 November 2017. The Department reviewed the Plan and were satisfied it met the terms of the relevant conditions of consent. Accordingly, the WMP was approved by the Department on 21 December 2017.

Any subsequent versions of the WMP will be submitted to DPE for approval as per SSD 7016 Condition C10 as is necessary.

1.5 Training

Training and Assessment Manual EMS0020 Environmental Standard Awareness Waste has been developed for the site. This training will continue be delivered to all Supervisors and Operators on site. The Manual outlines employees responsibilities to assist with managing waste across the site and ensure ongoing regulatory compliance. The Training and Assessment Manual will be reviewed as necessary where site conditions change to ensure it accurately reflects site operations and training requirements.

Standard Operating Procedure EMS0030 Receiving and Accepting Urban Wood Residue (UWR) has been developed for site. This is to ensure the type and quality of UWR received on site which is to be incorporated into new particleboard meets specification, EPA licence and Development Consent conditions, and NSW Government Regulations.

All training records are maintained in DataStation.

2 Legislative and Regulatory Compliance

2.1 Relevant Legislation

Key environmental legislation relating to waste management for the facility includes:

- *Protection of the Environment Operations Act 1997*;
- Protection of the Environment Operations (Waste) Regulation 2014; and
- *Waste Avoidance and Resource Recovery Act 2001*.

2.2 Conditions of Consent

The operations at the Development are subject to the conditions contained in Development Consent SSD 7016 and the following modifications:

- MOD 1 – extension of mouldings warehouse, reorientation of materials handling building, layout change to particleboard chipper/debarker building, extension of northern noise bund, reconfiguration of elements of the surface water management system, reclamation of the Spring Dam (approved 20 November 2018)
- MOD 2 – installation of an electricity generation gas turbine and ancillary equipment (approved 29 November 2019)
- MOD 3 – additional materials handling equipment, extension to northern warehouse, changes to the site surface water system and construction of further hardstand
- MOD 4 – Additions and alterations to the existing timber processing facility including reclamation of the remaining spring fed dam, relocation and expansion of the existing mechanic's workshop and improvements to the site's water treatment plant (approved 20 August 2022)
- MOD 5 – Minor update to the approved mechanical workshop including additional workshop bays, additional first floor storage and minor updates to the office plus removal of the refuelling system and automated truck washing machine. The proposed development will also result in the increase in length of the stormwater management system to cover an additional 11m length of the mechanics workshop building. (approved 23 April 2024)

For each of the above modifications, the Minister did not impose any additional conditions specific to this Management Plan.

The specific requirements for a WMP (Schedule 2, Condition B51 and B52) and general requirements for environmental management plans (Schedule 2, Condition C9) are detailed in Table 1.

Table 1 - Development Consent Conditions

No.	Requirement	Document Reference
	WASTE MANAGEMENT	
	Waste Management Plan	
B51.	Within 6 months of the date of this consent, the Applicant must prepare a Waste Management Plan (WMP) for the Existing Development to the satisfaction of the Secretary. The WMP must form part of the OEMP required by Condition C4 and be prepared in accordance with Condition C9. The WMP must:	This Plan
	a) detail the type and quantity of waste generated by the Existing Development;	Section 3
	b) describe the handling, storage and disposal of all waste streams generated on site, consistent with the POEO Act, <i>Protection of the Environment Operations (Waste) Regulation 2014</i> and the <i>Waste Classification Guideline</i> (Department of Environment, Climate Change and Water, 2009);	Section 4
	c) detail the materials that are being reused or recycled, either on or off site; and	Section 4
	d) include the Management and Mitigation Measures included in Appendix B.	Section 2.3
B52	Prior to commencement of operation of the Project, the Applicant must update the WMP required under Condition B51 to incorporate the Project and its management to the satisfaction of the Secretary. The updated plan must be prepared in accordance with the requirements of Condition B51, and must incorporate the following:	This Plan
	(a) details of the materials to be reused and recycled for the Project; and	Section 4
	(b) details of the procedures for managing, handling and accepting materials to be reused or recycled on-site for the Project.	Section 4
	MANAGEMENT PLAN REQUIREMENTS	
C9	The Applicant must ensure that the environmental management plans required under Condition C4 of this consent are prepared by a suitably qualified person or persons in accordance with best practice and include:	Revision History
	a) detailed baseline data;	Section 3
	b) a description of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); (ii) any relevant limits or performance measures/criteria; and (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;	Section 2

No.	Requirement	Document Reference
	c) a description of the management measures that would be implemented to comply with the relevant statutory requirements, limits or performance measures/criteria;	Section 4
	d) a program to monitor and report on the: (i) impacts and environmental performance of the Development; and (ii) effectiveness of any management measures (see (c) above);	Section 6
	e) a contingency plan to manage any unpredicted impacts and their consequences;	Section 5.4
	f) a program to investigate and implement ways to improve the environmental performance of the Development over time;	Section 4.3
	g) a protocol for managing and reporting any: (i) incidents; (ii) complaints; (iii) non-compliances with statutory requirements; and (iv) exceedances of the impact assessment criteria and/or performance criteria; and	Section 5
	h) a protocol for periodic review of the plan.	Section 6.5
	Note: <i>These requirements also apply to the preparation or updates of management plans for the Existing Development and the Project.</i>	

2.3 Development Consent SSD 7016 Mitigation Measures

Appendix B Applicant's Management and Mitigation Measures to Development Consent SSD 7016 details the reasonable and practical measures to avoid or minimise impacts to the environment that may arise as a result of the Project. The following is included for waste:

Recovered Wood Material/Products

EPA approval will be obtained prior to the use of recycled materials in the particleboard manufacturing process.

In 2019-2020, the Development undertook an EPA approved trial for the receipt, storage, processing and use of urban wood residue (UWR) as an alternative raw material to be used in the production of particleboard. Upon successful completion of the trial, the Development applied to the EPA for a site specific resource recovery order and exemption to allow for the continued use of UWR in the manufacture of particleboard. The EPA issued Porta Products with *The Borg Panels Urban Wood Residue order March 2021* and *The Borg Panels Urban Wood Residue exemption March 2021*.

In 2021 the Development applied to the EPA for a second trial for the acceptance of resource recovered engineered wood products for use in the manufacture of particleboard. Special Condition E1 was applied to EPL 3035 for this trial. This trial was approved to run within a period of 12 months. Following conclusion of this trial, the Development prepared and submitted to the EPA a report on the findings of the trial.

2.4 Environment Protection Licence

Environment Protection Licence 3035 (EPL 3035) specifies waste that may be received at the premises and use of that waste during operation of the facility.

Condition L3 Waste of EPL 3035 states:

L3.1 *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.*

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.

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.

This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	General or Specific exempted waste	Borg Panels Urban Wood Residue that meets all the conditions of The Borg Urban Wood Residue Order March 2021 under Part 9 Clause 93 of the Protection of the Environment Operations (Waste) regulation 2014	As specified in each particular resource recovery exemption	Maximum 200,000 tonnes of UWR per annum and no more than 40,000 tonnes at any one time.
NA	General or Specific exempted waste	Soil that meets all the conditions of the Sydney Trains screened soil order under Part 9 Clause 93 of the Protection of the Environment Operations (Waste) regulation 2014	As specified in each particular resource recovery exemption	NA
NA	General or Specific exempted waste	Reclaimed Asphalt, that meets all the conditions of the reclaimed asphalt pavement order under Part 9 Clause 93 of the POEO (Waste) Regulation 2014	As specified in each particular resource recovery exemption	NA
NA	General or Specific exempted waste	Waste glass, that meets all the conditions of the recovered glass sand order under Part 9 Clause 93 of the POEO (Waste) Regulation 2014	As specified in each particular resource recovery exemption	NA

Code	Waste	Description	Activity	Other Limits
NA	General or Specific exempted waste	Waste ceramic tiles, sourced from National Ceramic Industries Australia Pty Limited, Rutherford NSW, that meets all the conditions of the recovered aggregate resource recovery order under Clauses 91-96 of the POEO (Waste) Regulation 2014	As specified in each particular resource recovery exemption	NA
NA	Non-standard Fuel sourced from materials generated within the Oberon Timber Complex	As defined in condition L7.2		Used in accordance with conditions L7.1 and L7.2
NA	Non-standard Fuel generated offsite from material originally manufactured within the Oberon Timber Complex	As defined in Condition L7.2		Used in accordance with conditions L7.1 and L7.2

Note: For the purposes of condition L3.1, the Oberon Timber Complex refers to the businesses known as Structaflor, AKD, Porta Products and Woodchem.

Condition L7 Other limit conditions of EPL 3035 states:

L7.1 Only the following materials may be used as fuel within the Conti 1 and Conti 2 heat plants: -

- a) Standard Fuel; and
- b) Non-Standard Fuel.

L7.2 For the purposes of condition L7.1, Non-Standard Fuels are those fuels that have been assessed by the EPA as being appropriate for use as a fuel additive and comprise those materials that are derived from Oberon Timber Complex activities. Non-Standard Fuels currently approved for use are: -

- a) MDF Board;
- b) Particle Board sourced from Porta Products and Structaflor premises;
- b) Shredded MDF Board;
- c) Sander Dust;
- d) Laminated MDF Board;
- e) Water Treatment Plant sludge; and
- f) Saw dust/off-cuts sourced from Bearers 4 U Pty Limited (Lot 4 Albion Street, Oberon)

Licence version date 2 February 2022 included section 8 Special Conditions that are specific to the second urban wood residue trial. Condition E1 Trial of Urban Wood Residue – Particleboard Factory includes (but not limited to) the following:

The licensee must undertake a trial of the receipt, storage processing and use of Urban Wood Residue (UWR) as an alternative raw material to be used at the particleboard factory within the premises (Trial 2). Trial 2 is to be conducted within a period of 12 months and conclude on 24 December 2022.

All UWR received at the premises must be managed in accordance with the Urban Wood Residue Quality Assurance and Control Plan, v2.0 (UWR QA/QC Plan).

The condition also outlines requirements for sampling and testing of the material, and the preparation of a Report following the conclusion of the trial.

3 Process Overview

3.1 MDF Plant

The MDF plant produces medium density fibreboard from the compression and densification of wood fibres treated with Melamine/Urea Formaldehyde polymer and wax. The MDF plant operates with two fully automated press lines producing boards of various dimensions. Product from the MDF plant is also used in the mouldings plant.

There are two heat plants (HP) in operation supplying heat to the facility. Fuel from the heat plants is sourced from both raw materials purchased for the plants and waste products obtained in accordance with EPL 3035 requirements (Section 2.4).

A schematic overview of the MDF process is shown in Figure 1.

3.1.1 Waste Streams

The following waste streams are generated in the MDF plant:

- Bark;
- Oversize and undersize wood chips;
- Fibre;
- Off-spec product / reject board;
- Sawdust and sanding belts;
- MDF trim;
- Packaging materials; and
- Heat plant ash.

3.1.2 Bark

Sorted logs are transferred to a debarking plant either directly from incoming trucks or from the log yard. Bark from this process falls to a lower deck and is collected by a scraper, which feeds the bark to a conveyor and stockpile.

Bark and other log wood refuse is then used as fuel for the heat plant or on-sold for landscaping purposes.

3.1.3 Oversize and Undersize Woodchips

De-barked logs are fed into a chipper, which converts the full log into a standard size chip suitable for further processing. The created chip is then fed by conveyor onto the chip piles. Chips are stored in large chip piles that utilise horizontal screw reclaimers at the base of the

piles to feed chips into the refining process. Chips are screened and washed prior to the refining process to remove any oversize or undersize chip fractions and any stones, metal, or dirt that may cause process disruptions or flaws in the finished product. Undersize and oversize chip that is unable to be reprocessed is collected and fed as fuel to the MDF heat plants.

3.1.4 Fibre – Prior to Press Line

Following washing, dewatered chips are refined into fibre. Fibre is produced by passing wood chip through a defibrator, a steam pressurised disk refinement process. The fibre produced is light and fine, which means it is easily spread by wind.

Wax and resin are added to the fibres before the fibre drying process. Wax is added to improve the moisture resistance of the board, and resin is added as an adhesive for the MDF board pressing process.

Process disruptions during start-up or fibre production can lead to a 'fibre dump' from the dryer start-up cyclone. Dumped fibre is collected in designated fibre dump pits located in the outdoor MDF plant area. The quantity of fibre dumped is not officially recorded either manually or automatically as part of the process control system. The size of the fibre 'dump' varies according to whether the dump is due to process start-up and shut-down or process disruptions.

The fibre dumps are generally constructed with three surrounding walls and an open front to allow collection of the fibre by a front-end loader. This design provides some protection from the risk of windblown fibre spreading throughout the plant.

Additionally, a street sweeper operates on a full-time basis to collect and control the spread of fibre across the outside areas of the MDF plant, and subsequently the spread of windblown fibre to other areas of the timber complex and surrounding properties. Fibre collected by the street sweeper is placed in the fibre dumps.

Fibre from the fibre dumps is taken to the fuel storage and mixing bunker at the MDF plant for blending with other approved fuels for use in the MDF heat plants.

Loose fibres from within enclosed buildings of the MDF plant are collected with a vacuum, which is also emptied into the fibre dumps.

3.1.5 Fibre – Press Line

Ensuring the fibre matt is of appropriate quality and thickness is essential to achieving the required finished product standard. Therefore, the fibre quality is subject to online analysis following the pre-press. If unsatisfactory, the load of fibre on the conveyor can be 'dumped' prior to entering the press.

The edges of the pre-pressed matt are trimmed to provide a clean edge prior to the main press. Trimmed fibre is recycled back into the process, with return to fibre storage prior to the pre-press. There is no online analysis of the flowrate of fibre back into the process from the pre-press, or of reject fibre to the fibre dumps.

3.1.6 Reject Board

The quality of MDF exiting the main press is analysed online, with board that fails to meet the required standard being rejected prior to entering the star cooling wheel. The quantity of reject board from Conti 1, Conti 2 and Conti 4 press lines is recorded in the daily operations reports.

Board can also be rejected at later stages of the process by visual inspection. Board can be rejected from the production line by operators following sanding and trimming, and prior to packaging.

Rejected board from the press-line and later production stages is stockpiled for later use, predominantly as product packaging bearers. Leftovers and offcuts from the bearer making process are used as fuel in the MDF heat plants.

3.1.7 Sawdust and Sanding Belts

Following cooling and storage, MDF is sanded down to the required thickness and finish. Sawdust from the sanding process is collected under vacuum to a baghouse filter, prior to being blown across to sawdust storage silos at the MDF heat plants.

Sanding belts are approximately 2.65m x 2.8m and come packaged in large cardboard boxes. Approximately 1 belt per head requires changing each 12-hour shift. There are two thicknesses of finishing heads. Both the sanding belts and their cardboard packaging are disposed of as general waste to landfill.

3.1.8 MDF Trim

MDF is cut to the required size boards according to different product requirements. Trim offcuts can vary according to the product being produced. Wood trim from the trim saws (both the length and width cut) is automatically dropped onto a conveyor belt and fed to a wood hogger. The board is crushed and broken into smaller pieces in the hogger, which is then blown across to the fuel storage and mixing bunker for the MDF heat plants.

3.1.9 Product Packaging

MDF products are packaged using wood bearers, plastic strapping and plastic shrink wrap. All packaging wastes are disposed of as general mixed waste to landfill.

The plastic strap used in the MDF plant is recyclable, where possible it is segregated and reused however there is no segregated collection of plastic strap for recycling at the local waste facility so all additional strap waste is disposed of as general mixed waste to landfill.

3.1.10 Heat Plant Ash

Ash is the main waste stream from the heat plant. Ash is currently disposed of to landfill.

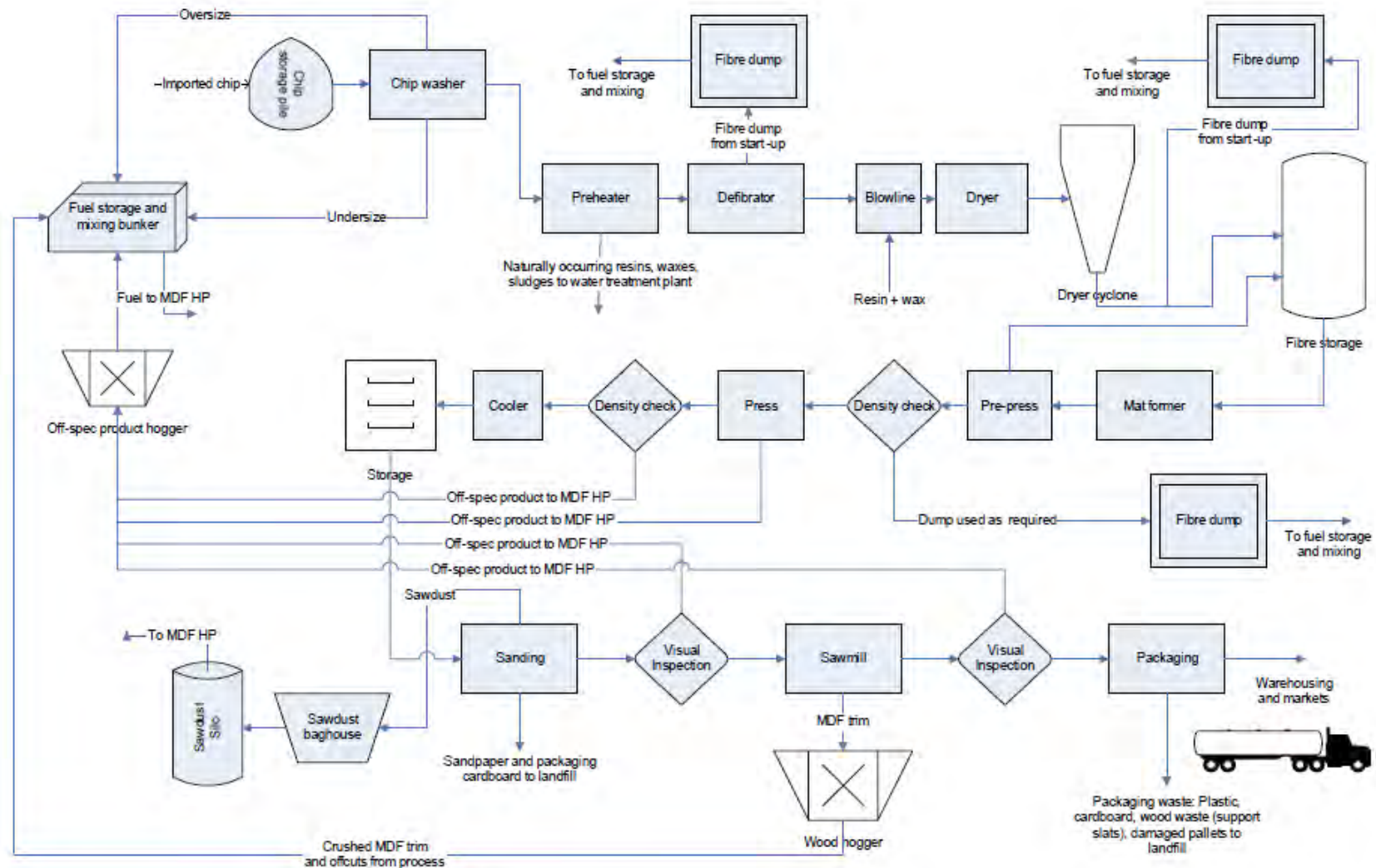


Figure 1 – Schematic Overview of the MDF Production Process

3.2 Particleboard

Particleboard manufacturing involves both the processing of virgin wood, residual wood waste from sawmills and the recycling and processing of appropriate used wood (UWR) to create suitable sized particles. These particles are blended with glue and a blend of urea formaldehyde with a paraffin wax emulsion. After blending, the particles are sent to the appropriate mat forming stations. The mat is then conveyed to the press via the forming line. The forming line is able to reject and recycle mat before pressing. Any reject material is reused on the site. Once processed, the board is cut, cooled and sanded, then stored for shipping.

3.2.1 Waste Streams

Waste streams generated from the manufacturing of particleboard include the following:

- Bark;
- Oversized and undersized wood chips;
- Off-spec product/board reject;
- Sawdust and sanding belts;
- Particleboard trim;
- Packaging materials; and
- WESP waste material.

3.2.2 Bark

Plantation timber logs are brought to site from external locations and processed through the timber yard. This includes processing the timber through a debarker and chipper. This chip is then fed on a covered conveyor to the chip storage silos (x2). Any fallen chip is swept up and added to the stockpile in the silos or taken to the fuel storage area.

3.2.3 Flaking

Chips are moved from the silos via covered belts and conveyors to the knife ring flakers designed to produce the optimum macro sized particles for processing. Saw dust is also introduced to the particles at this point. The flakers are located within an enclosed building. Any dust/small particles deposited outside the ring flaker are manually swept up and either used to fuel the heat plants or reintroduced into the particleboard production system.

3.2.4 Dryer

The dry saw dust and wet wood particles are then dried in a fully enclosed rotating drum drier. Any small particles generated during the drying process which are smaller than required are removed using cyclone extractors. Any surplus air generated which is not required for the drying process is cleaned using a Wet Electrostatic Precipitator (WESP) prior to being released to the atmosphere as clean air. Once dry and processed in this manner, the particles are removed and stored in a third silo.

Once this process has been carried out, screening is undertaken with any appropriately sized particles and dust sent to storage. Any oversized particles are sent to the grinding mill to reduce them to an appropriate size.

Dump chutes similar to those described in section 3.1.4 Fibre – Prior to Press Line are located in this area and waste from these are managed in the same way.

3.2.5 Blending, Forming, Pressing

Particles are then blended with glue and additives including urea formaldehyde and paraffin wax emulsions and sent to the mat forming stations. The forming stations ensure that there is

an even distribution of particles across both the width and thickness of the board. The mat is weighed and adjusted to ensure the finished product has a consistent density. Any reject mat is returned to the flaking system and reintroduced into the manufacturing process.

The forming line then transports the layered mat in a continuous format to the press. The forming line is able to reject and recycle the mat before pressing if the specified product parameters are not of a suitable standard. Any rejected material is reused on site. The press then applies the specified heat and pressure to cure and consolidate the board to meet or exceed Australian Standards.

3.2.6 Trimming, Sanding, Finishing

Once processed, the pressed board is then square cut, cooled and stored in an automated storage system. Any off cuts are put back through the system to create particleboard.

Once cooled and cured, the boards are removed from storage and processed through the sander to ensure they meet final standards. Sawdust from the sanding process is manually swept up by a mechanical sweeper for reuse on site.

Product packaging for particleboard is the same as for MDF described in section 3.1.9 above.

3.3 Mouldings Plant

3.3.1 General

The mouldings plant processes MDF sheets into finished (painted) mouldings suitable for use as skirting boards, doorjambes and architraves.

The main input materials to the mouldings process include MDF sheets from the MDF plant, paint, plastic wrap and strapping used in the final product packaging.

MDF sheets are cut to the required size using a multi-saw, prior to moulding and sanding to the required style and shape. The mouldings undergo a two stage (two coat) painting process with drying and intermediate de-nibbing (rubbing down) between paint stages, prior to visual inspection of the product, packaging, storage and delivery of product to markets.

A schematic overview of the mouldings process is shown in Figure 2.

3.3.2 Waste Streams

The following waste streams are generated in the mouldings plant:

- Plastic strapping and packaging from MDF receipt;
- Product trim and offcuts;
- Sawdust;
- Paint, paint filters, and paint washdown;
- Product packaging; and
- Reject material.

3.3.3 Plastic Strapping and Packaging from MDF Receipt

MDF sheets delivered to the mouldings plant are stacked on wood bearers supported with plastic strapping and are labelled.

The plastic strapping removed from the MDF is recyclable, however there is no segregated collection of plastic strap for recycling at the mouldings plant. MDF labels (equivalent to a printed A4 sheet) are disposed of as general waste.

Wood bearers are reused wherever possible. Undamaged wood bearers are returned to the MDF plant for reuse. Damaged wood bearers are collected and sent to the heat plants for use as fuel.

3.3.4 Product Trim and Offcuts

MDF offcuts from the initial sawing process are collected and sent to the MDF heat plants for use as fuel. The number of offcuts is dependent on the product specification and size of MDF board.

3.3.5 Sawdust

Sawdust from the sawing line, moulder, and sander is collected under vacuum to a baghouse filter, prior to being blown across to sawdust storage silos at the MDF heat plants.

Material removed from the painted timber surface in the denibbing process (following the first painting stage) is collected under vacuum to a baghouse filter, prior to being blown across to sawdust storage silos at the MDF heat plants.

Sawdust is also used to clean up any paint spillages. Paint soaked sawdust is dried and disposed of to a suitable landfill location.

3.3.6 Paint, Paint Filters and Paint Washdown

Painting is undertaken in a bunded area, allowing for cleaning and washdown of each painting area. The area is cleaned using water, and the washdown water is recycled back into the process via mixing with fresh paint in the paint day-tank or is sent to the water treatment plant for treatment. Contaminated paint waste is mixed with a polymer to form a spade-able waste which is taken to landfill.

Paint filters are cleaned and reused as required.

3.3.7 Product Packaging

Waste streams generated from the packaging line include:

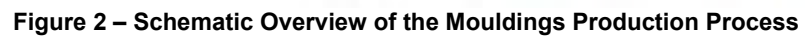
- Cardboard boxes (received from delivery of packaging materials);
- Cardboard cores from rolls of plastic wrap;
- Damaged wood bearers;
- Plastic wrap; and
- Plastic strapping offcuts from the strapping machine.

Finished mouldings are stacked on laminated wooden bearers prior to strapping and covering with plastic wrap. Plastic wrap used in the wrapper is coiled over a cardboard core that is currently not returnable to the manufacturer, thus the cores are disposed of as general waste to landfill.

Bearers used to support mouldings products are made from MDF or untreated wood, therefore they are suitable for use as fuel in the MDF heat plants. Attempts are made to repair and reuse damaged wood bearers as much as possible. Broken bearers are used for fuel in the MDF heat plants.

3.3.8 Reject Material

Product is subject to visual inspection following application of the second coat of paint and prior to packaging. Product that fails to meet the required quality standard is removed from the process and recorded as reject. Rejected product is stockpiled for use as fuel in heat plants.



3.4 Paper Treater

3.4.1 General

The paper treater manufactures resin treated paper films that are used to laminate onto the surface of the MDF and particle board sheets. These films provide colour, texture and durability to the surface of the board.

The paper treatment process uses urea and melamine formaldehyde adhesives which are saturated into and onto a continuous paper web. The resin filled paper web is dried sufficiently, in gas fired flotation ovens, until they no longer tack together when placed in contact with one another.

The continuous web is then cut into suitable sized sheets or reeled onto a core for use on a continuous laminating press line.

3.4.2 Waste Streams

Waste streams generated from the paper treatment process include the following items:

- Raw paper;
- Cardboard cores;
- Waste resin;
- Dried treated paper; and
- Wet treated paper.

3.4.3 Raw Paper

The dense cardboard protective outer wrapping of the paper rolls is removed prior to preparation for the paper treatment process. Additionally, some of the decorative raw paper is also recycled or sent to the MDF heat plants to be used as fuel.

3.4.4 Cardboard Cores

Raw decorative paper is coiled over a cardboard core. Used cardboard cores are disposed of as general waste to landfill.

3.4.5 Waste Resin

Waste resin is generated at the end of a production run, or when there are process upsets to out of specification resin. End of run material can be pH stabilised and utilised during the next suitable production run. Out of specification material can be reused in the MDF board making process if the opportunity exists, otherwise it is chemically set to solidify and disposed of to landfill.

3.4.6 Dried Treated Paper

Dried treated paper is generated in process upset conditions when the continuous web is broken. This paper is very brittle and has no alternative uses and is therefore sent to landfill.

3.4.7 Wet Treated Paper

Wet treated paper is generated in process upset conditions when the continuous web is broken. This wet paper has no alternative uses and is also sent to landfill.

3.5 Laminating Presses

3.5.1 General

Laminating presses are used to thermally fuse the treated paper to the surface of the MDF and particleboard substrate. They operate by applying heat and pressure to the treated paper leaf and board assembly, which activates the glue causing it flow and bond to the surface of the board product.

3.5.2 Waste Streams

Waste streams generated from the laminating press process include the following:

- Dry treated paper;
- Reject laminated board;
- Plastic film from wrapping; and
- Packaging.

3.5.3 Dry Treated Paper

Dry treated paper that is broken or damaged during setup of the laminating process is sent to landfill.

3.5.4 Reject Laminated Board

Board that is not suitable for resale after the laminating process is generally reused by sanding and then re-laminated into A grade product. Alternatively, the board product is used in the bearer making process. Offcuts from the bearer making process are used onsite as fuel in heat plants.

3.5.5 Plastic Film Wrapping

Plastic film is used for wrapping treated paper to prevent moisture ingress. Used plastic film is sent to landfill.

3.5.6 Packaging

Treated paper is transported for use at other manufacturing sites in flat sheets. The paper sheets are protected with thick MDF top and bottom. Treated paper for use onsite is rolled onto aluminium cores.

Both the MDF used for transport and aluminium cores used onsite are reused in the same process until end of life, at which time the MDF is sent to the heat plants for fuel and aluminium cores are recycled.

3.7 Water Treatment Plant

3.7.1 General

The on-site water treatment plant processes all the effluent (process water) generated from various activities at site. The water treatment plant utilises filtration and biological degradation to remove contaminants from the water for re-use, capturing over 400KL per day from the site and reusing it in the manufacturing process.

More detail on the function and operation of the water treatment plant is provided in EMS0006 Surface Water Management Plan.

3.7.2 Waste Streams

Waste streams generated from operation of the water treatment plant include the following:

- Chemical containers;
- Brine; and
- Solids from filtration.

3.7.3 Chemical Containers

The water treatment plant requires chemicals for its operation, the chemicals are generally supplied in IBCs or bags for solid materials. Management of IBCs on-site is detailed in Section 3.6.3. Empty bags are disposed of to landfill.

3.7.4 Brine

The water treatment plant produces brine, a waste product from the Reverse Osmosis (RO) system, which is high in dissolved solids. Brine solids are currently treated within the water treatment plant by way of dilution then reused in the manufacturing process.

3.7.5 Solids from Filtration

Dewatered waste sludge (biomass) from the centrifuge is sent to the heat plant as fuel for the furnace.

3.8 Common Waste Streams

The following waste streams are common to more than one process on-site, and are handled, processed and recorded collectively for the facility.

3.8.1 Scrap Metal

Scrap metal with potential for reuse within the plant is stockpiled on site and reused wherever possible.

Other scrap metal that is not stockpiled is placed in scrap metal skip bins for removal from site to a metal recycler.

3.8.2 Waste Oil

Waste oil is collected from site for recycling by Cleanaway.

3.8.3 Chemical Containers

Empty chemical containers (IBCs) are washed and stored on-site prior to recycling, reuse or disposal. The majority of IBC's are reused at site, with the remainder that are not re-purposed or are at end of life being cut up or crushed and sent to landfill.

Waste drums of metal construction are triple rinsed and sent to the recyclers.

Waste requiring burial is made up of urea formaldehyde spade-able resin and paraffin wax bladders. Quantities of these are sporadic and disposal of resin in this manner is considered as a last resort as the product has a high capital cost. This waste is disposed of to Bathurst Regional Council Waste Management Centre.

3.8.4 General Waste

All general waste from work areas, offices and staff amenities is collected in bulk skip bins and taken to Oberon Council Waste Depot for disposal. There is no segregation of recyclable materials.

3.9 Waste Quantities

A summary of estimated waste generation at the facility is provided in Table 2.

Table 2 – Summary of Waste Generated in Porta Products Facility

Waste Stream	Estimated Annual Waste Generation	Disposal / End Use
Bark	30,000 tonnes	Fuel in heat plants or on-sold for landscaping purposes
Oversize and undersize woodchips	190,000 tonnes	particleboard manufacturing
Fibre	Not recorded	Fuel in heat plants or particleboard manufacturing
Reject Product	2,200 tonnes (assumed plants average density of 730kg/m ³)	Fuel in heat plants or particleboard manufacturing
Ash	2,255m ³	Landfill
Sawdust	9,000 tonnes	particleboard manufacturing
Trim and Offcuts	7,000 tonnes	Fuel in heat plants or particleboard manufacturing
Wood Bearers	Included in MDF trim and offcuts	Fuel in heat plants
Scrap Metal	approximately 2,000 tonnes	Recycled
Waste Oil	40,000 litres	Recycled
Oil Drums	500 drums	Reused or returned
General Mixed Waste (sanding belts, cardboard, plastic strapping, shrink wrap, labels, paint filters, treated paper, general waste)	7,000 m ³	Landfill
Brine (from WTP)	100% reuse captured in board production	Reuse
Sludge (from WTP)	Not recorded	Fuel in heat plants
Chemical Containers (IBCs)	Included in general mixed waste	Reuse, recycle and landfill

Waste Stream	Estimated Annual Waste Generation	Disposal / End Use
Waste resin (spade-able or solidified) and paraffin wax bladders	150 tonnes	Bathurst Council Waste Management Centre – waste requiring burial

4 Implementation

4.1 Minimising Waste Production

The Development aims to appropriately manage and minimise waste generation at the Oberon facility, including domestic waste production and the reuse and recycling of waste where possible.

4.2 Waste Hierarchy

The Development will endeavour to manage the waste generated on site by following the best practices as set out in the *Waste Avoidance and Resource Recovery Act 2001*. The Waste Hierarchy of Control is detailed in Figure 3.



Figure 3 – Waste Hierarchy of Control

Waste is separated on site into different classes in accordance with the NSW EPA *Waste Classification Guidelines*. Before waste is removed from site it is assessed for suitability for the intended destination. Waste is classified into the groups identified in Table 3.

4.3 Waste Monitoring

Waste monitoring is undertaken at a corporate level. The focus of the monitoring program is to investigate and implement ways to reduce waste generation and increase recycling opportunities of the facility.

4.4 Management of Waste Streams

Waste produced at the site is disposed of either by staff or licenced contractors to licenced waste facilities. The classification, management and disposal of wastes is outlined in Table 3.

Table 3 – Waste Classification, Management and Disposal

Waste Category	Source	Management	Disposal
General solid waste (putrescible)	Food scraps and wrappers from site personnel	No separation from general solid waste (non-putrescible)	Off-site disposal at Oberon Council Licenced Waste Facility
General solid waste (non-putrescible)	Sanding belts	Collected in skip bins	Off-site disposal at Oberon Council Licenced Waste Facility
	Heat plant ash	Stockpiled and disposed of to landfill as general waste	Off-site disposal at Oberon Council Licenced Waste Facility
	Paint solids, filters, spillages and linings	Dried and disposed of to landfill as general waste	Off-site disposal at Oberon Council Licenced Waste Facility
	Plastic strapping and wrapping	Collected in skip bins	Off-site disposal at Oberon Council Licenced Waste Facility
	Cardboard cores and cardboard boxes	Collected in skip bins	Off-site disposal at Oberon Council Licenced Waste Facility
	Treated paper	Collected in skip bins	Off-site disposal at Oberon Council Licenced Waste Facility
	Waste resin (spade-able or solidified) and paraffin wax bladders	Collected in skip bins	Bathurst Council Waste Management Centre – Waste requiring burial
General solid waste (recyclable)	Bark, oversize and undersize woodchip, fibre, sawdust, wood trim, bearers and reject product	Stored on site	Fuel in heat plants or particleboard manufacturing
	Scrap metal	Metal recycling facility or reused on site	Off site to metal recycler
	Oil drums	Reused or returned	Off site to drum re-conditioner

Waste Category	Source	Management	Disposal
	Sludge (from WTP)	Stored on site	Fuel in heat plants
Liquid waste	Waste oil	Cleanaway	Off-site disposal by licenced contractor
	Brine (from WTP)	captured in production process	As detailed in EMS0006 <i>Surface Water Management Plan</i>
Hazardous waste	Chemical containers	Recycled, reused or disposed	Cleaned, cut up or crushed and sent to Bathurst Regional Council Waste Management Centre
Special waste	Asbestos waste	Asbestos register	Off-site disposal by licenced contractor
	Waste tyres (any used, rejected or unwanted tyres including shredded or tyre pieces)	Tyres collected and stored on site for disposal as required	Off-site disposal by licenced contractor

4.5 Waste Storage Areas

Designated waste storage areas are provided at various locations around the facility as follows:

- Paper treater building;
- Board offcuts skip bins in various locations;
- Metal recycling skip bins at various locations;
- Small general waste bins throughout the facility; and
- Large general waste skip bin.

4.6 Waste Minimisation and Avoidance

The Development aims is to avoid and reduce waste wherever possible. Porta Products has implemented a waste minimisation program by:

- Waste monitoring and tracking to enable the Development to account for trends in waste generation and set targets for reduction where possible;
- Incorporating information on waste classification and disposal into personnel training and communication material;
- Provision and clear identification of separate waste stream disposal bins and/or locations; and
- Discussion of opportunities for waste minimisation during staff and contractor meetings.

4.7 Waste Receipt and Handling On-Site

As described in Section 2.4 of this Plan, EPL 3035 allows specified waste to be received at the premises and stipulates use of that waste at the facility.

Each waste identified as *General or Specific exempted waste* in Section 2.4 must be managed in accordance with the particular resource recovery exemption as issued by the NSW EPA.

5 Incidents and Complaints Management

5.1 Incidents

Any environmental incident relating to waste management will be managed in accordance with the procedures in EMS0001 Operational Environmental Management Plan (OEMP).

5.2 Complaints

Community complaints will be managed in accordance with the procedures in EMS0001 Operational Environmental Management Plan (OEMP).

5.3 Non-Compliances

In the event it is determined that a non-compliance with waste legislation has occurred, notification procedures will be as per EMS0001 Operational Environmental Management Plan (OEMP).

5.4 Contingency Planning

If any unclassified waste material is encountered, it is to be classified in accordance with the NSW EPA *Waste Classification Guideline* prior to disposal off site by a licenced waste contractor to a licenced waste facility.

Any emergency involving the generation of waste is to be managed in accordance with the Porta Products *Emergency Response Plan*.

6 Monitoring and Review

6.1 Inspections

The Yard Supervisor is responsible for managing waste on a daily basis. The Yard Supervisor undertakes daily inspections and arranges weekly disposal of waste to landfill, and other collections as required.

Regular inspection of waste storage facilities is also undertaken as part of routine environmental inspections.

6.2 Waste Tracking

Waste generated by the Development is weighed by either the licenced waste disposal contractor or receiving waste management facility. Oberon Council historically received waste based on a cubic metre volume however installed weighbridges in 2025 and now invoice in tonnage. Bathurst Regional Council Waste Management Centre records waste received in tonnage. The following details are recorded:

- Amount and classification of waste transported;
- Date transported;
- Truck registration; and
- Name and location of the receiving waste facility.

The Development undertakes a review of waste management data on an annual basis and reports the findings in the Annual Review report.

6.3 Documentation and Record Keeping

The Development retains all records of waste disposal for traceability, including:

- Waste receipts; and
- Waste Transfer Certificates.

Records relating to waste disposal are kept for a minimum of 4 years.

6.4 Reporting

Relevant information relating to waste management will be reported by the Development as follows:

- Annual Review. A copy of the Annual Review is sent to relevant stakeholders, including DPE, EPA and Oberon Council and is available on the Porta Products website.

6.5 Review and Auditing of this Plan

In accordance with Development Consent SSD 7016 Condition C10, this WMP will be reviewed and if necessary revised within 3 months of an:

- Approval of a modification;
- Submission of an incident report under Condition C13;
- Approval of an Annual Review under Condition C11; or
- Completion of an audit under Condition C15.

Revisions to the WMP will be submitted to the Secretary DPE for approval.

Construction Environmental Management Plan

Timber Processing Facility

124 Lowes Mount Road, Oberon NSW

Porta Products Pty Ltd

31 October 2025

Revision History

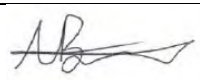
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1	27/04/17	C McCormack	Final Draft	V Bendeviski	
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3	29/10/18	Jacqueline Blomberg	Review post IEA of SSD 7016	V Bendeviski	
4	17/05/21	J Blomberg	Review and update as per SSD 7016 condition C10	V Bendeviski	
5	26/11/21	Andrew Brady	Review and update as per SSD 7016 condition C10	J Blomberg	
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7	25/08/2023	A Brady	Review and update as per SSD 7016 condition C10(c)	V Bendeviski	
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1 Introduction

1.1 Purpose of the CEMP

This Management Plan has been prepared for the Porta Products Pty Ltd (Formally Borg Manufacturing, Borg Panels, Australian Panels) Oberon site (and will be referred to herein as the 'Development')

This Construction Environmental Management Plan (CEMP) details the environmental management and control measures which are to be implemented for construction activities associated with installation of the particle board manufacturing facility, and alterations and additions to the existing medium density fibreboard facility (the Project), to ensure the works are managed so as to reduce adverse impacts on the environment.

The CEMP specifies actions, responsibilities, conformance requirements and mitigation activities to be followed during the construction phase of the Project.

The mitigations and measures detailed in this plan are required to achieve compliance with the requirements of Development Consent SSD 7016 and commitments contained in the Environmental Impact Statement (EIS) and Response to Submissions (RTS) Report.

Prior to the commencement of construction, this CEMP was approved by the Secretary of the Department of Planning and Environment on 2 June 2017.

This CEMP is a live document and will be reviewed and updated where necessary to reflect changes introduced by the Project team, site specific outcomes, non-conformances and recommendations arising out of inspections, meetings and audits

Though initially prepared to satisfy the requirements of Conditions C1 and C2 of Schedule 2 in Development Consent SSD 7016 for the Project, this CEMP has been reviewed and updated where necessary as per condition C10.

This CEMP should be read in conjunction with other Project construction and operational plans including:

- Construction Noise Management Plan;
- Construction Traffic Management Plan;
- Spring Fed Dam Reclamation Plan;
- Porta Products Operational Environmental Management Plan (OEMP);
- Porta Products Emergency Plan;
- Porta Products Work Health and Safety Management System;
- Fire Safety Study;
- Hazard and Operability Study;
- Final Hazard Analysis; and
- Construction Safety Study.

1.2 Objectives of the CEMP

The objectives for the Project CEMP are summarised in **Table 1**.

Table 1 – CEMP Objectives

Objectives	Targets	Execution
Compliance with Environmental Legislation	100% compliance with all legal requirements	Review of audit reports
Compliance with Development Consent Conditions	100% compliance with consent conditions	Review of audit reports
Avoidance of Environmental Harm	Compliance with CEMP and environmental procedures	- Installation and monitoring of environmental controls - Environmental reporting, auditing and recording - Awareness and education
Conformance with best practice environmental management procedures	- Conduct environmental site inductions - Achieve targets in plans and checklists - Undertake environmental inspections - Undertake audits as per audit program - Report and log all environmental incidents and non-conformances - Assign and complete corrective actions in designated timeframe	- Training of personnel in CEMP measures - Environmental monitoring and audits - Review of incidents and non-conformances register - Review of environmental reports
Maintain commitments to stakeholders and community	- Minimal complaints - Respond to all complaints within 48 hour period	Review of complaints register

1.3 Document Control

This CEMP will be issued to the Porta Products Project Manager and relevant extracts to other parties as controlled copies.

Revisions to this CEMP may be required during the Project to reflect changing circumstances. Revisions may result from:

- Management review;
- Audit (either internal or external);
- Complaints, incidents or non-conformance reports; and
- Changes in legislation.

1.4 Records

The Porta Products/Project Manager shall maintain environmental records as part of the Project records with the assistance of the Environmental Manager. The following records (**Table 2**) will be maintained during construction.

Table 2 – Environmental Records

Record	Type	Minimum length of time to keep record from completion of construction
Daily diaries	Hard copy	4 years
Inspections	Electronic copy	4 years
Waste dockets (if any)	Hard/Electronic copy	4 years
Monitoring results (including test results as required)	Electronic copy	4 years
Audit reports	Electronic copy	4 years
Incident reports	Electronic copy	4 years
Training records (e.g. Induction)	Electronic copy	4 years
Complaints records	Electronic copy	4 years
Monthly environmental management reports	Electronic copy	4 years
Materials tracking documentation (VENM, ENM, wastes listed in EPL3035)	Hard/Electronic copy	4 years

1.5 Corporate Safety, Health and Environment Policy

Porta Products is committed to the management of our business in an environmentally responsible manner, to care for the environment in which we live, work and to sustain its quality for the benefit of future generations.

We are committed to being a world-class leader in Safety, Health and Environmental Management.

Safety No job is so important and no task so urgent that we cannot take time to perform our work safely. The safety of people must come first.

Environment We will use resources efficiently, minimise waste and emissions, observe all relevant laws and respect the interests of the community.

Porta Products believes continuous development of our people and processes will ensure we are always using our finite resources in the most efficient way.

2 Compliance Requirements

2.1 Development Consent Conditions

The construction phase of the Development is subject to conditions contained in Development Consent SSD 7016 dated 29th May 2017 and the following modifications:

- MOD 1 – extension of mouldings warehouse, reorientation of materials handling building, layout changes to particleboard chipper/debarker building, extension of northern noise bund, reconfiguration of elements of the surface water management system, reclamation of the Spring Dam (approved 20th November 2018);

- MOD 2 – installation of an electricity generation gas turbine and ancillary equipment (approved 29th November 2019);
- MOD 3 – additional materials handling equipment, extension to northern warehouse, changes to the site surface water system and construction of further hardstand (approved 22nd May 2020); and
- MOD 4 – additions and alterations to the existing timber processing facility including reclamation of the remaining spring fed dam, relocation and expansion of the existing mechanics workshop and improvements to the site's water treatment plant (approved 20 May 2022).
- MOD 5 – Minor update to the approved mechanical workshop including additional workshop bays, additional first floor storage and minor updates to the office plus removal of the refuelling system and automated truck washing machine. The proposed development will also result in the increase in length of the stormwater management system to cover an additional 11m length of the mechanics workshop building. (approved 23 April 2024).

Consent condition B33A under MOD 1 required a Spring Fed Dam Reclamation Management Plan. This Management Plan was approved by DPIE on 12 July 2019. The works associated with this condition (i.e., part reclamation of the spring dam) was complete in 2019. Works to complete the reclamation of the spring dam was approved under modification 4 and new condition B33B was imposed, specifying an update to the Spring Fed Dam Reclamation Management Plan required under B33A to incorporate the remainder reclamation works. This Plan has been incorporated into this CEMP and is attached at Appendix G.

There were no new consent conditions for construction in MOD 2, MOD 3, MOD 4 or MOD 5.

The specific conditions relevant to the construction phase are detailed in Table 1 below. The full set of Development Consent conditions can be made available upon request.

Table 1 – Development Consent Conditions

No.	Requirement	Document Reference
	Construction Environmental Management Plan	
C1	The Applicant must prepare a Construction Environmental Management Plan (CEMP) to the satisfaction of the Secretary. The CEMP must:	This Plan
	a) be approved by the Secretary prior to the commencement of construction;	
	b) identify the statutory approvals that apply to the Project;	Section 2.3
	c) outline all environmental management practices and procedures to be followed during construction works associated with the Project;	Section 7
	d) describe all activities to be undertaken on the site during construction of the Project, including a clear indication of construction stages;	Section 4
	e) detail how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts;	Sections 7 & 8
	f) describe the roles and responsibilities for all relevant employees involved in construction works associated with the Project; and	Section 5
	g) include the management plans required under Condition C2 of this consent.	See below

C2	As part of the CEMP required under Condition C1 of this consent, the Applicant must include the following:	
	a) Traffic Management (Condition B34);	Section 7.8 Appendix D
	b) Dust Management (Condition B3);	Section 7.5
	c) Noise Management (Condition B15);	Section 7.4 Appendix C
	d) Mobile Wood Chipper Operation Management (Condition B24);	Section 7.11 Appendix F
	e) Erosion and Sediment Management (Condition B29);	Section 7.3
	f) Waste Management (Condition B50); and	Section 7.7
	g) Community Consultation and Complaints Handling (Condition B58).	Sections 2.5 & 11.4
	h) Spring Fed Dam Reclamation Plan (Condition B33A and B33B)	Section 7.12 Appendix G

2.2 Legislative Compliance

The environmental compliance requirements and legislative context of this Project are listed below and addressed in the Environmental Impact Statement for the Project. The primary statutory instruments applicable to this project include but are not limited to those listed in the following sub-sections.

2.2.1 Commonwealth Legislation

- *Environment Protection and Biodiversity Conservation Act 1999*

2.2.2 State Legislation

- *Environmental Planning and Assessment Act 1979*
- *Protection of the Environment Operations Act 1997*
- *Threatened Species Conservation Act 1995*
- *National Parks and Wildlife Act 1974*
- *Native Vegetation Act 2003*
- *Heritage Act 1977*

2.2.3 State Environmental Planning Policies

- State Environmental Planning Policy (State and Regional Development) 2011
- State Environmental Planning Policy 33 – Offensive and Hazardous Development
- State Environmental Planning Policy 55 – Remediation of Land

2.2.4 Regional Context

- Central West and Orana Regional Growth Plan

2.2.5 Local Planning Instruments and Controls

- Oberon Local Environmental Plan 2013
- Oberon Development Control Plan

2.3 Approvals, Licences and Permits

The following environmental approvals, licences or permits are associated with the Project:

- Environment Protection Licence 3035 (EPL 3035) issued under Section 55 of the *Protection of the Environment Operations Act 1997* applies to the premises for the scheduled activities chemical production and wood or timber milling or processing.
- In the event of an Aboriginal artefact or site being discovered during earthworks, excavation or disturbance, work in the immediate area must stop, and the Regional Operations Group of the OEH, Council and the Registered Aboriginal Parties are to be consulted. Under the *National Parks and Wildlife Act 1974*, a permit is required from the OEH for consent to disturb or destroy any Aboriginal artefact or site. An unexpected finds protocol for heritage items is included as **Appendix A**.
- If any archaeological relics are uncovered during the course of work, then all works shall cease immediately in that area and the OEH NSW Heritage Division contacted.

Depending on the possible significance of the relics, an archaeological assessment and an excavation permit under the *Heritage Act 1977* may be required before further works can continue in that area. An unexpected finds protocol for heritage items is included as **Appendix A**.

- Water Supply Works approval 80WA715797 issued under s87B of the Water Management Act 2000 for extraction of groundwater.
- Department of Planning, Industry and Environment Development Consent SSD 7016 and any subsequent modifications.

Note the above list is not necessarily comprehensive and Porta Products Construction shall ensure necessary approvals, licences and permits are obtained where applicable for all construction activities.

2.4 Consultation with Key Agencies

Consultation has been undertaken with key agencies throughout the design phase and environmental assessment of the Project, including:

- Department of Planning and Environment
- Roads and Maritime Services (RMS)
- Department of Premier and Cabinet
- Environmental Protection Authority
- Safework NSW
- Office of Water
- Oberon Shire Council
- Department of Primary Industries
- Office of Environment and Heritage
- NSW Fire Service

Issues raised by each of the above agencies are included in the EIS, Part F Section 9.

In addition, submissions were received following the exhibition of the EIS from OEH, NSW EPA, Oberon Shire Council, Safework NSW, RMS and Office of Water. Submissions were responded to in the *Response to Submissions Timber Processing Facility (Particle Board)* Reports dated 24 October 2016 and 6 December 2016.

2.5 Community Consultation

Condition B58 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

“B58. The Applicant must consult with the community as required under Conditions C1 and C4 for the Development, including consultation with the nearby sensitive receivers, relevant regulatory authorities, Registered Aboriginal Parties and other interested stakeholders.”

Close community liaison will be maintained to ensure local residents are kept up to date on the progress of the Project, and to provide an avenue for communication between the community and the Project team.

2.5.1 Community Consultative Committee

Porta Products has an established joint Community Consultative Committee (CCC) that meets nominally quarterly to discuss environmental and operational aspects of the Manufacturing site. This existing CCC will be utilised to discuss and address general construction impacts and mitigation measures. The CCC meeting will also provide a forum for feedback to Porta Products in relation to the environmental management of the Project.

2.5.2 Opportunities for Information Exchange

Porta Products has in place the following avenues to register inquiries and complaints related to construction and operational activities:

- A 24-hour free call community liaison line (1800 802 795)
- Postal address for written complaints (Porta Products, Private Mail Bag 1, Oberon NSW2787)
- Email address for electronic complaints (oberon_site@borgs.com.au)

The telephone number, postal and email address will be clearly displayed on a sign near the entrance to the construction site, in a position that is clearly visible to the public. This information will also be widely disseminated in the community and included on public information, which may include the website, local area advertisements, letterbox notifications and Project specific fact sheets.

3 Existing Environment

3.1 Existing Operations

Porta Products operates an existing reconstituted wood-based manufacturing facility in Oberon, NSW. This facility manufactures a range of Customwood, MDF and particleboard products including:

- Standard MDF;
- Moisture Resistant MDF;
- E0 (Low Formaldehyde Emitting) MDF;
- Ultraprime MDF Mouldings;
- Standard particleboard;
- Moisture resistance particleboard;
- Particleboard flooring products for structural applications;
- Decorative Laminated MDF and Particle Board; and

- Treated paper for the lamination of MDF and Particle Board.

The infrastructure includes:

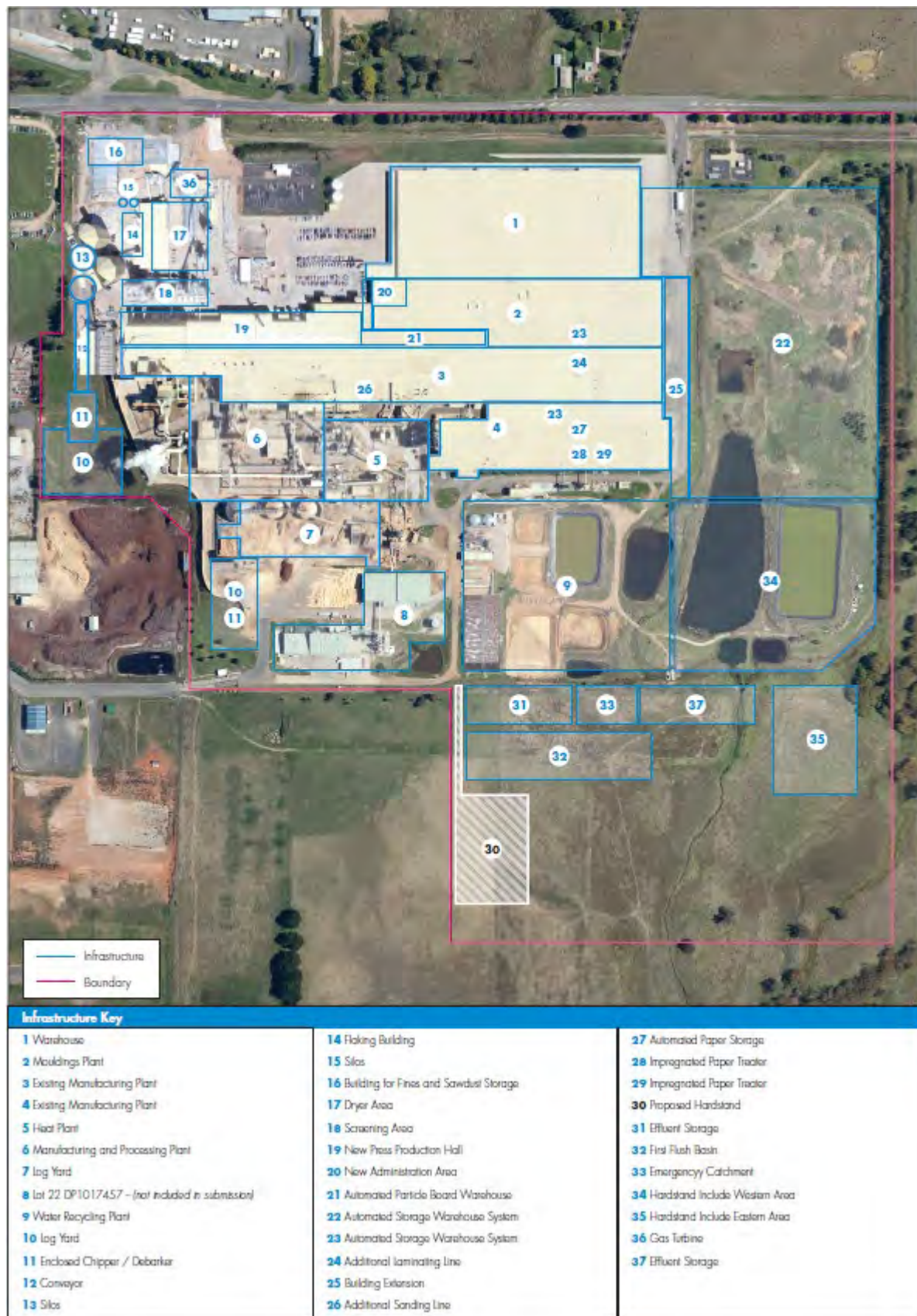
- A number of large industrial scale buildings which contain various processes involved with the manufacture, storage and dispatch of MDF, value add MDF products and particleboard products;
- Concrete hard stand areas;
- two-storey administration/amenities building with associated staff car parking;
- Various necessary items of infrastructure including venting, conveyors and the like;
- Other facilities/buildings associated with the use of the land (including maintenance areas, security entry/exit gates, weigh bridges and the like); and
- Fencing, landscaping, drainage and other site facilities.

The current maximum output of the site is 380,000m³ of MDF board and 500,000m³ of particleboard annually.

Figure 1 below displays the site, site boundary and site facilities both existing and proposed.

The site operates under Development Consent SSD 7016. In addition, Environment Protection Licence 3035 (EPL3035) applies to the site.

Figure 1 Porta Products Manufacturing Facility



4 Project Description

4.1 General Description of the Project

The Project is the expansion of the existing timber processing facility. The components of the expansion under the initial Development Consent SSD 7016 approval date 29th May 2017 are:

- Allow for the construction of a dedicated Particle Board Manufacturing Line to allow the Development to continue their growth and remain internationally competitive;
- Provide additional infrastructure within existing buildings to value add to existing product;
- Demolition of existing infrastructure to make way for new assets;
- Modernise the existing facility;
- Allow for expansion to Lot 1 and 2 DP 1085563 for the purposes of a wood flake preparation area;
- Construct a new automated storage warehouse part on Lot 24 DP 1148073 and part on Lot 26 DP 1200697;
- Construction of hardstand on Lot 24 DP 1148073;
- Allow for expansion to Lot 1 DP 1076346 for hardstand, water quality ponds and emergency catchment;
- Rationalise the current Conditions of Consent that apply to a number of different lots, all under fragmented ownership and operation;
- Allow for an increase in production by up to 500,000m³, with a commensurate increase in staff levels;
- Boundary adjustment of Lot 1 DP 1076346 to rectify the current split zoning, consolidating the IN1 zoned land into Lot 26, retaining all the RU1 zoned land under the current Lot and DP;
- Lot consolidation of all lots the subject of this application; and
- Surrender of the existing approval (DA 27/95) issued by the Department of Planning for the land identified as being the subject of this application.

Description of works under MOD 1 (approval date 20th November 2018) include:

- Extension of mouldings warehouse
- Reorientation of materials handling building
- Layout changes to particleboard chipper/debarker building
- Extension of northern noise bund
- Reconfiguration of elements of the surface water management system
- Reclamation of a portion of the Spring Dam

Description of works under MOD 2 (approval date 29th November 2019) include:

- Installation of an electricity generation gas turbine and ancillary equipment

Description of works under MOD 3 (approval date 22nd May 2020) include:

- Additional materials handling equipment
- Extension to northern warehouse
- Changes to the site surface water system
- Construction of further hardstand area

Description of works under MOD 4 (approval date 20 May 2022) include:

- Additions and alterations to the existing timber processing facility (multidaylight press)
- Reclamation of the remaining spring fed dam
- Relocation and expansion of the existing mechanic's workshop

Description of works under MOD 5 (approval date 23rd April 2024) include:

- Minor update to the approved mechanical workshop
- Additional workshop bays
- Additional first floor storage
- Minor updates to the office
- Removal of the refuelling system and automated truck washing machine
- Increase in length of the stormwater management system to cover an additional 11m length of the mechanics workshop building

4.2 Improvements to the site's water treatment plant Program of Construction Works

Construction works commenced in June 2017 under approved SSD 7016 dated 29th May 2017, and essentially followed the Stages as outlined below:

- Stage 1 – Demolition of office building and site works, construction of detention basin (required for erosion and sediment control for later stages) and hardstand areas. Within this stage the construction of the detention basin and drainage swales will be undertaken first in order to ensure that the appropriate erosion and sediment control measures can be implemented as support for following stages. Stage 1 is to commence upon approval and is estimated to take approximately 6 months.
- Stage 2 – construction of Particle Board Manufacturing Facility and installation of related plant and equipment, including modernisation of the existing plant. Stage 2 is to commence upon approval or slightly thereafter and is estimated to take up to 18- 24 months, dependent on equipment and labour availability.
- Stage 3 – alterations and additions to existing MDF site and construction of new automated storage warehouse. Stage 3 is to commence post completion of Stage 2 and is estimated that this will take up to 9 months.
- Stage 4 – debarker chipper building and chip preparation area. Stage 4 may commence approximately six (6) months after approval and is estimated to take up to 12 months to complete.

The activities included in the above four stages are complete.

The description of works outlined above in Section 4.1 for modifications 1, 2, 3 and 4 have commenced with works under MOD 1 complete. MOD 2 works have been completed including the commissioning of the gas turbine which was complete on the 28th of May 2021. Activities under MOD 3 are complete with works under MOD 4 and MOD 5 progressing.

4.3 Outline of Main Construction Activities

The key construction activities included:

- Excavation and construction of new first flush and emergency basin to the east of the site;
- Demolition of existing site infrastructure;
- Construction of new site access and hardstand;
- Installation of new services and support infrastructure;
- Construction of new industrial buildings to the south west and north west of the subject site to house new plant and equipment, as well as to provide storage;

- Installation of new plant and equipment in existing industrial buildings;
- Reclamation of a portion of the Spring Dam;
- Installation of gas turbine;
- Installation of additional material handling equipment;
- Extension to the northern warehouse;
- Layout changes to new builds;
- Construction of additional equipment to the new builds;
- Changes to the site surface water management system; and
- Construction of further hardstand

The new builds are generally as follows:

- Debarker and chipping plants were constructed to the south and east of the existing production building. The chippers have been contained in concrete and acoustic panel enclosures;
- A materials handling building has been constructed to the west of the production hall. The building is enclosed with concrete panelling to the north, south and west side with an opening on the eastern side to allow for material to be brought in using a frontend loader for processing;
- A flaker building was constructed to the west of the production hall. The building is fully enclosed with acoustic panelling;
- Production building which facilitates the board pressing process. The building is fully enclosed using sheet metal and concrete panelling; and
- Automated storage warehouse building located at the northern end of the site. The building is fully enclosed using sheet metal.
- An additional lined effluent storage dam for the water treatment plant
- Installation of an additional reverse osmosis filtered water plant including an enclosure
- Improvements to the MDF multidaylight press;

The above activities have been completed. The following activities have commenced:

- Increase the size of the hardstand at the north-eastern corner of the site to facilitate the relocation of the existing site mechanic's workshop;

4.4 Construction Site Facilities

Existing site facilities (offices, amenities, dry storage and any chemical storage) will be used where possible during construction activities. Where existing site facilities are insufficient, the following considerations will be made when selecting the location for the construction facilities:

- Within the footprint of the proposed Project;
- Away from natural surface drainage lines;
- Suitable vehicle access;
- Separate storage for fuels, chemicals and hazardous goods, inside bunded area(s);
- Minimise potential for work near dry vegetation which could cause fire; and
- If lighting is required for night-time security, lights will be installed to avoid nuisance to neighbours.

All site sheds and other facilities will present a neat appearance with safety signs erected as required. The construction areas will be regularly maintained and will be kept tidy and free of rubbish. Covered rubbish bins will be provided.

5 Structure and Responsibilities

The Project delivery team, as per the list presented below, shall manage the Project.

During the construction period, all personnel including the Project Manager, Environmental Manager, Safety Officer, Site Supervisor, Work Assistants, and engaged Contractors have general responsibilities in the development of a positive environmental management culture and for ensuring all activities are conducted in a manner that is consistent with the CEMP. Specific project responsibilities in relation to environmental management are shown below.

Porta Products Managing Director

The Porta Products Managing Director is responsible for:

- approving appointment of the Project Manager;
- periodic management review of the CEMP and its implementation; and
- investigating any serious incidents, complaints or non-conformances and ensuring necessary corrective action is implemented.

Porta Products Construction/Project Manager

The Porta Products Construction/Project Manager reports to the Porta Products Managing Director and is responsible for the day-to-day management of environmental performance on the project. The Project Manager is ultimately accountable for the implementation of the requirements contained within this CEMP. The Project Manager is responsible for:

- approving and implementing the CEMP;
- approving any revisions to the CEMP;
- instructing project personnel on how to comply with environmental policy and procedures;
- ensuring the Site Supervisor is aware of and complies with the environmental obligations as detailed within this CEMP;
- ensuring that employees, contractors and sub-contractors are aware of, and comply with, the conditions of consent and requirements of the CEMP relevant to their respective activities;
- tracking and compliance against the conditions of consent for the scope of works being performed;
- evaluation of how effectively environmental controls are performing;
- initiating remedial measures, as recommended by the Environmental Manager, when environmental deficiencies are observed or in response to environmental complaints;
- engaging Porta Products Environmental Manager and/or environmental consultants where required to provide support in relation to implementing the CEMP; and
- investigating any incidents or complaints and ensuring necessary corrective action is implemented (in consultation with Porta Products Managing Director for significant incidents / complaints).

Environment Manager

The Environmental Manager will assist the Project Manager in meeting environmental performance targets for the project. The Environmental Manager is responsible for:

- preparing and updating the CEMP;
- assisting the Project Manager in implementing the CEMP;
- assisting in training project personnel on how to comply with environmental policy and procedures;
- undertaking, and/or arranging suitably trained personnel, for periodic monitoring and inspection;

- regular site inspections and the active pursuit of opportunities to enhance environmental outcomes;
- spot checks and general environmental compliance observations;
- tracking and reporting environmental performance;
- monthly evaluation of how effectively environmental controls are performing;
- recommending remedial measures when environmental deficiencies are observed or in response to environmental complaints;
- maintaining environmental performance records;
- investigating any incidents or complaints and ensuring necessary corrective action is implemented (in consultation with Porta Products Managing Director and Project Manager for significant incidents / complaints).

Safety Officer

The Safety Officer will assist the Project Manager in meeting safety and environmental performance targets for the project. The Safety Officer is responsible for:

- advising on all issues related to work health and safety;
- inducting employees, contractors and sub-contractors to the Project;
- maintaining the SDS register;
- maintaining the hazardous substances register;
- hazardous materials clearance prior to demolition of buildings.

Site Supervisor

The Site Supervisor will report to the Project Manager and is responsible for:

- Managing employees / contractors and construction activities on a daily basis to ensure the appropriate environmental controls are implemented and maintained in accordance with the requirements of the CEMP;
- Ensuring all staff are inducted into the site and undertake daily toolbox talks;
- Undertake daily site inspections of environmental controls and maintain records of environmental actions;
- Reporting any environmental management concerns or incidents immediately to the Project Manager;
- Recommending improvements to the CEMP to the Project Manager; and
- Implementing any corrective actions issued as a result of any site inspections, audits or meetings.

Works Assistants and Contractors

The Work Assistants and Contractors will report to the Site Supervisor and are responsible for:

- Implementing the requirements of the CEMP as they conduct their works; and
- Reporting any environmental management concerns or incidents immediately to the Site Supervisor.

6 Environmental Risk Assessment

Environmental aspects and potential construction stage environmental impacts have been identified based on the Environmental Impact Statement and supporting studies, the Development Consent Conditions and Porta Products Construction general experience on construction projects as shown on **Table 5**.

The Risk Assessment Matrix in **Table 3** has been used to assess the unmitigated risk of each individual environmental aspect relevant to the construction of the Project.

The level of risk assessed from the matrix informs the level of mitigations required for that environmental aspect. These risks are to be mitigated through the application of measures identified in this CEMP.

Table 3 – Risk Assessment Matrix

	Probability					
Consequence		A	B	C	D	E
	1	H	H	H	H	M
	2	H	H	H	M	M
	3	H	H	M	M	L
	4	M	M	M	L	L
	5	M	L	L	L	L

Table 4 provides explanatory notes on the selection of the consequence and probability for each environmental aspect.

Table 4 – Risk Matrix Explanation

Probability			Consequence		
A	Almost Certain	Expected to occur, quite common	1	Major	Major environmental harm. e.g. major pollution incident causing significant damage or potential to health or the environment.
B	Likely	Will probably occur, has happened	2	Significant	- Long term or serious environmental damage - Numerous complaints received - Potential for prosecution
C	Possible	Might occur at some time	3	Moderate	- Moderate environmental impact - Will cause complaints - Possible fine
D	Unlikely	Could occur at some time although unlikely	4	Minor	- Minimal environmental harm - Potential for complaints - Fine unlikely
E	Rare	Might occur at some time in exceptional circumstances	5	Insignificant	- Little or no environmental harm - Little potential for fines or complaints

Table 5 – Risk Matrix Explanation

Aspect	Potential Construction Stage Impact	Probability	Consequence	Risk Ranking	Controls
Site security and access	Entry of unauthorised persons or vehicles onto the site	D	4	Low	Refer Section 7.1
Sedimentation and erosion control and construction stormwater management	Erosion of sediments from stockpiles or exposed areas	B	3	High	Refer Section 7.3
	Discharge of sediment laden stormwater leading to potential impacts to downstream environment	B	3	High	
Unsuitable fill material used in the partial reclamation of the Spring Fed Dam	Localised groundwater mounding negatively effecting on water quality	C	3	Medium	Refer Section 7.12
Noise	Excessive noise generated by construction activities, and/or truck and vehicle movements	C	3	Medium	Refer Section 7.4
	Excessive noise generated from simultaneous operation of mobile wood chippers and rock/ concrete breaking activities	C	3	Medium	Refer Section 7.11
Air quality and dust	Generation of dust from soil stockpiles and other exposed areas	B	3	High	Refer Section 7.5
	Generation of dust during handling of soil	B	3	High	
	Generation of dust from vehicle movements	C	4	Medium	
	Unacceptable emissions from vehicles / plant	D	4	Low	
Hazardous materials	Leaking or spillage of fuels or chemicals stored or used on the Site leading to potential impacts to soil, groundwater or surface water	C	1	High	Refer Section 7.6
	Explosion of fuels or chemicals stored or used on the Site	E	1	Medium	
Waste management	Inappropriate disposal of waste	D	2	Medium	Refer Section 7.7
	Not minimising generation of waste	D	4	Low	

Aspect	Potential Construction Stage Impact	Probability	Consequence	Risk Ranking	Controls
Traffic management	Traffic causing congestion or damage on local roadways	D	3	Medium	Refer Section 7.8
	Traffic incident / accident	D	2	Medium	
Materials management	Unintended mixing of materials (clean vs yet to be validated etc)	C	2	High	Refer Section 7.9
Contamination management	Covered in remedial action plan for fuel depot	B	2	High	Refer Section 7.9
Heritage	Disturbance of aboriginal artefacts or skeletal remains during excavation activities	E	2	Medium	Refer Section 7.10

7 Environmental Management and Controls

This section identifies the management measures which will be implemented during the construction of the Project to mitigate against the environmental aspects identified in **Table 5**. The Project Manager will ensure that personnel responsible for undertaking the works are aware of their roles and responsibilities as detailed in this CEMP.

The following sub-plans, which are attached as appendices to this CEMP, have been prepared:

- Construction Traffic Management Sub-Plan;
- Construction Noise Management Sub-Plan;
- Mobile Wood Chipper Operation Management Plan; and
- Spring Fed Dam Reclamation Plan.

Where a sub-plan has been prepared for a particular aspect, the environmental management activities and management measures to be implemented are detailed in the sub-plan. It is intended that this CEMP be a live document and that it be regularly reviewed for effectiveness, with procedures to be modified where considered beneficial. Procedures for review are discussed in **Section 10.1**.

7.1 Site Security and Access

7.1.1 Objectives

- Prevent entrance of unauthorised people to site during construction activities.

7.1.2 Management Measures

- 1) The site currently operates 24 hours per day 7 days per week and is security fenced. Access is provided via Gate 4, 5 and Gate 6, which are security controlled. Visitors and contractors to the site are required to complete a site induction prior to entry. This aspect will be managed by the Safety Officer.
- 2) As the site will continue to be operational during the construction phase, existing security measures will be maintained during the construction period.
- 3) All construction site personnel must undergo site contractor induction, including the requirements of this CEMP. For deliveries, drivers are not required to undergo an induction as they are not working on site and do not get out of their vehicle. Visitors are similarly not required to undergo an induction though are to be accompanied by a fully inducted person at all times while on site.
- 4) If deemed necessary, the separation between the Woodchem operations and the rest of the site will be reinforced through additional fencing to clearly delineate the different operations and ensure that access can be achieved without any intrusion into areas of construction or storage.
- 5) Lighting is currently provided on site to allow the full 24-hour operation of the site in line with the current consent. Lighting is designed to project downwards to minimise impacts on the amenity of the area and to increase overall site safety.

7.1.3 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
Visual check that perimeter fence in tact	Monthly	Site Supervisor / Environmental Manager	Monthly Inspection Checklist
All contractors complete site induction	Daily	Project Manager / Safety Officer	WHSMS Audits

7.2 Hours of Operation

7.2.1 Objectives

- Prevent outside of hours noise and traffic impacts resulting from construction activities.

7.2.2 Applicable Conditions of Approval

Conditions B13 and B14 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

“B13. The Applicant must comply with the hours detailed in Table 1, unless otherwise agreed in writing by the Secretary.

Table 1: Hours of Work

Activity	Day	Time
Earthworks and Construction	Monday – Friday	7 am to 7 pm
	Saturday	8 am to 1 pm
Operation	Monday – Sunday	24 hours

B14. Works outside of the hours identified in Condition B13 may be undertaken in the following circumstances:

- works that are inaudible at the nearest sensitive receivers;*
- works agreed to in writing by the Secretary;*
- for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or*
- where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.”*

7.2.3 Management Measures

- Construction work shall be conducted within the approved hours as per the above table in **Section 7.2.2**.
- Construction work may be also undertaken outside these hours if work meets the circumstances in Condition B14.
- Quarterly construction noise monitoring events performed by an independent third party suitably qualified consultant

7.2.4 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
No construction related complaints	24 hour complaints hotline	Project Manager / Environmental Manager	Complaints Register

7.3 Soil and Water Management

7.3.1 Objectives

- The objective of the Soil and Water Management Plan (SWMP) is to set out strategies to control soil erosion and sediment generation close to the source and thereby minimise the potential for construction activities to adversely affect water quality leaving the site.
- Comply with the requirements of the latest version of the *Managing Urban Stormwater: Soils and Construction Guideline* (Landcom, 2004).

7.3.2 Applicable Conditions of Approval

Condition B29 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

“B29. Prior to the commencement of construction, the Applicant must install and maintain suitable erosion and sediment control measures on-site, in accordance with the relevant requirements in the latest version of the Managing Urban Stormwater: Soils and Construction Guideline and the Erosion and Sediment Control Plan included in the CEMP required by Condition C1.”

7.3.3 Responsible Officer(s)

The Environmental Manager will be assigned to the Project delivery team. The Environmental Manager will supervise soil and water management controls during construction and respond to environmental incidents.

Porta Products construction staff have been trained in sediment and erosion control and know how to implement these control measures.

7.3.4 Design Criteria

Assumed Soil Hydrological Group and Type of Basin

It has been assumed that soils on the site are part of hydrological group C, fine clays with mildly dispersible particles that will result in runoff from most but not every rainfall event, i.e. the site soils possess some infiltration capacity. A type D basin would be required for these soil conditions. Some flocculation may be required to hasten settlement.

Rainfall Data

Analysis of several local rainfall gauges indicate an annual average rainfall depth for calculation purposes of 800mm/year. This is based on rainfall at the Jenolan Caves Road gauge, as well as the Spring Bank gauge close to the site. Spring Bank has an annual average rainfall of 840mm and Jenolan Caves Road 745mm/year.

Design Rainfall Depth

A design rainfall depth of the 5 day 75th percentile event has been chosen in accordance with the Blue Book noting that Kings Stockyard Creek is not a sensitive waterway. For example, a SEPP14 Wetland would be considered sensitive. A 5 day, 75th percentile rainfall

depth for Oberon is 22.50mm.

7.3.5 Mitigation Measures

Localised Sediment Controls

Localised sediment controls shall be used to minimise and prevent sediment laden runoff from entering any waterway. Localised controls would include the use of:

- Sediment fences;
- Geofabric wrapped hay bales within swales;
- Rock check dams; and
- Filter sausages around the opening of all impacted stormwater pits.

Typical details for each of these controls is shown in **Appendix B**.

Figure 2 shows local sediment controls to be installed across the Project site. Where identified necessary, additional sediment controls will be installed by construction staff.

Work Site Access Controls

A minimum of 15m of railway ballast is to be placed at the point of access and egress to all areas with exposed earth works to facilitate the removal of mud from vehicles. The ballast shall be washed down weekly when the site is dry or when clogged.

Stockpiles

Material stockpiles are to be limited to 3m in height. Stockpiles shall be surrounded by a sediment fence where deemed necessary and directed by the Environmental Manager and be located away from waterways. If stockpiles are to be kept for more than 3 months it is suggested that stockpiles are sprayed with a bitumen emulsion or similar to prevent erosion and promote grass growth where applicable.

Main Sediment Basin Sizing

Parameter	Value Assigned	Comment
Soil Hydrologic Group	C	Appendix F, moderate to high runoff potential, moderately fine clay loam etc.
Mean annual rainfall (mm)	800	744.8mm/year at Jenolan Caves rd station and 840.5 at Springbank Station, estimated interpolated value of 800mm/yr assumed
$R_{75\%}(5day)$	22.50	
C_v	0.35	Appendix F Table F2, depends on soil hydraulic group and design rainfall depth
A	13.77 Ha	Total area draining to southern swale and therefore directed into main sed basin. Only 6.63Ha disturbed.
Settling Zone	1084.4m ³	$S_z = A \times C_v \times R$
Storage Zone	542.2m ³	50% of Settling zone.
Total required Volume	1626.6m ³	Only approx 20% of the total proposed water quality pond will be required during construction as a sediment basin.
Total required volume if soil type D	2,323 m ³	

Notes:

LOT BOUNDARIES FOR CONSOLIDATION ARE NOT SHOWN ON THIS PLAN (FOR CLARITY) - SEE PLAN 2021/01 CONSOLIDATION PLAN FOR DETAIL

REFER TO KEY PLAN FOR REFERENCES TO DOCUMENTATION OF NEW WORKS

TOTAL SITE AREA: 604,000m²

NO.	DESCRIPTION	DATE	BY	CHKD
1	Construction Certificate	14-03-2021	DC	DC
2	Construction Certificate	14-03-2021	DC	DC
3	Construction Certificate	14-03-2021	DC	DC
4	Construction Certificate	14-03-2021	DC	DC
5	Construction Certificate	14-03-2021	DC	DC
6	Construction Certificate	14-03-2021	DC	DC
7	Construction Certificate	14-03-2021	DC	DC
8	Construction Certificate	14-03-2021	DC	DC
9	Construction Certificate	14-03-2021	DC	DC
10	Construction Certificate	14-03-2021	DC	DC
11	Construction Certificate	14-03-2021	DC	DC
12	Construction Certificate	14-03-2021	DC	DC
13	Construction Certificate	14-03-2021	DC	DC
14	Construction Certificate	14-03-2021	DC	DC
15	Construction Certificate	14-03-2021	DC	DC
16	Construction Certificate	14-03-2021	DC	DC
17	Construction Certificate	14-03-2021	DC	DC
18	Construction Certificate	14-03-2021	DC	DC
19	Construction Certificate	14-03-2021	DC	DC
20	Construction Certificate	14-03-2021	DC	DC
21	Construction Certificate	14-03-2021	DC	DC
22	Construction Certificate	14-03-2021	DC	DC
23	Construction Certificate	14-03-2021	DC	DC
24	Construction Certificate	14-03-2021	DC	DC
25	Construction Certificate	14-03-2021	DC	DC
26	Construction Certificate	14-03-2021	DC	DC
27	Construction Certificate	14-03-2021	DC	DC
28	Construction Certificate	14-03-2021	DC	DC
29	Construction Certificate	14-03-2021	DC	DC
30	Construction Certificate	14-03-2021	DC	DC
31	Construction Certificate	14-03-2021	DC	DC
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57	Construction Certificate	14-03-2021	DC	DC
58	Construction Certificate	14-03-2021	DC	DC
59	Construction Certificate	14-03-2021	DC	DC
60	Construction Certificate	14-03-2021	DC	DC
61	Construction Certificate	14-03-2021	DC	DC
62	Construction Certificate	14-03-2021	DC	DC
63	Construction Certificate			

Sediment Control Basin

In accordance with the Water Cycle Impact Assessment (Sustainability Workshop, May 2016) and the Blue Book, a basin is required when the disturbed area exceeds 2,500 square meters, Porta Products did operate a construction phase sediment basin shown on Figure 2 as First Flush Basin. This basin is now effectively an operational basin which continues to manage runoff from construction activities.

The basin was designed in accordance with the Blue Book as detailed below.

Minimum Sediment Basin Volumes Required by Blue Book		
Parameter	Value Adopted	Comment or Source of Data
Soil Hydrologic Group	C	Appendix F, moderate to high runoff potential, moderately fine clay loam etc
Mean Annual Rainfall (mm)	800	744.8mm/year at Jenolan Caves Rd station and 840.5mm at Springbank Station, estimated interpolated value of 800mm/yr assumed
R/(75%, 5day)	22.5	
C/v	0.35	Appendix F Table F2, depending on soil hydraulic group and design rainfall depth
A	13.77 Ha	Total area draining to southern swale and therefore directed into main sediment basin. Only 6.63Ha disturbed
Settling Zone	1084.4m ³	$S_z = A \times C_v \times R$
Storage Zone	542.2m ³	50% of Settling Zone
Total Required Volume	1626.6m ³	9,000 m ³ of volume are proposed
Total Required Volume if Soil Type D	2,323 m ³	As above

Assuming a worst-case scenario with type D soils, the sediment basin volume would need to be 2,323 m³ to comply with the Blue Book. Porta Products constructed a 9,000 m³ basin which substantially exceeded the minimum volumes required under the Blue Book.

Any additional temporary construction sediment basins that are deemed necessary for future modification construction works will be designed in accordance with the Blue Book where appropriate and managed under this Plan including but not limited to the following:

- Installation and maintenance of sediment and erosion controls where required
- Placing topsoil in swales to promote grass growth
- Vegetate or spray grass swales and line base with turf

Sediment Basin Controlled Discharge

Controlled discharge from the First Flush Basin may occur from time to time to ensure the Basin is kept at a level to ensure enough capacity is available to capture a rain event and minimise the potential for an exceedance of water quality discharge limits.

Prior to a controlled discharge, the Environmental Manager or delegate must obtain a water sample and send to a NATA accredited laboratory for analysis on a 24 hour turnaround time. Once results show that the water quality meets the criteria for the concentration limits for pollutants listed in condition L2.5 of EPL 3035, the Environmental Manager can proceed with a controlled discharge.

Where appropriate, the Basin will be treated with a coagulant/flocculant and retested before a controlled discharge event.

Only employees who have completed the Safe Operating Procedure Controlled Discharge of First Flush Basin may undertake this activity.

7.3.7 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
Ensure localised erosion and sediment control devices are installed	Prior to commencement of earthworks	Site Supervisor / Environmental Manager	Initial inspection
Work access controls installed at the point of access and egress to all areas with exposed earth works	Prior to commencement of earthworks	Site Supervisor / Environmental Manager	Initial inspection
Topsoil stockpiles to be managed in accordance with the SWMP	Monthly	Site Supervisor / Environmental Manager	Monthly inspection
Keep records of sediment basin operation	As required	Site Supervisor	Sediment basin operation SOP
Erosion and sediment control devices inspected post-rainfall	During and/or immediately following rainfall event	Site Supervisor / Environmental Manager	Post-rainfall inspection
Erosion and sediment control devices inspected routinely	Monthly	Environmental Manager	Monthly Inspection Checklist
Follow-up inspection after sediment removal from devices	Within 1 week of sediment removal requirement identified	Environmental Manager	Post maintenance inspection

7.4 Noise Management

Refer to the Construction Noise Management Sub-Plan in **Appendix C** for objectives, management measures and monitoring requirements related to construction noise impacts.

7.5 Air Quality (Dust) Management

7.5.1 Objectives

- Minimise air pollution from construction activities.
- Minimise the exposure of areas for wind erosion.

- Control, to the maximum extent practicable, the generation of dust on site and migration of dust offsite.
- Undertake activities with the objective of preventing visible dust emissions from the site.

7.5.2 Applicable Conditions of Approval

Condition B2 and B3 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

- “B2. The Applicant must implement all reasonable and feasible measures to minimise dust generated by the Development.*
- B3. During construction, the Applicant must ensure that:*
- (a) exposed surfaces and stockpiles are suppressed by regular watering;*
 - (b) all trucks entering or leaving the site with loads have their loads covered;*
 - (c) trucks associated with the Development do not track dirt onto the public road network;*
 - (d) public roads used by these trucks are kept clean; and*
 - (e) land stabilisation works are carried out progressively on site to minimise exposed surfaces.”*

7.5.3 Management Measures

- 1) Toolbox meetings will be held to ensure all personnel on site are made aware that if they observe excessive dust in the air leaving the site, they are to immediately inform the Site Supervisor. In such cases, the Site Supervisor will investigate the source of the dust and ensure that proper controls are in place. If those controls prove ineffective that activity will cease until methods to successfully control the dust are employed.
- 2) The following measures will be implemented to manage dust generation from stockpiles of soil:
 - Minimise the period and volume of stockpiling where practicable;
 - Where any long-term stockpiling is required, stabilise the stockpiles; and
 - Use of water sprays on any un-stabilised stockpiles.
- 3) Evaluate prevailing weather conditions - excavation/fill works to cease or be modified if dust generation observed.
- 4) Stabilise exposed areas as soon as practicable.
- 5) Spray water on unsealed areas.
- 6) Minimise the height from which dust-generating material is dropped.
- 7) Minimise the surface area of a work zone.
- 8) Construction plant and equipment are to be maintained and serviced regularly.
- 9) Efficient use of plant and equipment, e.g. turning off idling plant and equipment.
- 10) Covering of truck loads before leaving the site.
- 11) Remove dirt and debris from the tyres and underside of trucks prior to leaving the site.
- 12) Daily visual inspections by the Site Supervisor of the immediate surrounding area to ensure no materials have been lost from vehicles entering or leaving the site, and to assess general dust generation.
- 13) Visual inspection of plant on a daily basis by the Site Supervisor for excessive exhaust emissions. Defective plant will be stood down until repaired.
- 14) Offensive odours are not expected to be generated from the site. If this does occur work involved is to stop temporarily, the source of odour investigated, and solutions

actioned so that offensive odour production does not continue.

7.5.4 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
Visual inspection of site for excessive dust generation, weather conditions, truck load covers, condition of stabilised site work access controls	Daily	Site Supervisor	Daily Diaries
Visual inspection of stockpile stability	Monthly	Site Supervisor / Environmental Manager	Monthly Inspection
Toolbox talks to include reminders about reporting excessive dust from either internal or external sources, covering loads, efficient use of plant and equipment	Weekly	Site Supervisor	Toolbox Record

7.6 Storage of Hazardous Materials

7.6.1 Objectives

- Prevent leaks or spills of hazardous materials
- Prevent pollution arising from leakage or spillage of hazardous materials

7.6.2 Applicable Conditions of Approval

Condition B44 and B45 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

“B44. The quantities of dangerous goods stored and handled at the site must be below the threshold quantities listed in the Department’s Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 at all times.

B45. The Applicant must store all chemicals, fuels and oils used on-site in appropriately bunded areas in accordance with the requirements of all relevant Australian Standards, and/or the EPA’s Storing and Handling of Liquids: Environmental Protection – Participants Handbook.”

7.6.3 Management Measures

- 1) Manufacturer’s instructions / Safety Data Sheets (SDS) for substances and materials shall be obtained and kept in a file on site, which will be readily available to site construction personnel when needed.
- 2) Substance risk assessments to be completed for all hazardous materials brought onto site for construction
- 3) Minimise fuel and chemical storage on site.

- 4) Bunds around any chemical, fuel or oil storage (to contain 110% of largest tank / container, or 25% of the total volume of all drums, whichever is greater). Any bunds shall be designed and installed in accordance with the requirements of all relevant Australian Standards, and/or EPA's *Storage and Handling of Liquids: Environmental Protection – Participant's Manual*.
- 5) Spill kits to be kept onsite in marked containers (containing absorbent materials – granular vermiculite, mats, and pillows) and personnel should be trained in spill response.
- 6) Vehicles transporting materials on-site will be operated in a manner to prevent any loss of materials during loading, transport and unloading.

7.6.4 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
Visual inspection of chemical and fuel storage areas and bunding	Monthly	Site Supervisor / Environmental Manager	Monthly Inspection Checklist
Maintain SDS register	As required	Site Supervisor / Safety Officer	SDS register
Visual inspection of spill kits contents	Monthly	Site Supervisor / Environmental Manager	Monthly Inspection Checklist
Maintain Hazardous Substances Register	As required	Site Supervisor / Safety Officer	Hazardous Substances Register

7.7 Construction and Demolition Waste Management Plan

7.7.1 Objectives

- To develop a plan for management of wastes on the site in accordance with the *NSW Waste Avoidance and Resource Recovery Strategy 2014-21* (WARR). This involves managing the waste in accordance with the waste hierarchy established under the *Waste Avoidance and Resource Recovery Act 2001*. The waste hierarchy is shown below in **Figure 3**.

The NSW WARR aims to maximise conservation of natural resources and to minimise environmental harm from waste management and disposal of solid waste.

The specific objectives of the waste management plan include:

- Reduce waste generation associated with site construction activities;
- Where waste generation is unavoidable, promote reuse and recycling;
- Where on-site reuse or recycling is not practicable, appropriate off-site recycling or disposal facilities should be employed, ensuring the responsible treatment of all waste streams; and
- Ensuring all waste disposal is undertaken lawfully.

Contingency procedures will also need to be in place to deal with any waste generated as a result of hazardous material spills (**Section 7.6**).

Figure 3 – The Waste Hierarchy

7.7.2 Applicable Conditions of Approval

Condition B50 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

- “B50. Prior to the commencement of construction of the Project, the Applicant must prepare a Construction and Demolition Waste Management Plan for the Project to the satisfaction of the Secretary. The plan must form part of the CEMP required by Condition C1 and must:*
- (a) detail the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations; and*
 - (b) be implemented for the duration of construction works.*

7.7.3 Management Measures

Table 6 details the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations.

Two Site Environmental Plans have been developed showing stockpile material type and location on site, and waste storage areas including waste type. These Plans will be separate Plans to this CEMP and the Waste Management Plan due to their dynamic nature. The *Site Environment Plan – Waste Storage Areas* and the *Site Environment Plan – Stockpile Map* will be communicated to the workforce via Toolbox talks and displayed in prominent areas at the site. As each Plan is updated as site conditions change, they will be recommunicated to the workforce in the same manner described.

Table 6: Waste types, disposal methods and disposal locations

Construction activity	Waste type	Waste classification	Likely quantity	Disposal methods	Waste disposal location
Clearing and grubbing	Green waste – vegetation	General solid waste (non-putrescible)	20 Cubic metres (m ³)	Re-use on-site as mulch bunds for erosion and sediment controls, landscaping and boosting topsoil organic matter content	On-site
Demolition	Timber	General solid waste (non-putrescible)	5 Tonne (t)	Recycle/reuse of material on-site or send offsite to recycling facility	On-site OR Oberon Council Waste Depot
	Metal – pipes, sheets, reo, fencing	General solid waste (non-putrescible)	20 t	Recycle/reuse of material on-site or send offsite to recycling facility	On-site OR Oberon Council Waste Depot
	Concrete, bitumen, bricks and tiles	General solid waste (non-putrescible)	120 t	General demolition waste expected to be disposed of, unless a reuse option is identified	On-site OR Oberon Council Waste Depot
	Asbestos	Special waste	To be confirmed if encountered	Assessed by a licensed assessor. Managed and disposed of by licenced sub-contractor.	Oberon Council Waste Depot following Council approval
	Cabling and lighting	General solid waste (non-putrescible)	5 t	Where possible send offsite to a recycling facility. Fluorescent light globes and tubes recycled at Oberon Council waste depot.	Oberon Council Waste Depot

Construction activity	Waste type	Waste classification	Likely quantity	Disposal methods	Waste disposal location
	Redundant utility services	General solid waste (non-putrescible)	2 t	Copper wires and pipes send off-site to recycling facility. Separately stockpiled at various locations onsite before being sent offsite to a licensed waste facility.	Oberon Council Waste Depot
	Plastics – PVC pipes, sheeting	General solid waste (non-putrescible)	2 t	Recycle/reuse of material onsite or send offsite to recycling facility.	On-site OR Oberon Council Waste Depot
Excavation and earthworks	Topsoil	General solid waste (non-putrescible)	20 t	Stockpiled and reused on-site	On-site
	Subsoils – soils and clay materials	General solid waste (non-putrescible)	20 t	Reuse onsite for pond linings (clay), batters or landscaping (soils)	On-site
	Potentially contaminated soils	Classified based on soil tests and in accordance with Waste Classification Guidelines (DECCW 2009)	To be confirmed if encountered	Unless soil can be appropriately treated and validated, it will be disposed of in accordance with a Contaminated Land Management Plan	Landfarm on-site or Oberon Council Waste Depot following Council approval

Construction activity	Waste type	Waste classification	Likely quantity	Disposal methods	Waste disposal location
General construction	General waste and recyclables – paper, glass, plastics, silt fences, aluminium, cans, etc	General solid waste (non-putrescible)	20 t	Recyclables placed in recycling bins and removed offsite to recycling facility (metals, glass, aluminium cans, plastics, batteries, paper products). General waste taken to a licensed waste facility.	Oberon Council Waste Depot
	Excess construction materials – asphalt, concrete, metal, steel, timber, temporary fencing, timber from formworks, guard rails etc.	General solid waste (non-putrescible)	Limited	Reused on-site. Re-processed (concrete, asphalt) for use as road base. Re-processed Urban Wood Residue (UWR) on-site for Particle board production or Removed off-site to a recycling facility or to a licensed waste facility.	On-site OR Oberon Council Waste Depot
	Sediment/sludge from sediment basin desilting	General solid waste (non-putrescible)	15 t	Collected and reused on-site as general fill material or incorporated within landscaping / topsoil material where practical	On-site

Construction activity	Waste type	Waste classification	Likely quantity	Disposal methods	Waste disposal location
	Storm water site run-off captured in sediment basins	Liquid waste	To be confirmed, rainfall dependent	Water captured in sediment basins pumped to water treatment plant for treatment and reuse on-site. Any water discharged offsite will be in accordance with EPL 3035.	On-site
	Waste water from contaminated runoff	Liquid waste	To be confirmed	Water captured in dirty water system and pumped to water treatment plant for treatment and reuse onsite.	On-site
	Packaging – pallets, crates, cartons, plastics and wrapping materials	General solid waste (non-putrescible)	100 t	Return to material supplier, Re-processed Urban Wood Residue (UWR) on-site for Particle board production or send off-site for recycling	Return to supplier, on-site recycling OR Oberon Council Waste Depot

Construction activity	Waste type	Waste classification	Likely quantity	Disposal methods	Waste disposal location
	Empty Containers used for pesticides, herbicides, fuel, lubricants, paints and other hazardous chemicals.	Hazardous waste	2 t	Stored in appropriate locked and bunded areas until disposal at licensed waste facility. Steel drums will be recycled where practical if a reliable drum reconditioning service is available. Chemical drums that have been triple rinsed will be disposed of by Drum-muster collection at Oberon Council Waste Depot.	Drum reconditioning service OR Oberon Council Waste Depot

Construction vehicles will be serviced by the existing workshop, and as such materials associated with mechanical servicing and repairs will be managed and disposed of through the existing site waste management system.

As for the workshop, existing office and bathroom facilities will be utilised by construction personnel, and wastes will be managed and disposed of through the existing site waste management system. An exception may be the use of portable toilets where construction activities are located away from existing facilities. These portable toilets will be serviced by the hire company on a contractual basis.

7.7.5 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
Visual inspection of surface, loads, bins and portable toilets	Monthly	Site Supervisor / Environmental Manager	Monthly Inspection Checklist
Records kept for all waste removed from site	As required	Site Supervisor	Waste Disposal Records

7.8 Traffic Management

Refer to the Construction Traffic Management Sub-Plan in **Appendix D** for objectives, management measures and monitoring requirements related to construction traffic management.

7.9 Contamination Management / Remediation

7.9.1 Objectives

- Avoid and minimise the environmental and human health risks arising from the disturbance of contaminated land if encountered during construction of the project.
- No degradation to the receiving environment as a result of disturbance of contaminated land (if encountered).
- No contamination of soil, air or water as a result of spillages or other impacts arising from construction activities.
- No importation of potentially contaminated soils to site.

7.9.2 Applicable Conditions of Approval

Conditions B28 and B53 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

“B28. The Applicant must:

- (a) ensure that only VENM, or ENM, or other material approved in writing by the EPA is used as fill on the site;*
- (b) keep accurate records of the volume and type of fill to be used; and*
- (c) make these records available to the Secretary upon request.*

B53. Prior to the commencement of construction of the Project, the Applicant must prepare a site validation report for Lot 1 DP 1085563, which demonstrates the site is suitable for its intended use(s). A copy of the site validation report must be provided to the Secretary and Council.

7.9.3 Management Measures

- 1) Removal of fuel tanks from the fuel depot on Lot 1 DP 1085563 has already been undertaken. Envirowest Consulting was engaged to undertake a contamination investigation and validation of the Lot, outside the scope of this CEMP. The validation report concluded that the area is suitable for ongoing industrial land use as defined in the UPSS Regulation 2008 and NEPC 1999 (Validation Investigation Report, 20 June 2017).
- 2) All buildings and immediate surrounds will be checked against the site hazardous materials register, i.e. for asbestos materials, prior to demolition. Any hazardous

materials identified in these areas would need to be removed, in accordance with relevant legislative requirements, from the site and disposed of at an EPA licenced facility.

- 3) The site Pollution Incident Response Management Plan (PIRMP) would be enacted in the event of a major fuel or chemical spill. Minor spills will be contained and cleaned up in accordance with the SDS, using available spill kits.
- 4) If potentially contaminated material is encountered the Unexpected Contaminated Land Finds Protocol (**Appendix E**) will be followed. Works in the vicinity will be stopped or modified and will not recommence until the material has been analysed and management measures developed.
- 5) All potentially affected spoil will be stockpiled on a bunded, impermeable surface.
- 6) If soils are to be disposed off-site, then testing would be undertaken to assess the appropriate waste classification of the soils according to the EPA guidelines.
- 7) All imported VENM, or ENM, shall be classified based on soil tests and in accordance with Waste Classification Guidelines (DECCW 2009). For material to be considered VENM, it must meet the requirements of the Protection of the Environment Operations Act 1997. Where an excavated material cannot be classified as VENM, it may be eligible for reuse under the ENM order and exemption.
- 8) Other material imported to site for reuse must meet the requirements of the relevant NSW EPA Resource Recovery Exemption.

7.9.4 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
Hazardous materials clearance prior to demolition of buildings	Prior to demolition	Project Manager / Site Supervisor / Safety Officer	Clearance Report
Visual inspection of excavations to detect presence of contamination	Daily	Site Supervisor	Daily Diary
Record of unexpected, contaminated land finds	As required	Site Supervisor / Environmental Manager	Incident Report
Record of all environmental incidents/spills	As required	Site Supervisor / Environmental Manager	Incident Report
Record of imported or exported materials from site	As required	Site Supervisor / Environmental Manager	Waste dockets / VENM/ENM certificates

7.10 Aboriginal and European Heritage

7.10.1 Objectives

- Implement contingency measures to appropriately manage Aboriginal artefacts, skeletal material or historic relics in the unexpected event that they be encountered during site earthworks. The Heritage Assessment undertaken as part of the EIS concluded that the proposed development is unlikely to encounter Aboriginal objects or historic relics.

7.10.2 Applicable Conditions of Approval

Conditions B54 and B55 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

“B54. If Aboriginal objects are uncovered during earthworks, excavation or disturbance, work in the immediate area must stop and the Regional Operations Group of the OEH and the Registered Aboriginal Parties are to be consulted.

B55. If any archaeological relics are uncovered during the course of the work, then all works must cease immediately in that area and the OEH NSW Heritage Division contacted. Depending on the possible significance of the relics, an archaeological assessment and an excavation permit under the Heritage Act 1977 may be required before further works can continue in that area.”

7.10.3 Management Measures

1) All personnel working on the Site are to be made aware of the:

- NPW Act 1974 and the fact that it is an offence to move, disturb or destroy Aboriginal objects without the written permission of the Director General of the OEH.
- Heritage Act 1977 and the fact that it may be an offence to move, disturb or destroy archaeological relics without consultation with the OEH NSW Heritage Division.

2) Should Aboriginal objects be identified during the course of site works, all work must cease immediately and the Unexpected Finds Protocol – Aboriginal objects/features encountered during construction activities (**Appendix A**) enacted.

3) Should archaeological relics be identified during the course of site works, all work must cease immediately and the Unexpected Finds Protocol – Discovery of historic relics during construction activities (**Appendix A**) enacted.

4) Should suspected skeletal material be identified during construction, all works must cease immediately and the Unexpected Finds Protocol – Discovery of human remains during construction activities (**Appendix A**) enacted.

7.10.4 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
Site Induction	Once, before work on site Commences	Site Supervisor / Safety Officer	Induction Register
Toolbox talks reminding personnel of processes regarding heritage items	Weekly	Site Supervisor	Toolbox Record

7.11 Mobile Wood Chippers

Refer to the Mobile Wood Chipper Operation Management Plan in **Appendix F** for objectives, and management and mitigation measures related to mobile wood chipper operation.

7.12 Spring Fed Dam Reclamation

Refer to the Spring Fed Dam Reclamation Plan in **Appendix G** for objectives and

management and mitigation measures related to the remainder reclamation works associated with the spring fed dam.

8 Contingencies

Table 7 summarises issues that can reasonably be expected to be encountered during construction and how these may be resolved.

Table 7 – Contingencies

Potential Anticipated Issue	Corrective Action
Excessive dust generation	Temporarily stop work activity that is causing dust generation. Review dust controls currently in place and assess need for additional measures. Such measures may include additional use of water sprays, cease dust-generating activity until better dust control can be achieved, temporarily cover dust producing areas, etc.
Excessive noise generation	Identify source, review noise attenuation equipment and as necessary provide silencers on noisy equipment or remove equipment from site.
Erosion and sediment control ineffective	Stop work, review appropriateness of environmental controls. Consider alternative measures. Consult Drainage Engineer if repeated/major issues occurring.
Release of fuel/oil from machinery	Remove source, use spill kit to remove oil, make any repairs as required.
Chemical spill/exposure	Stop work, refer to Section 11.1 for response procedure.
Inspections reveal damage to Environmental Controls	Repair as required and assess cause of damage. Eliminate cause where possible, otherwise strengthen control to limit impact of cause.

9 Training and Implementation

9.1 Site Induction

All employees, sub-consultants and sub-contractors must undertake a site induction prior to their commencement of work on site. The induction of employees and contractors is the Site Supervisor's responsibility.

The site induction will inform employees of their environmental responsibilities on site. It details the most significant environmental aspects and introduces this CEMP as the management tool used to address the controls and mitigation measures required to minimise environmental impact of the Project.

The induction will cover the following:

- Contents of the CEMP;
- Critical environmental protection procedures including spill responses, emergency procedures, hazardous substances and dangerous goods handling, and monitoring of

- imported fill quality;
- The location of the CEMP during works; and
- General obligations.

All visitors to the site must be accompanied by a fully inducted member of staff at all times.

Site personnel shall be encouraged to be proactive and report any instances of environmental control measures not operating properly.

9.2 Toolbox Talks

Toolbox talks will be conducted daily by the Site Supervisor for employees and sub-contractors. Toolbox talks will be undertaken in response to evolving issues on the ground, particularly in response to significant environmental and safety incidents and non-conformance issues.

Toolbox talks will also include any change to site conditions, new plant or equipment that may impact surrounding sensitive receivers. For example, where existing facility panels are removed for construction activities, this work is to be discussed with the facility's Operations Managers to ensure the operational activities of the site do not negatively impact the surrounding residents.

9.3 Environmental Awareness Training

The CEMP requires all employees receive an appropriate level of environmental awareness training. This training is designed to suit the various needs and levels. Training covers environmental legislation, due diligence, performance criteria, reporting requirements and emergency response procedures. All employees are made aware of the Company's Environmental Policy and the need to meet its obligations.

Environmental awareness training is undertaken as part of staff, employees and contractor's induction training.

10 Compliance

10.1 Environmental Audit Program

The CEMP implementation system will be audited internally to ensure effective compliance with environmental controls, reporting and incident management requirements.

The internal audits will occur within three months of commencement of construction activities on site and every twelve months minimum or as required thereafter. This activity will be planned, programmed and fully documented. The audits should be undertaken by the Porta Products Environmental Manager and include:

- A site visit;
- Review of monthly and other checklists;
- Compliance with the CEMP;
- Update on project status;
- Report on any on-site environmental incidents occurring since the last audit;
- Checks for any repeat issues; and
- Any new initiatives in environmental management.

The audits will be documented in a summary report.

Audit reports findings will be provided to the Project Manager for determining corrective action and reply. On a twelve monthly basis the Porta Products Construction Project Manager and/or Environmental Manager shall undertake a management review of the CEMP.

10.2 Environmental Monitoring

Monitoring that is required during the construction phase of the Project is defined in **Section 7** of this CEMP.

Any measuring equipment used for monitoring shall be regularly serviced and calibrated.

10.3 Environmental Inspections

In addition to formal auditing and monitoring identified in this CEMP, the following inspections will also be undertaken:

- On a daily basis, site supervisory staff will inspect the site and any issues arising will be noted in the daily diaries and communicated to the Project Manager. The inspections will be conducted visually prior to commencement of each day's work and where appropriate during the working day. A final daily inspection will also be undertaken at the end of the workday to ensure that systems and structures are in place.
- A monthly site inspection will be conducted by the Environmental Manager. Checklists will be used to record and report on activities for compliance with this CEMP and specific issues presenting significant environmental risks will be addressed, such as noisy works, sediment basin management, etc. An example checklist is shown in **Appendix H**. Checklists may be edited to reflect changing site conditions.

Where necessary, any damage or reduced capacity of environmental control measures will be corrected. If required, environmental control measures may be upgraded.

11 Incident Management and Complaints

11.1 Environmental Incidents

Condition C12 and C13 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

"C12. The Applicant must notify the Secretary and any other relevant agencies of any incident or potential incident with actual or potential significant off-site impacts on people or the biophysical environment associated with the Development immediately after the Applicant becomes aware of the incident."

C13. Within seven days of the date of this incident, the Proponent must provide the Secretary and any relevant agencies with a detailed report on the incident."

An environmental incident is an unplanned event which occurs on-site and has the potential to result in adverse environmental impacts either on-site or in the surrounding area. Environmental incidents include spills, uncontrolled discharges or emissions, unintended damage to native vegetation, or injury to wildlife.

Depending on the nature of the incident and the risk posed to site personnel, all practical steps will be taken to minimise the risk of environmental damage as soon as possible after the event.

In the case of an environmental incident, actions to be taken are:

- Notify the Site Supervisor immediately;
- Immediately cease work in that area and remove people from the incident zone;
- Activate the site Pollution Incident Response Management Plan (PIRMP) if appropriate;
- Notify emergency services as/if required;
- Where safe to do so, attempt to contain the hazard and prevent it from spreading;
- If the incident is a spill:
 - o Use silt fences, bunding or interception pits;
 - o Use absorbent materials stored on site to clean up spill;
 - o Contain contaminated soil/absorbent material waste in appropriate containers, and dispose of contaminated soil/absorbent material to an appropriately licensed off-site disposal facility;
- Notify any relevant agencies when an incident causes or threatens material harm to the environment and /or an exceedance or limit of the performance criteria in the approval and /or when legislation requires;
- The Site Supervisor is to notify the Environmental Manager and Project Manager of any environmental incident as soon as practicable;
- Temporarily repair or isolate the failed plant or equipment component;
- Determine actions to rectify the incident in consultation with the Environmental Manager;
- Sample the impacted site media be it soil and/or surface water; and
- Implement any longer term remedial measures that may be required.

In accordance with Condition C12 and C13 of Schedule 2 in Development Consent SSD7016, the Porta Products Environmental Manager shall notify the Secretary DPE and any other relevant agencies, including the EPA, of any incident associated with the Project as soon as practicable after becoming aware of the incident. Within seven days of the date of the incident, the Proponent shall provide the Secretary DPE and any relevant agencies with a detailed report on the incident.

The Environmental Manager will be responsible for notifying NSW EPA of the pollution incident. Information to be provided under section 150 of the POEO Act includes:

- Time, date, nature, duration and location of the incident;
- Location of the place where pollution is occurring or is likely to occur;
- Nature, the estimated quantity or volume and concentration of any pollutants involved;
- Circumstances in which the incident occurred (including the cause of the incident, if known); and
- Action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution.

The Environmental Manager is to collect and document (to the extent practicable) the above information. For example, this would include taking photographs, collecting surface water samples of any unplanned water discharges both from the source of the pollution and upstream and downstream in the receiving waterway (for analysis and comparison).

Any environmental incidents, spills, uncontrolled discharges or emissions, unintended damage to native vegetation, etc, and the corrective actions undertaken, shall be recorded in DataStation, Porta Products incident management system.

In accordance with Condition C10 of Schedule 2 in Development Consent SSD 7016, within three months of the submission of an incident report under Condition C12 Porta Products Construction shall review, and if necessary revise the CEMP to the satisfaction of the Secretary DPE.

11.3 Emergency Contacts

Emergency contact details are listed in the Porta Products – Oberon Emergency Response Plan, which includes the Pollution Incident Response Management Plan (PIRMP).

11.4 Complaints Handling

The Environmental Manager is to be notified of any received complaints. The Environmental Manager is to follow the Porta Products complaints handling procedure (**Section 11.4.1**) and notify the Project Manager as soon as practicable. The Project Manager will notify the Porta Products Managing Director, as appropriate.

11.4.1 Inquiry and Complaints Handling Process

Porta Products community and stakeholder management system includes procedures for recording, investigating, tracking and handling of all inquiries and complaints.

Once Porta Products has received verbal or written inquiries and/or complaints via telephone, email or post, the Environmental Manager or their nominated delegate will:

- undertake an immediate investigation into the nature/cause of the inquiry and/or complaint;
- make initial contact with the community or stakeholder representative within 48 hours to clarify the reason for the inquiry and/or complaint and to notify of the investigation process including an appropriate re-notification time;
- record the enquiry and/or complaint on the Community Complaints register. This register includes the following details:
 - Complaint date and time;
 - Site;
 - Title;
 - Category;
 - Description;
 - Caller details;
 - Action;
 - Status;
 - Follow-up;
 - Complaint validity; and
 - Attachments.
- further investigate the inquiry and/or complaint and provide the community or stakeholder representative with an explanation of the cause and details of any actions taken to mitigate its effect.

It should be noted that if the inquiry and/or complaint is classified as an incident of significance under the site Emergency Response Plan (ERP), the Environmental Manager must follow the

incident reporting process in that document and ensure appropriate resolution and sign-off.

Records of complaints will be maintained in the complaints register database for at least four years after the complaint was made.

12 Non-Conformance

12.1 Non-Conformance and Corrective Action Report

All non-conformances noted in the Site Inspections, Audits, Incident Reports, or reported to the Project Manager by staff or other parties/authorities will be investigated and recorded in a Non-Conformance and Corrective Action Report which will be provided to the Project Manager on a monthly basis. Details of the non-conformance, including any immediate corrective actions undertaken, are to be recorded by the Environmental Manager.

It is the responsibility of the Site Supervisor to immediately initiate corrective actions, if required. The Non-Conformance and Corrective Action Report must include details of the corrective action proposed and an appropriate close out date. Corrective Actions will include containment measures, clean-up and restoration of the affected area and of any deficient operational controls or monitoring controls. On completion, the Environmental Manager will re-inspect the outcomes to ensure that they are acceptable before signing, dating and filing the Non-conformance Report.

The occurrence of such an event will be brought to the attention of personnel responsible, and environmental controls will be updated to prevent a reoccurrence.

12.2 Environmental Incidents Register

Environmental incidents are recorded in DataStation, Porta Products incident management system. Each incident report will detail the issue, the corrective and preventative actions proposed, and the responsibilities and timing for completion of the actions. The report will include any comments and the completion date of corrective actions.

The Environmental Manager shall review the Environmental Incidents Register monthly to ensure actions are completed and that controls are performing effectively. The Environmental Manager shall also review the CEMP to determine if the above situations require project scope changes or if the incident identifies opportunities for improvement in mitigations or work practices.

Appendices

Appendix A - Unexpected Finds Protocol Heritage Items

Unexpected Finds Protocol – Aboriginal objects/features encountered during construction activities

Stop all work in the immediate area of the item and notify the Project Manager.
Establish a 'no-go zone' around the item. Use high visibility fencing, where practical.
Inform all site personnel about the no-go zone. No further interference, including works, ground disturbance, touching or moving the item must occur within the no-go zone.
Project Manager MUST IMMEDIATELY NOTIFY the Registered Aboriginal Parties and suitably qualified archaeologist.
Representatives of the Registered Aboriginal Parties, and the suitably qualified archaeologist must determine the extent, nature and significance of the Aboriginal object(s).
Notify OEH and submit a site card.
Project Manager, the Registered Aboriginal Parties, the suitably qualified archaeologist and OEH determine if avoidance of further impact is possible for objects of high archaeological or Aboriginal significance. If not of high significance or if avoidance is not feasible develop an appropriate salvage methodology.

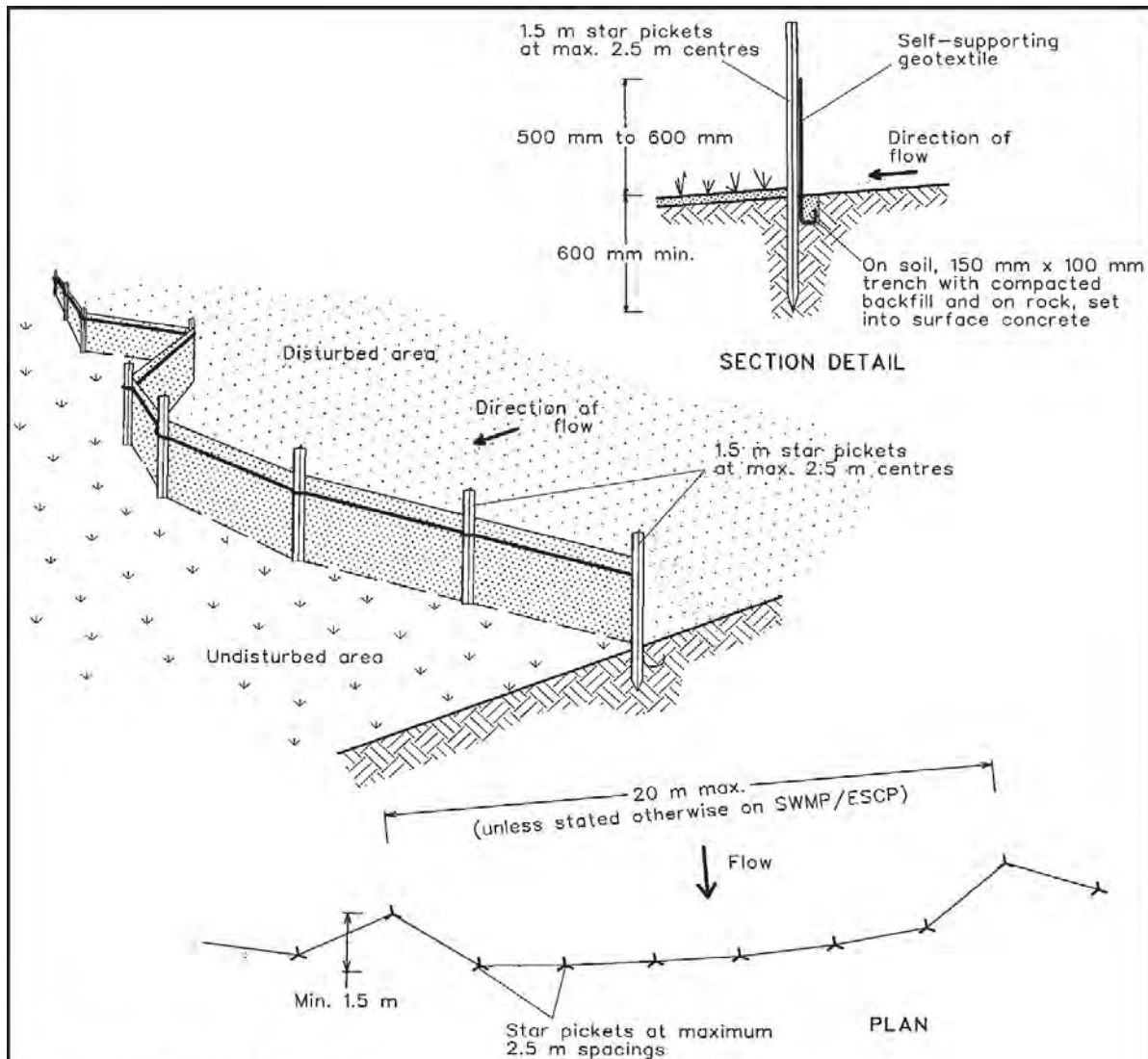
Unexpected Finds Protocol – Discovery of human remains during construction activities

When suspected human remains are exposed, all work is to cease immediately in the near vicinity of the find location.
Notify the Project Manager immediately.
Project Manager must notify the NSW Police Department, OEH on the Environment line 131 555, the registered Aboriginal Parties and a suitably qualified archaeologist.
OEH will provide details on the current processes involved in best dealing with archaeological skeletal remains (both Aboriginal & historic).
Under the instructions of the Police, an area of 50 m radius is to be cordoned off by temporary fencing around the exposed suspected human remains site - work can continue outside of this area as long as there is no risk of interference to the human remains or the assessment of human remains.
If the remains are determined to be Aboriginal remains, then under the advice of OEH, consult with the Registered Aboriginal Parties.
Do not recommence work at the location until all legal requirements and the reasonable requirements of OEH and the Registered Aboriginal Parties have been adequately addressed.

Unexpected Finds Protocol – Discovery of historic relics during construction activities

Stop all work in the immediate area of the item and notify the Project Manager.
Establish a 'no-go zone' around the item. Use high visibility fencing, where practical.
Inform all site personnel about the no-go zone. No further interference, including works, ground disturbance, touching or moving the item must occur within the no-go zone.
Project Manager must notify a suitably qualified heritage consultant.
Suitably qualified heritage consultant to assess objects and recommend mitigation measures and salvage options if necessary.
Investigate, record or salvage in accordance with recommendations of the suitably qualified heritage consultant.
Project Manager to ensure implementation of heritage mitigation measures are documented.
Proceed with construction works.

Appendix B – ESC Standard Drawings

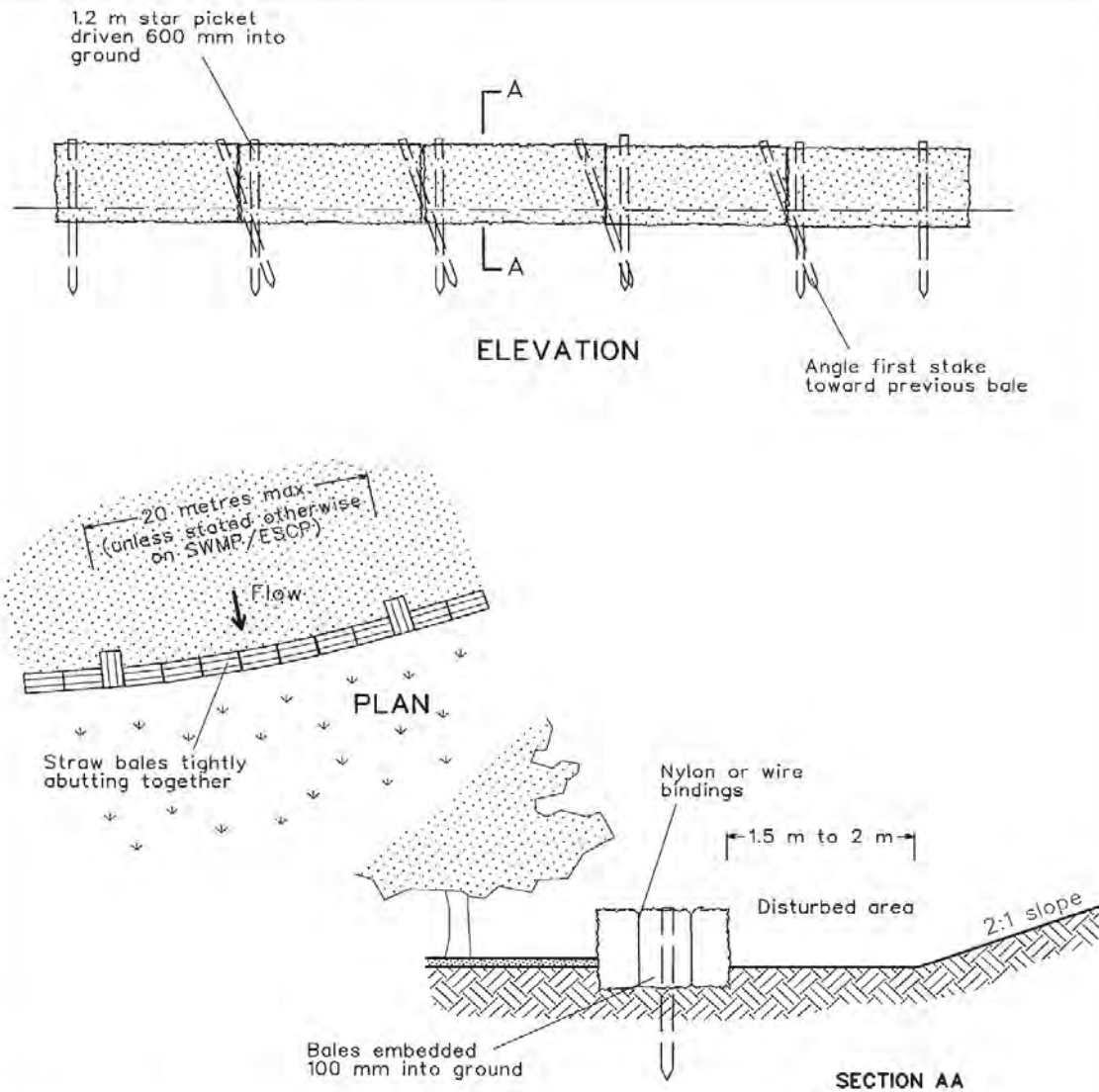


Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

SEDIMENT FENCE

SD 6-8

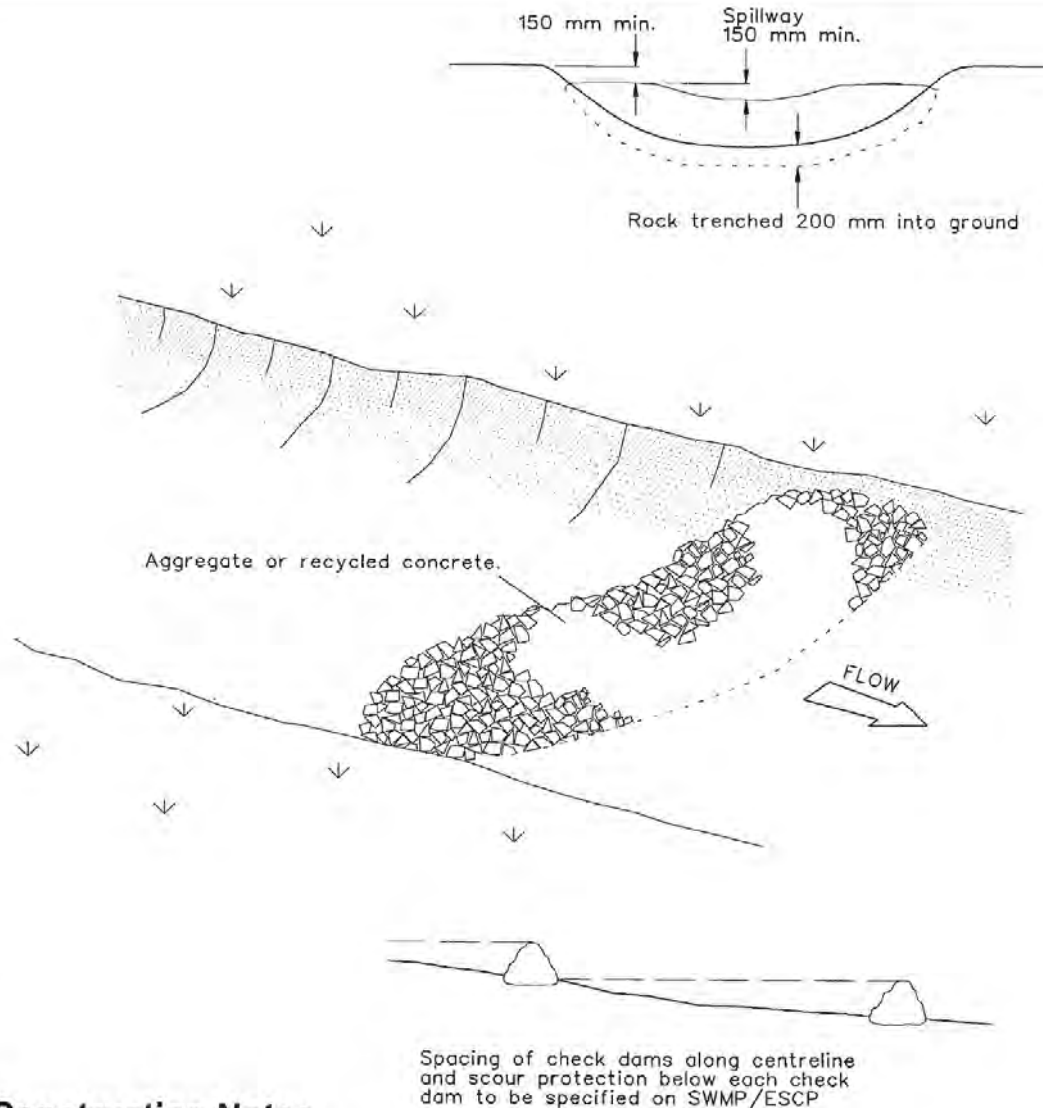


Construction Notes

1. Construct the straw bale filter as close as possible to being parallel to the contours of the site.
2. Place bales lengthwise in a row with ends tightly abutting. Use straw to fill any gaps between bales. Straws are to be placed parallel to ground.
3. Ensure that the maximum height of the filter is one bale.
4. Embed each bale in the ground 75 mm to 100 mm and anchor with two 1.2 metre star pickets or stakes. Angle the first star picket or stake in each bale towards the previously laid bale. Drive them 600 mm into the ground and, if possible, flush with the top of the bales. Where star pickets are used and they protrude above the bales, ensure they are fitted with safety caps.
5. Where a straw bale filter is constructed downslope from a disturbed batter, ensure the bales are placed 1 to 2 metres downslope from the toe.
6. Establish a maintenance program that ensures the integrity of the bales is retained - they could require replacement each two to four months.

STRAW BALE FILTER

SD 6-7

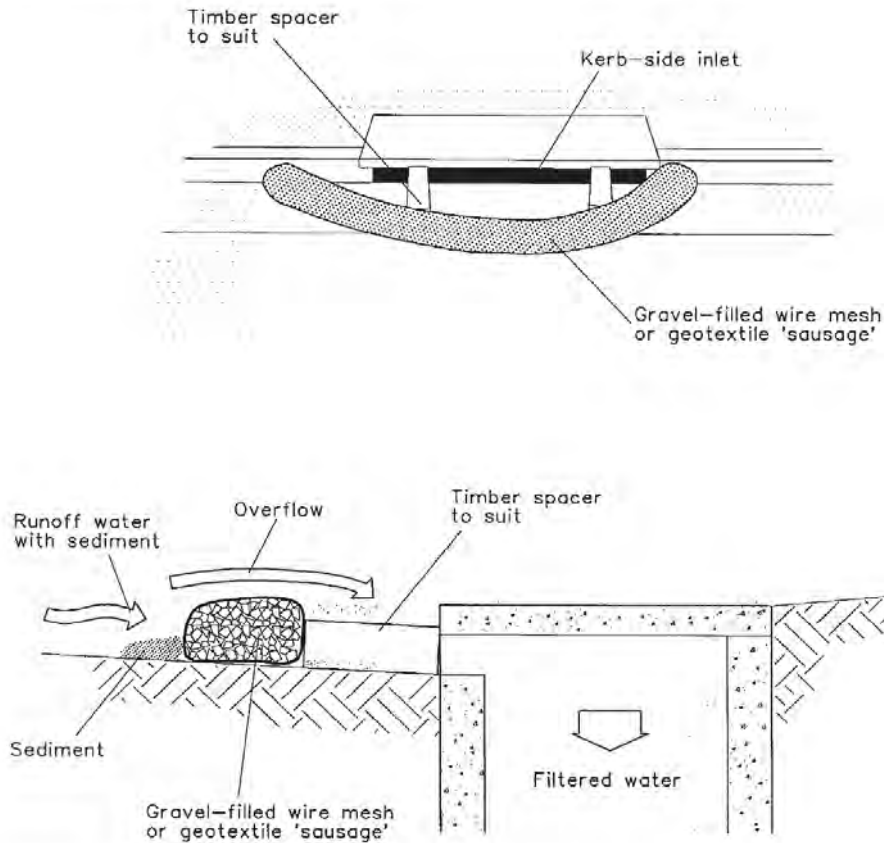


Construction Notes

1. Check dams can be built with various materials, including rocks, logs, sandbags and straw bales. The maintenance program should ensure their integrity is retained, especially where constructed with straw bales. In the case of bales, this might require their replacement each two to four months.
2. Trench the check dam 200 mm into the ground across its whole width. Where rock is used, fill the trenches to at least 100 mm above the ground surface to reduce the risk of undercutting.
3. Normally, their maximum height should not exceed 600 mm above the gully floor. The centre should act as a spillway, being at least 150 mm lower than the outer edges.
4. Space the dams so the toe of the upstream dam is level with the spillway of the next downstream dam.

ROCK CHECK DAM

SD 5-4



NOTE: This practice only to be used where specified in an approved SWMP/ESCP.

Construction Notes

1. Install filters to kerb inlets only at sag points.
2. Fabricate a sleeve made from geotextile or wire mesh longer than the length of the inlet pit and fill it with 25 mm to 50 mm gravel.
3. Form an elliptical cross-section about 150 mm high x 400 mm wide.
4. Place the filter at the opening leaving at least a 100-mm space between it and the kerb inlet. Maintain the opening with spacer blocks.
5. Form a seal with the kerb to prevent sediment bypassing the filter.
6. Sandbags filled with gravel can substitute for the mesh or geotextile providing they are placed so that they firmly abut each other and sediment-laden waters cannot pass between.

MESH AND GRAVEL INLET FILTER

SD 6-11

Appendix C – Construction Noise Management Plan

Construction Noise Management Plan

Timber Processing Facility – Particle Board

124 Lowes Mount Road, Oberon NSW

Porta Products Pty Ltd

15 August 2025

Revision History

Rev No.	Revision Date	Author	Details	Reviewed / Authorised	
				Name	Signature
0	04/04/17	Carly McCormack	Draft	Jeremy Welbourne Victor Bendevski	
1	20/04/17	C McCormack	Final Draft	J Welbourne V Bendevski	
2	01/06/17	C McCormack	Final	V Bendevski	
3	19/05/21	Jacqueline Blomberg	Review and update as per SSD 7016 condition C10, for submission to DPIE	V Bendevski	
4	26/11/21	Andrew Brady	Review and update as per SSD 7016 condition C10(d), for submission to DPIE	J Blomberg	
5	25/08/22	A Brady	Review and update as per SSD 7016 condition C10, for submission to DPIE. Name change and inclusion of MOD4	J Blomberg	
6	08/08/23	A Brady	Review and update as per SSD 7016 condition C10(c)	V Bendevski	
7	5/09/24	A Brady	Review and update as per SSD 7016 condition C10, Name change and inclusion of MOD5	A Brady	
8	14/08/25	A Brady	Review and update as per SSD 7016 condition C10, Name change	A Brady	

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Definitions and Abbreviations

Abbreviation	Description
ABL	Assessment background level (ABL), the 10th percentile background noise level for a single period (day, evening or night) of a 24 hour monitoring period
Ambient Noise	The all-encompassing noise associated within a given environment at a given time, usually composed of sound from all sources near and far
Background Noise	Background noise is the term used to describe the underlying level of noise present in the ambient noise, measured in the absence of the noise under investigation, when extraneous noise is removed
CEMP	Construction Environmental Management Plan
Day	The period from 7:00am to 6:00pm on Monday to Saturday, and 8:00am to 6:00pm on Sundays and Public Holidays
dB(A)	Noise level measurement units are decibels (dB). The “A” weighting scale is used to describe human response to noise
DP&E	NSW Department of Planning and Environment
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence issued by the EPA under the POEO Act
Evening	The period from 6:00pm to 10:00pm
Incident	A set of circumstances causing or threatening material harm to the environment, and/or exceedance of the limits of performance criteria in Development Consent SSD 7016
L _{Aeq} (15 min)	The average noise energy during a 15 minute period
Night	The period from 10:00pm to 7:00am on Monday to Saturday, and 10:00pm to 8:00am on Sundays and Public Holidays
RBL	Rating background level (RBL), the background noise level for a period (day, evening or night) determined from ABL data
Sound Level Meter (SLM)	An instrument consisting of a microphone, amplifier and indicating device, having a declared performance and designed to measure sound pressure levels

1 Introduction

1.1 Background

This Management Plan has been prepared for the Porta Products Pty Ltd (Formally Borg Manufacturing, Borg Panels, Australian Panels) Oberon site (and will be referred to herein as the '**Development**')

The development operates as an existing Medium Density Fibre (MDF) and particleboard production facility in Oberon, NSW, manufacturing a range of Customwood MDF products and particleboard products including:

- Standard MDF;
- Moisture Resistant MDF;
- E0 (Low Formaldehyde Emitting) MDF;
- Ultraprime MDF Mouldings;
- Standard particleboard;
- Moisture resistance particleboard;
- Particleboard flooring products for structural applications;
- Decorative Laminated MDF and particleboard; and
- Treated paper for the lamination of MDF and particleboard.

On 29 May 2017 Development Consent (SSD 7016) was granted by the Minister for Planning to construct a particleboard manufacturing facility, modify the existing MDF Board manufacturing facility and undertake general site works (the Project) at the existing Development facility located on 124 Lowes Mount Road, Oberon.

The main components of the Project are:

- Construction of a dedicated particleboard manufacturing line;
- Provide additional infrastructure within existing buildings;
- Modernise the existing facility;
- Construct a new automated storage warehouse; and
- Construction of hardstand, water quality ponds and emergency catchment.

Since that date, the Minister for Planning has approved four modifications (MOD) to SSD 7016:

- MOD 1 – extension of mouldings warehouse, reorientation of materials handling building, layout changes to particleboard chipper/debarker building, extension of northern noise bund, reconfiguration of elements of the surface water management system, reclamation of the Spring Dam (approved 20th November 2018).
- MOD 2 – installation of an electricity generation gas turbine and ancillary equipment (approved 29th November 2019).
- MOD 3 – additional materials handling equipment, extension to northern warehouse, changes to the site surface water system and construction of further hardstand (approved 22nd May 2020).
- MOD 4 – Additions and alterations to the existing timber processing facility including reclamation of the remaining spring fed dam, relocation and expansion of the existing mechanic's workshop and improvements to the site's water treatment plant (approved 20 May 2022).
- MOD 5 – Minor update to the approved mechanical workshop including additional

workshop bays, additional first floor storage and minor updates to the office plus removal of the refuelling system and automated truck washing machine. The proposed development will also result in the increase in length of the stormwater management system to cover an additional 11m length of the mechanics workshop building. (approved 23 April 2024).

No additional conditions were imposed by the Minister during the assessment and approval of these modifications with regards to this Construction Noise Management Plan.

This Construction Noise Management Plan (CNMP) is a sub plan to the Construction Environment Management Plan (CEMP).

1.2 Construction Staging

Construction works commenced in June 2017 under approved SSD 7016 dated 29 May 2017, and essentially followed the Stages as outlined below:

- Stage 1 – Demolition of office building and site works, construction of detention basin and hardstand areas. Within this stage the construction of the detention basin and drainage swales will be undertaken first in order to ensure that the appropriate erosion and sediment control measures can be implemented as support for following stages. Stage 1 is to commence upon approval and is estimated to take approximately 6 months.
- Stage 2 – construction of particleboard manufacturing facility and installation of related plant and equipment, including modernisation of the existing plant. Stage 2 is to commence upon approval or slightly thereafter and is estimated to take up to 18-24 months, dependent on equipment and labour availability.
- Stage 3 – alterations and additions to existing MDF site and construction of new automated storage warehouse. Stage 3 is to commence post completion of Stage 2 and is estimated that this will take up to 9 months.
- Stage 4 – debarker chipper building and chip preparation area. Stage 4 may commence approximately 6 months after approval and is estimated to take up to 12 months to complete.

The activities included in the above four stages are complete. The works associated with the modifications described in section 1.1 Background have since followed. Works under MOD 1 are complete. Works under MOD 2 have been completed with final commissioning of the new turbine undertaken on the 28 May 2021.

Activities associated with MOD 3 have been completed, with the installation of additional equipment located in the material handling area of the site to better utilise recycled wood products in the manufacturing of particleboard and to better protect already installed equipment from potential physical contaminants. Installation of an enclosed awning on the northern end of the northern warehouse extension has optimised loading and unloading activities. Construction of the western hardstand area has facilitated further parking for the occupants of the northern hardstand, reclamation of the effluent overflow process water dam and relocation has been completed. Construction of the eastern hardstand is complete for redundant equipment/construction storage. Changes have been made to the swales which convey surface water from Borg and HPP around the site, thus providing HPP with a new discharge point independent to that of the Borg facility.

Activities under MOD 4 are progressing with the increase in hardstand at the north-eastern corner of the site underway to facilitate the relocation of the existing site mechanic's workshop. The Reverse Osmosis filtered water production plant has been installed and is in commissioning phase with a shed enclosure built to assist with temperature control. The construction of an additional lined effluent storage dam for the water treatment plant has also been completed to allow for extra emergency capacity.

MOD 5 was lodged in January 2024 which included minor changes to the proposed mechanic's workshop. The noise impacts of this proposed modification were accounted for in the update of site noise model prepared by EMM and were included in the MOD 4 application.

1.3 Purpose of this Plan

This CNMP has been developed to address potential noise impacts on sensitive receivers and to satisfy the requirements set out in Condition B15 of Development Consent SSD 7016 for the Project, and includes information on the following:

- Relevant legislation and guidelines for noise generated during construction of the Project;
- Potential sensitive receivers who may be affected by noise generated by the Project;
- Noise impacts potentially arising from the Project;
- Safeguards, mitigation measures and monitoring to manage noise impacts during construction;
- Roles and responsibilities of those involved in the design and implementation of noise management controls; and
- An effective monitoring, auditing and reporting framework to assess the effectiveness of the controls implemented.

2 Legislative and Regulatory Compliance

2.1 Relevant Legislation

Key environmental legislation relating to noise management for the Project includes:

- *Protection of the Environment Operations Act 1997*; and
- *Environment Planning and Assessment Act 1979*.

2.2 Conditions of Consent

The Development Consent (SSD 7016) conditions relevant to noise that have been considered in this Plan are detailed in **Table 1**.

Table 1 – Development Consent Conditions

No.	Requirement	Document Reference									
	NOISE										
	Hours of Work										
B13	The Applicant must comply with the hours detailed in Table 1, unless otherwise agreed in writing by the Secretary. Table 1: Hours of Work <table> <tr> <th>Activity</th><th>Day</th><th>Time</th></tr> <tr> <td>Earthworks and Construction</td><td>Monday – Friday Saturday</td><td>7 am to 7 pm 8 am to 1 pm</td></tr> <tr> <td>Operation</td><td>Monday – Sunday</td><td>24 hours</td></tr> </table>	Activity	Day	Time	Earthworks and Construction	Monday – Friday Saturday	7 am to 7 pm 8 am to 1 pm	Operation	Monday – Sunday	24 hours	Section 2.6
Activity	Day	Time									
Earthworks and Construction	Monday – Friday Saturday	7 am to 7 pm 8 am to 1 pm									
Operation	Monday – Sunday	24 hours									

B14	Works outside of the hours identified in Condition B13 may be undertaken in the following circumstances: (a) works that are inaudible at the nearest sensitive receivers; (b) works agreed to in writing by the Secretary; (c) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or (d) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.	Section 2.6								
	Construction Noise Management Plan									
B15	The Applicant must prepare a Construction Noise Management Plan (CNMP) for the Project to manage construction noise. The plan must form part of the CEMP required by Condition C1 and must:	This Plan								
	(a) be prepared by a suitably qualified and experienced noise expert;	Reviewed by Global Acoustics								
	(b) be approved by the Secretary prior to the commencement of construction of the Project;									
	(c) describe procedures for achieving the noise limits in Table 2;	Section 6								
	(d) describe the measures to be implemented to manage noisy works such as rock/concrete breaking activities, in close proximity to sensitive receivers;	Section 6								
	(e) include strategies that have been developed with the community for managing noisy works;	Table 7 & Section 9.1.2								
	(f) describe the community consultation undertaken to develop the strategies in e) above; and	Section 9.1.2								
	(g) include a complaints management system that would be implemented for the duration of the Project.	Section 9.2								
	Operational Noise Limits									
B16	The Applicant must ensure that noise generated by the Development does not exceed the noise limits in Table 2. Table 2: Noise Limits dB(A) <table><tr><th>Location</th><th>Day LAeq(15 minute)</th><th>Evening LAeq(15 minute)</th><th>Night LAeq(15 minute)</th></tr><tr><td>All sensitive receivers</td><td>55</td><td>50</td><td>45</td></tr></table> Note: Noise generated by the Development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.	Location	Day LAeq(15 minute)	Evening LAeq(15 minute)	Night LAeq(15 minute)	All sensitive receivers	55	50	45	Section 5
Location	Day LAeq(15 minute)	Evening LAeq(15 minute)	Night LAeq(15 minute)							
All sensitive receivers	55	50	45							
	Mobile Wood Chippers									
B22	During construction, the Applicant must ensure that mobile wood chippers are not operating simultaneously with rock/concrete breaking activities.	Section 6 Table 7								

2.3 Mitigation Measures

This Plan also considers the requirements of the Mitigation Measures from the Environmental Impact Statement (EIS) and Response to Submissions (RTS) for the Project.

There are no noise mitigation measures specific to construction, however Porta Products commits to achieving noise limits prescribed for the Project and managing noisy works including concrete breaking in close proximity to sensitive receivers. Table 7 General Construction Noise Impact Mitigation Measures of this Plan outlines the commitments made to manage noise impacts from construction activities.

2.4 Environment Protection Licence

Environment Protection Licence 3035 (EPL 3035) specifies noise limits for operation of the existing facility. Condition L4 of the EPL provides noise conditions, which are reproduced below:

L4 Noise limits

L4.1 Noise from the premises must not exceed:

- a) 55 dB(A) $L_{Aeq}(15 \text{ minute})$ during the day (7am to 6pm); and
- b) 50 dB(A) $L_{Aeq}(15 \text{ minute})$ during the evening (6pm to 10pm); and
- c) at all other times 45 dB(A) $L_{Aeq}(15 \text{ minute})$, except as expressly provided by this licence.

Where L_{Aeq} means the equivalent continuous noise level – the level of noise equivalent to the energy-average of noise levels occurring over a measurement period.

L4.2 To determine compliance with condition L4.1, noise must be measured at or computed for Oberon High School or any other noise sensitive locations (such as a residence/school). A modifying factor correction must be applied for tonal, impulsive or intermittent noise in accordance with the "NSW Industrial Noise Policy (EPA, January 2000)".

L4.3 The noise limits set out in condition L4.1 apply under all meteorological conditions except for the following:

- a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or
- b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
- c) Stability category G temperature inversion conditions.

L4.4 For the purpose of condition L4.3:

- a) Data recorded by the meteorological station identified as EPA Licence Point 26 must be used to determine meteorological conditions; and
- b) Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.

The Development will operate the Project with continuation of these existing noise limits.

2.5 Guidelines and Standards

The guidelines and standards relevant to noise management for the Project include:

- DECC 2009, *Interim Construction Noise Guideline (ICNG)*, NSW Department of Environment and Climate Change: Sydney NSW; and
- EPA 2017, *Noise Policy for Industry (NPfI)*, Environment Protection Authority. Sydney NSW.

2.6 Construction Noise Management Levels

Construction noise can represent a significant risk of impact on the amenity of sensitive receivers. The Interim Construction Noise Guideline (DECC, 2009) was developed to focus on applying work practices most suited to minimising construction noise impacts, rather than focusing only on achieving numeric noise levels. While some noise from construction sites is inevitable, the aim of the guideline is to protect the majority of residences and other sensitive land uses from noise pollution most of the time.

Table 2 sets out management levels for construction noise at residences and how they are to be applied. The rating background level (RBL), i.e; the overall background noise level measured in each relevant assessment period, is used when determining the management level.

Table 2 – Noise Management Levels from the ICNG (DECC, 2009)

Time of Day	Management Level LAeq (15 min) *	Notes
Residential Premises		
Recommended Standard Hours Monday to Friday 7am to 6pm Saturday 8am to 1pm No work on Sundays or Public Holidays	Noise affected RBL + 10 dB	The noise affected level represents the point above which there may be some community reaction to noise.
		Where the predicted or measured LAeq (15 min) is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level.
		The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.
	Highly noise affected 75 dB(A)	The highly noise affected level represents the point above which there may be strong community reaction to noise.
		Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur, taking into account: 1. times identified by the community when they are less sensitive to noise (such as before and after school for works near schools, or midmorning or mid-afternoon for works near residences) 2. if the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.
Outside Recommended Standard Hours	Noise affected RBL + 5 dB	A strong justification would typically be required for works outside the recommended standard hours.
		The proponent should apply all feasible and reasonable work practices to meet the noise affected level.
		Where all feasible and reasonable practices have been applied and noise is more than 5 dB(A) above the noise affected level, the proponent should negotiate with the community.
Commercial Premises	70 dB(A)	External noise level at most affected point of the premises.

* Noise levels apply at the property boundary that is most exposed to construction noise at a height of 1.5 m above ground level. If the property boundary is more than 30 m from the residence, the location for measuring or predicting noise levels is at the most noise-affected point within 30 m of the residence.

Other types of sensitive land uses such as schools or recreation areas may consider noise from construction to be disruptive when the property is in use. Management levels for noise at other sensitive land uses are summarised in **Table 3**.

Table 3 – Noise Management Levels for Sensitive Land Uses other than Residences

Land Use	Management Level LAeq (15min) (Applies when property is in use)
Classrooms at schools and other educational institutions	Internal noise level: 45 dB(A)
Hospital wards and operating theatres	Internal noise level: 45 dB(A)
Places of worship	Internal noise level: 45 dB(A)
Active recreation areas (characterised by sporting activities and activities which generate their own noise or focus for participants, making them less sensitive to external noise intrusion)	External noise level: 65 dB(A)
Passive recreation areas (characterised by contemplative activities that generate little noise and where benefits are compromised by external noise intrusion, for example, reading, meditation)	External noise level: 60 dB(A)
Community centres	Depends on the intended use of the centre. Refer to the recommended 'maximum' internal levels in AS2107 for specific uses.

Construction of the infrastructure will occur concurrently with operation of the existing facility. All construction will generally be undertaken during standard construction hours, with the exception of 6am – 7pm Monday to Friday. The operational noise criterion for the evening period would apply during these hours, as conditioned in Development Consent SSD7016 and EPL 3035. Only unforeseen circumstances would require work to continue outside of these hours. When construction work outside of these hours is required, the operational noise criterion for the relevant period would apply, as conditioned in Development Consent SSD7016 and EPL 3035.

The Development proposes to generally restrict site noise emission from both construction and operational tasks combined to comply with the day period operational noise criterion of $L_{Aeq(15 \text{ min})}$ 55 dB and the evening period operational noise criterion of $L_{Aeq(15 \text{ min})}$ 50 dB, conditioned in Development Consent SSD7016 and EPL 3035. The exception will be for short duration highnoise emitting tasks as such as rock/concrete breaking, for which the “highly noise affected” construction noise criterion of $L_{Aeq(15 \text{ min})}$ 75 dB is deemed appropriate. Such construction tasks should be restricted to the least noise sensitive times of day. It is recommended all potentially affected receivers are notified in advance of any construction tasks where the operational day period criterion is likely to be exceeded.

3 Sensitive Receivers

The subject land is located on the northern outskirts of Oberon, to the east of Lowes Mount Road. As per the Oberon Council Local Environmental Plan (LEP) 2013, the land zoning classification of the subject site is IN1 General Industrial. The Development operations are part of a larger industrial precinct operated by a number of separate companies, which generally involve timber product manufacture.

Land use north, east and west of the subject site is generally agricultural. Land use to the immediate south is industrial/recreational, and further south residential and the township of Oberon.

For the purpose of identifying and managing noise impacts, representative noise sensitive receivers (NSR) have been selected including the nearest and potentially most affected residences to the site, and Oberon High School. The following NSRs are considered representative of all potentially affected receivers and are referred to in this Plan. Refer to **Figure 1** for details.

Table 4 – Noise Sensitive Receivers

Receiver ID	Receiver Location
R01	32 O'Connell Road
R02	6 Herborn Street
R03	Oberon High School
R04	10 Tasman Street
R05	127 Hazelgrove Road
R06	26 Cunynghame Street
R07	131 Hazelgrove Road
R08	2 Herborn Street
R09	15-19 Albion Street
R10	Oberon Caravan Park



Figure 1 – Noise Sensitive Receivers (Source: EMM (Formerly Global Acoustics), May 2016)

4 Noise and Vibration Impact Assessment

EMM Consulting (formally Global Acoustics) (May 2016) was engaged by The Development to carry out a noise and vibration impact assessment for the proposed expansion of the panel manufacturing facility. This assessment considered impacts associated with noise emission from the existing site, and the expansion. Potential impacts from operational noise, low frequency noise, sleep disturbance, cumulative noise, construction noise and road traffic noise were assessed. A model validation assessment was undertaken to provide an estimate of model prediction accuracy.

EMM's advice was also provided for construction and operation of those items included in modifications 1 through 4. At each modification, the acoustic consultant concluded that there would be no change to site noise emission levels with continued compliance predicted for all receptors, and that construction activities should continue to be managed in accordance with the CNMP (this Plan).

4.1 Operation

Model predictions indicate the proposed expansion could generally comply with existing EPL operational noise criteria, when recommended management strategies are implemented, and if limiting sound powers for proposed infrastructure and recommended noise controls for existing plant are achieved. The exception is 15-19 Albion Street, for which a minor 1 dB exceedance is predicted for the day period during enhancing meteorological conditions if a mobile chipper is operational. Compliance was predicted for all receivers for 'normal' operations when no mobile chipping plant is operated.

4.2 Construction

4.2.1 Noise

Construction activities will be undertaken in conjunction with regular operation of the existing site. The Development propose to generally restrict site noise emission from both construction and operational tasks combined to comply with operational noise criteria conditioned in Development Consent SSD7016 and EPL 3035.

Rock or concrete breaking, earthworks, and infrastructure installation were assessed. Model predictions for the earthworks and installation scenarios indicate general compliance with the day period operational noise criterion at all receivers, with the exception of 15-19 Albion Street. At this location, exceedances were predicted during prevailing wind conditions if a mobile chipper is operated concurrently with construction plant. Exceedance of the evening period operational noise criterion is predicted at R02, R03, R06, R08, R09 and R10. These exceedances are predicted during calm and prevailing wind conditions when a mobile chipper is operated concurrently with construction plant. Construction noise can be managed through monitoring weather conditions, restricting use of the mobile chipper during enhancing conditions if a large amount of construction plant is operating, and restricting construction activities where possible to the hours detailed in the ICNG.

Rock breaking was assessed against the "highly affected" construction noise criterion of $L_{Aeq(15min)} 75$ dB, as the duration would be relatively short compared with other construction tasks, and few options are available to mitigate noise from this activity. Predictions were well below this criterion.

4.2.2 Vibration

Due to the distance to sensitive receivers from operational and construction areas, no vibration impact is expected.

4.2.3 Road Traffic Noise

Construction and operational road traffic noise impacts were assessed for North Street and Albion Street, the roads indicated in the Traffic Impact Assessment report to receive the greatest traffic flows. The majority of both construction and operational project traffic generated by the project will occur outside of general peak hour traffic flows. Increases to road traffic noise relative to the existing situation were found to be insignificant, and less than 1 dB. Such an increase is unlikely to be either measurable, or perceptible to the human ear.

4.2.4 Construction Plant

Table 5 lists plant included in the construction noise assessment.

Table 5 – Potential Noise Sources

Equipment Type	Earthworks	Installation	Rock Breaking
Excavator	4	0	0
Loader	1	0	0
Dozer	1	0	0
Dump truck	2	0	0
Grader	1	0	0
Roller	1	0	0
Articulated truck	2	0	0
Mobile crane	0	2	0
Concrete truck	0	1	0
Delivery truck	0	2	0
Bobcat	0	1	0
Rock breaker	0	0	1

Predictions for the rock breaking scenarios include a plus 5 dB modifying factor penalty to account for the intermittent nature of rock breaking works. It is recommended mobile chipping plant is not operated during rock breaking works. It is considered reasonable to assess rock breaking against the “highly affected” construction noise criterion of $L_{Aeq (15 \text{ min})}$ 75 dB, as the duration would be relatively short compared with other construction tasks, and few options are available to mitigate noise from this activity. Predictions (without mobile chipping plant operating) are well below this criterion.

5 Construction Noise Management Levels

Construction activities will be undertaken simultaneously with regular operation of the existing site. The Development propose to generally restrict site noise emission from both construction and operational tasks combined to comply with operational noise criteria conditioned in Development Consent SSD 7016 and EPL 3035.

Following consideration of the ICNG (**Section 2.6**), Development Consent (SSD 7016) conditions (**Section 2.2**), EPL 3035 (**Section 2.4**) and the measured background noise levels (refer Global Acoustics, May 2016), **Table 6** summarises the Noise Management Levels (NMLs) for all residential receivers.

Table 6 – Operation and Construction Noise Management Levels

Location	Activity	Day (7am-6pm) LAeq (15 min)	Evening (6pm-10pm) LAeq (15 min)	Night (10pm-7am) LAeq (15 min)
All residential receivers	General Construction	55	50	45
	Rock/Concrete Breaking	75		

Work outside approved construction hours are not expected, however unforeseen constraints relating to delivery of materials or equipment, or other technical requirements, may see some activities undertaken outside approved hours. Where required, out of hours works will be undertaken to meet the noise management levels in **Table 6**.

Development Consent SSD 7016 Condition B14 requires non-standard construction hour work to be inaudible at the nearest sensitive receivers. The Development Consent takes precedence over the ICNG and will be adopted in this plan.

In this instance, “inaudible” means the activity is not discernible from general operation activities.

6 Impact Management Measures

In order to ensure project goals are met and to maintain impacts at a practical minimum, the measures and safeguards summarised in **Table 7** will be implemented by the Development throughout the construction phase of the Project.

Table 7 – General Construction Noise Impact Mitigation Measures

Mitigation Measures	Timing	Responsibility
Administrative Controls		
Construction activities that are audible at any residential receptor, shall only be undertaken during the following hours: a) 7:00 am to 7:00 pm Monday to Friday b) 8:00 am to 1:00 pm Saturdays c) at no time on Sundays or public holidays.	Daily	Project Manager/ Environmental Manager

Construction Noise Management Plan

The DECC construction noise management levels, and site operational levels, will be achieved as far as practicable. Where works are predicted to exceed the NMLs (refer Section 5), residents should be informed of the time, type, duration and noise level of noisy activities prior to the anticipated exceedance.	Daily	Project Manager/ Environmental Manager
Provide an induction to site personnel (which includes Environmental Awareness Training) addressing the requirements of this CNMP and their responsibilities with regard to noise management.	Prior to starting on work site	Project Manager/ Environmental Manager
Ensure truck drivers are informed of designated vehicle routes, parking locations, delivery hours, and minimising engine braking and idling.	Daily	Project Manager/ Environmental Manager
Provide education of supervisors, operators and sub-contractors on the need to minimise noise through Toolbox meetings and on-site coaching.	As needed	Project Manager/ Environmental Manager
Inform potentially noise affected residents of the nature of works to be carried out, the expected noise levels and duration, as well as relevant contact details.	As needed	Project Manager/ Environmental Manager
Restrict use of mobile chippers during enhancing conditions if a large amount of construction plant is operating.	Daily	Project Manager/ Environmental Manager
Where works are expected to be undertaken outside approved work hours, ensure operational noise management levels can be met for the relevant period (evening or night).	As needed	Project Manager/ Environmental Manager
Procedures for handling noise complaints (Section 9) will be implemented including recording, reporting and acting on complaints.	As needed	Project Manager/ Environmental Manager
Construction Controls – General		
Select appropriately sized equipment for the task, such as excavation equipment.	Daily	Project Manager/ Environmental Manager
Select low noise emission plant where possible.	Daily	Project Manager/ Environmental Manager
Avoid, where possible, noisy plant working simultaneously close together.	Daily	Project Manager/ Environmental Manager
Ensure all equipment is equipped with reasonable and feasible noise control (e.g. mufflers, acoustic enclosures, flashing lights or non-tonal reversing alarms (squawkers) as an alternative to traditional reversing beepers) and is turned off when not in use.	Daily	Project Manager/ Environmental Manager

Construction Noise Management Plan

Ensure equipment is operated in the correct manner and adequately maintained - including replacement of engine covers, repair of defective silencing equipment, tightening of rattling components, repair of leakages in air lines and shutting down equipment not in use.	Daily	Project Manager/ Environmental Manager
Where practicable, maintenance work on all construction plant will be carried out away from noise sensitive receivers and confined to standard construction hours.	Daily	Project Manager/ Environmental Manager
The site entry and egress points will be set as far from receivers as practical.	Once-off	Project Manager/ Environmental Manager
Ensure traffic movement is kept to a minimum, e.g. ensure trucks are fully loaded so that the volume of each delivery is maximised.	Daily	Project Manager/ Environmental Manager
Avoid dropping material from a height into unlined metal trays or bins.	Daily	Project Manager/ Environmental Manager
Where it is necessary to modify or remove noise control/management measures (even temporary), ensure impacts are appropriately addressed	As necessary	Project Manager/ Environmental Manager
Construction Controls – Rock/Concrete Breaking		
Mobile wood chipper and rock/concrete breaking activities are not to be undertaken concurrently. A permit to work is required for rock/concrete breaking activities that requires the construction team to consult with mobile wood chipper operators to ensure operations do not occur simultaneously.	Daily	Project Manager/ Environmental Manager
Consult with Oberon High School prior to rock/concrete breaking activities. Where feasible and reasonable, plan works to limit rock/concrete breaking activities during important events, e.g. examination periods.	Daily	Project Manager/ Environmental Manager
Undertake rock/concrete breaking activities only between 8am and 6pm Monday to Friday, and 8am and 1pm Saturdays.	Daily	Project Manager/ Environmental Manager
Undertake rock/concrete breaking in continuous blocks not exceeding three hours each with a minimum respite from those activities and works of not less than one hour between each block.	Daily	Project Manager/ Environmental Manager
Monitoring and Auditing		
Monitor construction noise levels to verify compliance with the CNMP. Prepare quarterly monitoring summaries for submission to the Project team.	As needed	Environmental Manager

Monitor meteorological conditions (i.e. wind speed and direction) during construction activities and adjust activities when prevailing (enhancing) meteorological conditions occur.	As needed	Environmental Manager
Report any exceedance of limits to DPIE and EPA in accordance with Development Consent SSD 7016 and EPL 3035.	As needed	Environmental Manager

7 Noise Monitoring

7.1 Overview

The Noise Impact Assessment (EMM, May 2016) and subsequent advice provided as required for each modification indicates general compliance with the day period operational noise criterion at all receivers, when management measures are implemented. Therefore, construction noise monitoring will be undertaken to:

- Verify compliance with the noise objectives presented in **Section 5**;
- In response to any exceedance of limits; and
- In response to complaints where this is considered appropriate.

7.2 Monitoring Frequency

7.2.1 Compliance Monitoring

The following compliance monitoring, to be undertaken during construction by a suitably qualified noise expert, is recommended for the project:

- Periodic attended noise monitoring at the potentially most affected residences during the day period, with a frequency of once per quarter, during the construction phase of the Project; and
- If exceedance of limits is demonstrated, additional mitigation controls are to be implemented, and follow-up monitoring undertaken by a suitably experienced person within one week of the exceedance.

Construction noise performance is reported as detailed in **Section 10**.

7.2.2 Management Monitoring

In addition to quarterly compliance monitoring, off-site management noise monitoring by suitably trained site personnel should be undertaken regularly, particularly during periods of meteorological enhancement and on commencement of new construction activities or areas, to ensure relevant noise criteria are adhered to.

Operations should be modified accordingly as required when exceedance or potential exceedances are measured. Modifications may include, but are not limited to, erection of temporary barriers or screens, temporary shutdown of equipment until adverse weather conditions change, or relocating equipment to less sensitive areas when feasible to do so.

7.3 Monitoring Locations

Four representative locations have been chosen for monitoring as summarised in **Table 8**. Refer to **Figure 2** for these locations.

Table 8 – Noise Monitoring Locations

Location ID	Monitoring Location
NM1	Oberon Caravan Park
NM2	Intersection Pine Street and Herborn Street
NM3	127 Hazelgrove Road
NM4	Intersection Tasman Street and Earl Street

Noise management levels for each monitoring location are provided in **Table 6**. Where these are exceeded by construction-related noise sources, the exceedance should be investigated (as discussed in **Section 10**) to determine the cause and any necessary mitigation.

7.3.1 Instrumentation

The following requirements should be observed whilst monitoring:

- Before commencing monitoring, ensure the Sound Level Meter's (SLM) laboratory calibration is current (refer to the sticker on the unit).
- If unsure about the functions of the SLM, refer to the instruction sheet in the case. The Environmental Manager should be trained in the use of the SLM and training documents kept on file.
- Ensure the windscreen is attached and that the SLM settings include a windscreen factor, the SLM is set to A-weighted and fast response.
- Prior to and completing the measurement, the SLM should be field calibrated using the supplied calibrator. Ensure that the pre and post measurements do not differ by more than 0.5 dB(A).



Figure 2 – Noise Monitoring Locations

7.3.2 Weather Conditions

Monitoring should be undertaken on days of light winds (<5 m/s) and no rain. Wind speed is to be monitored using a hand held wind speed monitor. Rain and too much wind will elevate the noise level. If there is no choice but to monitor in inclement weather, note the conditions on the field sheet.

NMLs listed in Table 6 apply under all meteorological conditions except for the following:

- Wind speeds greater than 3 metres/second at 10 metres above ground level; or
- Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
- Stability category G temperature inversion conditions.

Weather conditions measured at the site weather station should be used to determine applicability of meteorological exclusion rules.

7.3.3 Construction Noise Monitoring Procedure

Monitoring should be undertaken for a duration of 15 minutes at each location. More than one 15-minute measurement can be undertaken at each location.

The following information should be recorded in accordance with *AS 1055.2—1997 Acoustics—Description and measurement of environmental noise*. The field sheet for noise monitoring should capture the following details:

- Date and time of measurement;
- Details of the measurement positions, instrumentation used and types of analyses made;
- Weather conditions at each monitoring location, recorded at 1.8 metres above ground level, during the measurements (wind direction, wind velocity, relative humidity, temperature, recent precipitation, cloud cover (oktas));
- Description of the noise being investigated as well as operating conditions of the sound source(s) under investigation;
- Noise due to other sources including normal and possibly unusual noises;
- Statistical noise metric results including L_{A1} , L_{A10} , L_{Aeq} and L_{A90} due to all noise sources during the measurement period;
- Estimated or calculated $L_{Aeq (15min)}$ attributable to Borg noise sources (in the absence of extraneous noise sources) during the measurement period;
- Associated observations (vibrations, amplitude or frequency modulation or similar).

Noise monitoring results will be recorded on a Noise Monitoring Record Form. An example Noise Monitoring Record form is provided as **Appendix A**.

Correction for Background Noise

Operational noise management levels are used to assess construction noise (refer **Section 5**). Porta Products propose to generally restrict site noise emission from both construction and specific operational tasks combined to comply with operational noise criteria.

Background noise such as traffic and other non-operational influences are not included in this total. Therefore, it is important to distinguish between operational noise and other noises. This can be done in several ways:

- i. Use the SLM display while monitoring to estimate the noise level from specific sources dominant at the time, e.g. when no traffic is present and construction/operational equipment is strongly dominant or where construction/operation is inaudible over the traffic.
- ii. Also, note the proportion of time that construction/operational noise is dominant, e.g. 10%, 50% etc, and under what conditions this occurs.
- iii. If practical, use the 'pause' and 'back erase' functions of the SLM to eliminate any extraneous noise such as dogs barking or lawn mowers.
- iv. Where possible, or in cooperation with operators, measure background noise with no construction activity, then again with construction underway. The construction noise can then be compared with the background noise. This could be for durations of just a few minutes or, with cooperation, two separate 15 minute recordings.

Correction for Impulsive Noise

Impulsive noise is noise having a high peak of short duration or a sequence of such peaks (EPA, 2000).

To assess whether noise is substantially impulsive, noisy activities should be measured with the SLM set on A-weighted **fast** response and **impulse** response. According to the INP, noise is considered impulsive if the difference between the two values is more than 2 dB(A). Apply difference in measured levels as the correction, up to a maximum of 5 dB.

Correction for Intermittent Noise

Intermittent noise is when the level of noise suddenly drops to that of the background noise several times during the assessment period, with a noticeable change in noise level of at least 5 dB (EPA, 2000).

In accordance with the INP, a correction of 5 dB(A) for intermittent noise should be made to the measured L_{Aeq} noise levels to account for the greater annoyance. Adjustment to be applied for night-time period only.

8 Training

The Development shall implement appropriate training and induction in the requirements of this CNMP. All employees and contractors working on site will undergo site induction training, which includes Environmental Awareness Training. The induction will address:

- This CNMP;
- The existence of noise legislation and what this means for the Project, i.e. Noise Management Levels;
- Delivery hours and locations;
- Reporting and recording environmental non-compliance related to noise;
- Noise minimisation measures; and
- The importance of regular plant maintenance.

Records will be kept of all personnel undertaking the site induction and training, including the contents of the training, date and name of trainer/s.

Key staff will undertake more comprehensive training relevant to their position and/or responsibility. This training may be provided as “toolbox” training or at a more advanced level by the Environmental Manager.

Further details regarding the content of staff induction and training are outlined in the CEMP.

9 Community Consultation and Complaints Management

9.1 Community Consultation

Close community liaison will be maintained to ensure that local residents are aware of the times and durations when they may be affected by construction noise that exceeds the NML's in **Table 6** (such as rock/concrete breaking activities) and to provide an avenue for communication between the community and the Project team.

The CEMP details the methods and timing for community consultation on the Project throughout the construction period.

9.1.1 Community Consultative Committee

The Development has an established joint Community Consultative Committee (CCC) that meets nominally quarterly to discuss environmental and operational aspects of The Development. This existing CCC will be utilised to discuss and address general construction impacts, including noise management and mitigation measures. The CCC meeting will also provide a forum to provide feedback to The Development in relation to the environmental management of the Project.

9.1.2 Community Consultation for Managing Noisy Works

Strategies developed with the community for managing noisy works are documented in **Table 7**; refer section on Construction Controls – Rock/Concrete Breaking.

Community consultation undertaken to develop these strategies for managing noisy works included:

- Presentation and Project update to the Oberon Business and Tourism Association at their meeting held on 12 April 2017. An outline of activities to occur during construction, including rock/concrete breaking activities was presented, and included contact details for the construction period of the Project;
- Written email correspondence on 12 April 2017 with the Oberon High School Principal to inform that noise generating activities will occur during construction of the Project. The email was an invitation to assist in development of strategies for managing the noisy works and sought feedback and suggestions;
Additionally, the Principal was advised further consultation will be undertaken prior to the activity occurring and where feasible and reasonable, The Development will plan works to limit rock/concrete breaking activities during important events, e.g. examination periods;
Furthermore, an invite was extended to the School Principal to attend the CCC meeting workshop for developing strategies for managing noisy works;

- A meeting was held on the 18 May 2017 to update Oberon Council on the progress of the development application. This meeting was also used to discuss the management of noisy works during Project construction. Council agreed that the communication channels proposed in the CEMP were suitable, and also suggested the use of the Council community newsletter as a conduit to the public. This newsletter is sent to all households on the 15th of each month.

A workshop focusing on managing noisy works was held at the CCC meeting dated 12th April 2017, prior to the noisy works being undertaken. Proposed strategies for managing the noisy works were presented, discussed and further developed with the CCC members. Strategies previously developed have been included in **Table 7**.

A project update letter dated 22nd February 2019 was distributed to the community via Oberon Council. This letter advised that the project had progressed well since approval in May 2017 and that commissioning of the new particleboard line was underway.

9.2 Inquiry and Complaints Management

9.2.1 Opportunities for Information Exchange

The Development has in place the following avenues to register inquiries and complaints related to construction and operational activities:

- A 24-hour free call community liaison line (1800 802 795);
- Postal address for written complaints (Porta Products, Private Mail Bag 1, OberonNSW 2787); and
- Email address for electronic complaints (oberon_site@borgs.com.au).

The telephone number, postal and email address is clearly displayed on a sign near the entrance to the construction site, in a position that is clearly visible to the public. This information will also be widely disseminated in the community and included on public information, which may include the website, local area advertisements, letterbox notifications and Project specific fact sheets.

9.2.2 Inquiry and Complaints Handling Process

The Developments community and stakeholder management system includes procedures for recording, investigating, tracking and handling of all inquiries and complaints, as detailed in the CEMP.

Once The Development has received verbal or written inquiries and/or complaints via telephone, email or post, the Environmental Manager or their nominated delegate will:

- Undertake an immediate investigation into the nature/cause of the inquiry and/or complaint;
- Make initial contact with the community or stakeholder representative within 48 hours to clarify the reason for the inquiry and/or complaint and to notify of the investigation process including an appropriate re-notification time;
- Record the inquiry and/or complaint on the Community Complaints register. This register includes the following details:

- Complaint date and time;
 - Site;
 - Title;
 - Category;
 - Description;
 - Caller details;
 - Action;
 - Status;
 - Follow-up;
 - Complaint validity; and
 - Attachments.
- Further investigate the inquiry and/or complaint and provide the community or stakeholder representative with an explanation of the cause and details of any actions taken to mitigate its effect.

It should be noted that if the inquiry and/or complaint is classified as an incident of significance under the site Emergency Response Plan (ERP), the Environmental Manager must follow the incident reporting process in that document and ensure appropriate resolution and sign-off.

Records of complaints will be maintained in the complaints register database for at least four years after the complaint was made.

10 Reporting

10.1 Scheduled Reporting

Construction noise performance is reported externally as follows:

- Quarterly attended noise compliance monitoring reports. Attended noise monitoring reports will include a comparison of measured noise levels with operational noise criteria conditioned in Development Consent SSD 7016 and EPL 3035. All attended measurement result analysis should consider criteria applicability (for project specific criteria) with regard to wind speed and atmospheric stability class;
- Quarterly updates of monitoring results on the company website; and
- Annual Review. A copy of the Annual Review is sent to relevant stakeholders, including DPE, EPA and Oberon Council and is available on the company website.

10.2 Exceedance Reporting

In the event it is determined that an exceedance of a noise criterion has occurred, at the earliest opportunity (as soon as practicable) The Development will notify DPE in accordance with Development Consent SSD 7016 and EPA in accordance with EPL 3035.

In accordance with Condition C12 of Development Consent SSD 7016, The Development will within 7 days of the exceedance date, provide a detailed report on the exceedance to the DPE and EPA.

11 CNMP Review

In accordance with Development Consent SSD 7016 Condition C10, this CNMP will be reviewed and if necessary revised within 3 months of an:

- Approval of a modification;
- Submission of an incident report under Condition C13;
- Approval of an Annual Review under Condition C11; or
- Completion of an audit under Condition C15.

Revisions to the CNMP will be submitted to the Secretary DPE for approval.

12 References

Environment Protection Authority (January 2000). *NSW Industrial Noise Policy*. ISBN 0 7313 2715 2, EPA 00/1.

Environment Protection Authority (September 2015). *Draft Industrial Noise Guideline*. ISBN 978 1 74359 940 2, EPA 2015/0185.

Global Acoustics (May 2016). *Borg Panels Timber Panel Processing Facility Oberon NSW – Noise and Vibration Impact Assessment*. Prepared for Borg Manufacturing.

Appendices

Appendix A – Noise Monitoring Record Form

Noise Monitoring Record Form	
Monitoring Location	
Description of Location	
Test Conducted By	
Date of Monitoring	
Measurement Start Time (hh:mm)	
Measurement Time – Length (min)	
Noise Meter Model/ Calibration Date	
Calibrator Model/ Calibration Date	
Weather Conditions	
General Description	
Wind Speed (m/s)	
Wind Direction	
Temperature (deg C)	
Relative Humidity	
Recent Rainfall	
Cloud Cover (oktas)	
Measurement Results	
L _{Aeq} (15min) (dB(A))	
L _{A1} (dB(A))	
L _{A10} (dB(A))	
L _{Aeq} (dB(A))	
L _{A90} (dB(A))	
Major Construction Noise Source(s) During Monitoring	
Other Noise Source(s) During Monitoring	
Comments	

Appendix D – Construction Traffic Management Plan



Construction Traffic Management Plan 124 Lowes Mount Road, Oberon

Prepared for:
Porta Products

14/08/2025

The Transport Planning Partnership
ACN: 607 079 005

Construction Traffic Management Plan

124 Lowes Mount Road, Oberon

Client: Borg Construction

Version:5

Date: 14/08/2025

TTPP Reference: 16182

Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
Final	3/05/17	S.Botross, L.Nguyen	W.Johnson	W.Johnson	
Rev 2	4/06/21		Jaqueline Blomberg		
Rev 3 Review as per SSD 7016 C10(d)	9/12/21		Andrew Brady	J Blomberg	
Rev 4 Review as per SSD 7016 C10 (a) & (c)	25/08/22		A Brady	J Blomberg	
Rev 5 Review as per SSD 7016 C10(c)	25/08/23		A Brady	Victor Bendevski	
Rev 6 Review as per SSD 7016 C10(c)	5/09/24		A Brady	A Brady	
Rev 7 Review as per SSD 7016 C10(c)	14/08/25		A Brady	A Brady	

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APPENDICES

A. DRIVERS CODE OF CONDUCT

B. SITE INFRASTRUCTURE

C. INTERNAL ROAD NETWORK SITE PLAN

1 Introduction

1.1 Background

This Management Plan has been prepared for the Porta Products Pty Ltd (Formally Borg Manufacturing, Borg Panels, Australian Panels) Oberon site (and will be referred to herein as the '**Development**').

State Significant Development Application SSD 7016 was approved by the Minister for Planning on 29 May 2017 for the construction and operation of a particleboard facility and continuation of, and alterations and additions to, the existing medium density fibreboard facility at The Development 124 Lowes Mount Road, Oberon.

Since then, four modifications to SSD 7016 have been approved by the Minister. Modification 1 approved on 20 November 2018, modification 2 on 29 November 2019, modification 3 on 22 May 2020 and modification 4 on 20 May 2022.

The Transport Planning Partnership (TPPP) prepared this Construction Traffic Management Plan (CTMP) on behalf of Borg Construction (The Development) to assess the traffic and transport implications of the development activities as part of the initial approval.

This CTMP was prepared to satisfy the relevant conditions of consent specified by the Minister for Planning. Table 1 lists the conditions of consent and the corresponding sections of the CTMP where there are addressed.

Table 1: Construction Staging and Duration

Traffic and Access Requirements	Addressed in
Condition B34.	
(c) detail the measures that would be implemented to ensure road safety and network efficiency during earthworks and construction;	Section 5
(d) detail heavy vehicle routes, access and parking arrangements;	Sections 3.3 and 3.4
(e) include a Driver Code of Conduct to: (i) minimise the impacts of construction on the local and regional road network; (ii) minimise conflicts with other road users; (iii) minimise road traffic noise; and (iv) ensure truck drivers use specified routes;	Appendix A
(f) include a program to monitor the effectiveness of these measures; and	Section 6
(g) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.	Section 4.7
Condition B35.	
The Applicant must provide sufficient parking facilities on-site, including for heavy vehicles and for site personnel, to ensure that traffic associated with the development does not utilise public or residential streets or public parking facilities.	Section 3.3

1.2 Purpose of this CTMP

This CTMP addresses the traffic and transport implications during construction phases of the development. The overall principles of traffic management during construction include:

- manage access to/from adjacent properties
- restrict construction vehicle movements to designated routes to/from the site

- manage and control construction vehicle activity in the vicinity of the site
- provide an appropriate and convenient environment for pedestrians and cyclists
- minimise the impact on pedestrian movements
- maintain appropriate capacity for pedestrians at all times on footpaths adjacent to the site
- maintain appropriate public transport access, and
- carry out construction activity in accordance with the approved work hours.

The report was initially prepared by engineers who hold the RMS Select/ Modify Traffic Control Plans (Red Card) and Design and Inspect Traffic Control Plans (OrangeCard) certification which is now named *Prepare a Work Zone Traffic Management Plan*.

Subsequently, this CTMP has been reviewed and updated where necessary by appropriately experienced personnel.

During the preparation of this CTMP, Roads and Maritime Services and Oberon City Council were consulted for any additional aspects which required further assessment. Both authorities returned no additional requirements.

This CTMP includes the following:

- Measures to ensure that the transport related conditions of consent are met,
- Drivers' Code of Conduct (Appendix A), and
- A program for monitoring the effectiveness of the CTMP and Drivers Code of Conduct.

1.3 Overview of Works

The approved project is for the expansion of the existing timber processing facility at 124 Lowes Mount Road, Oberon. The expansion under SSD 7016 approval date 29 May 2017 included the addition of a particle board manufacturing line, including chipping facility, to the existing medium density fibreboard (MDF) manufacturing line. The project also includes for minor additional site works and extension of the area covered by the consent.

The components of the expansion included:

- Construction of a dedicated Particle Board Manufacturing Line
- Additional infrastructure within existing buildings
- Expand Lot 1 and 2 DP 1085563 to accommodate a wood flake preparation area
- Construction of a new automated storage warehouse on Lot 24 1148073 and part on Lot 26 DP 1200697
- Construction of hardstand area on Lot 24 DP 1148073
- Expansion to Lot 1 DP 1076346 for hardstand, water quality ponds and emergency catchment

- Allow for an increase in production by up to 500,000m³, with a commensurate increase in staff.

The components of the four subsequent modifications are as follows:

- MOD 1 – extension of mouldings warehouse, reorientation of materials handling building, layout changes to particleboard chipper/debarker building, extension of northern noise bund, reconfiguration of elements of the surface water management system, reclamation of the Spring Dam;
- MOD 2 – installation of an electricity generation gas turbine and ancillary equipment;
- MOD 3 – additional materials handling equipment, extension to northern warehouse, changes to the site surface water system and construction of further hardstand; and
- MOD 4 – additions and alterations to the existing timber processing facility including reclamation of the remaining spring fed dam, relocation and expansion of the existing mechanic's workshop and improvements to the site's water treatment plant
- MOD 5 – Minor update to the approved mechanical workshop including additional workshop bays, additional first floor storage and minor updates to the office plus removal of the refuelling system and automated truck washing machine. The proposed development will also result in the increase in length of the stormwater management system to cover an additional 11m length of the mechanics workshop building. (approved 23 April 2024).

See Appendix B for plan showing the site infrastructure.

2 Existing Conditions

2.1 Site Description

The Development is located on Lot 1 DP 1085563, Lot 2 DP 1085563, Lot 26 DP 1200697, Lot 24 DP1148073 and Lot 1 DP 1076346 in the local government area of Oberon Council.

The site location and its surrounds are shown in Figure 1.

Figure 1: Site Location (Aerial)



The Development is located on the northern outskirts of Oberon town and along the eastern side of Lowes Mount Road. The primary industries within the vicinity include agriculture (farming and plantation timber growing), as well as industries associated with logging, sawmilling and timber dressing and the manufacture of wood products.

Access to the site are located along Lowes Mount Road and Endeavour Street. Gate 4 is located on Lowes Mount Road and permits access to employees, dispatch, visitors and heavy vehicle deliveries. Gate 6 is located around 400m north of Gate 4 and provides access for heavy vehicle deliveries and employees.

Gate 5 is located on Endeavour Street and provides access for delivery trucks carrying raw material (ie. timber logs) and chemical to the neighbouring Woodchem facility.

The location of the site accesses and the approximate separation of the sites are illustrated in Figure 2.

Figure2: Site Access



Base map source: Google Earth 2022

2.2 Road Network

The site is surrounded by a network of roads including Lowes Mount Road along the site frontage. A description of these roads is provided herein.

Lowes Mount Road

Lowes Mount Road is a two-way two-lane road with a north-south alignment. It has a posted speed limit of 60km/hr at the southern end of the road and 100km/hr north of the site. Informal parking is permitted within the wide grass verge along the eastern side of Lowes Mount Road.

Access to the site is provided off Lowes Mount Road via Gate 4 and Gate 6. It is noted that both Gate 4 and Gate 6 are indented approximately 75m and 150m from the property boundary line on Lowes Mount Road, allowing space for queuing of vehicles on the subject site. A dedicated right-turn lane that is 60m in length is located at the Gate 6 access.

Albion Street

Albion Street is a two-way road with one lane per direction. It has an east-west configuration with wide kerbside parking lanes on both sides of the roadway. The posted speed limit within the township is 60km/hr which increases to 70km/hr closer to the town outskirts.

Horace Street

Horace Street has an undivided carriageway with a north-south alignment. It has a cul-de-sac at its northern end which connects to the southern boundary of the subject site. Unrestricted kerbside parking is permitted on both sides of the roadway. There is no posted speed limit however, by default, the speed zone along Horace Street is 50km/hr.

Endeavour Street

Endeavour Street is aligned in a north-south direction and has an undivided carriageway. There is a cul-de-sac at the northern end of the road where there is an access to the subject site (Gate 5).

Endeavour Street has a posted speed limit of 50km/hr with kerbside parking permitted along both sides of the roadway.

O'Connell Road

O'Connell Road is a divided two-way two-lane road with a north-south alignment. The posted speed limit varies from 60km/hr from the southern end of the road to 100km/hr around 300m north of Albion Street. On-street parking is not formalised along O'Connell Road, however, is permitted within the unsealed road verge.

2.3 Surrounding Intersections

The key intersection surrounding the site is at Lowes Mount Road and Albion Street. This is a four-way roundabout intersection, providing connectivity between Duckmaloi Road (from Sydney) and O'Connell Road (from Bathurst) to the site. The local road network and key intersection are illustrated in Figure 3.

Figure 3: Locality Map



Base map source: Google Maps 2017

2.4 Public Transport

Public transport facilities are not provided within the area surrounding the subject site.

2.5 Pedestrian and Cycle Infrastructure

A 1.5m-wide shared path is located along the site frontage on Lowes Mount Road. At the access driveways of Gate 4 and Gate 6, shared path signage is installed to inform drivers of the presence of pedestrians and cyclists using the pathway.

In the general vicinity of the site, a footpath and kerb ramps are provided along the eastern site of Lowes Mount Road and North Street. At the key nearby intersection of Lowes Mount Road and Albion Street, pedestrian refuges are provided on all approaches of the roundabout to assist pedestrians with crossing these roads.

3 Overview of Construction Activities

This section of the report outlines the construction methodology and details for the development at 124 Lowes Mount Road.

3.1 Description of Works

The expansion of the timber processing facility included but is not limited to the addition of a particle board manufacturing line and chipping process to the current MDF manufacturing. The key construction activities included:

- Construction of new first flush and emergency basin to the east of the site
- Demolition of redundant infrastructure
- Construction of new site access and hardstand
- Construction of new industrial buildings to the south-west and north-west of the site to accommodate new plant and equipment, as well as provide storage

- Installation of new plant and equipment in existing industrial buildings
- Reconfiguration of elements of the site surface water management system
- Extensions to existing and new build warehouses
- Layout changes to new builds
- Reclamation of the Spring Dam for additional hardstand and relocation of mechanic's workshop
- Installation of a new electricity generating gas turbine
- Installation of a new high-pressure gas pipe as an ancillary to the turbine and site, within the project area
- Installation of additional reverse osmosis and enclosure to the site water treatment plant
- Construction of additional equipment to new builds as follows:
- Debarker and chipping plants constructed to the south and east of the existing production building. The chippers are contained in concrete and acoustic panels enclosures
- A materials handling building was constructed to the west of the production hall. The building is enclosed with acoustic panelling to the north, south and west side with an opening on the eastern side to allow for material to be brought in using a front-end loader for processing
- A flaker building constructed to the west of the production hall. The building is fully enclosed with acoustic panelling
- Automated storage warehouse building located at the northern end of the site. The building is fully enclosed using sheet metal

3.2 Duration and Staging of Works

Construction works commenced in June 2017 under approved SSD 7016 dated 29 May 2017, and essentially followed the stages outlined below:

- Stage 1 – site works, construction of detention basin and hardstand areas. Construction of the detention basin and drainage swale will be undertaken first in order to ensure that the appropriate erosion and sediment control measures can be implemented for later stages
- Stage 2 – construction of particle board manufacturing facility and installation of related plant
- Stage 3 – alterations and addition to existing MDF site and construction of new automated storage warehouse
- Stage 4 – debarker and chipper building and chip preparation area

The activities described in the above four stages have been completed.

The description of works for Mod 1, Mod 2, Mod 3, Mod 4 and Mod 5 provided in section 1.3 Overview of Works of this Plan are complete. Works associated with Mod 4 are progressing.

3.3 Construction Details

3.3.1 Construction Vehicle Types

Vehicles likely to be generated by construction activities at the site are summarised in Table 2.

Table 2: Construction Vehicles

Works	Vehicle	Quantity
Earthworks	Excavator	1
	Loader	1
	Dozer	1
	Dump Truck	2
	Grader	1
	Roller	1
	Articulated truck	2
Installation	Mobile crane	2
	Concrete truck	1
	Delivery truck	2
	Bobcat	1
Rock Breaking	Rock breaker	1

3.3.2 Work hours

Construction activities shall be undertaken between 7:00am – 7:00pm Monday to Friday and 8:00am – 1:00 pm on Saturday. Construction works are not to be undertaken on Sunday and public holidays.

Regular site operation would continue as per normal, that is, across 24 hours per day for seven days.

Works outside of the aforementioned hours may be undertaken in accordance with consent condition B14, which specifies the following circumstances:

- Works that are inaudible at the nearest sensitive receivers;
- Works agreed to in writing by the Secretary
- For the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or
- Where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.

3.3.3 Works Zone

All activities associated with the construction phase of the project would be carried out wholly within the site premises. Therefore, no construction works or loading/ unloading of construction vehicles would take place outside of the site boundary.

As The Development will be manufacturing a significant amount of the physical infrastructure themselves at the site, the amount of deliveries from other locations will be minimal. It is expected that construction plant would be held offsite until they are required. Once at the site, plant will be stored onsite until project completion.

Any loading and unloading of construction vehicles will be accommodated on the site hardstand areas at the northern and eastern areas of site. In special circumstances, the unloading of large construction plant would be undertaken at the location where it is required for use to eliminate double-handling.

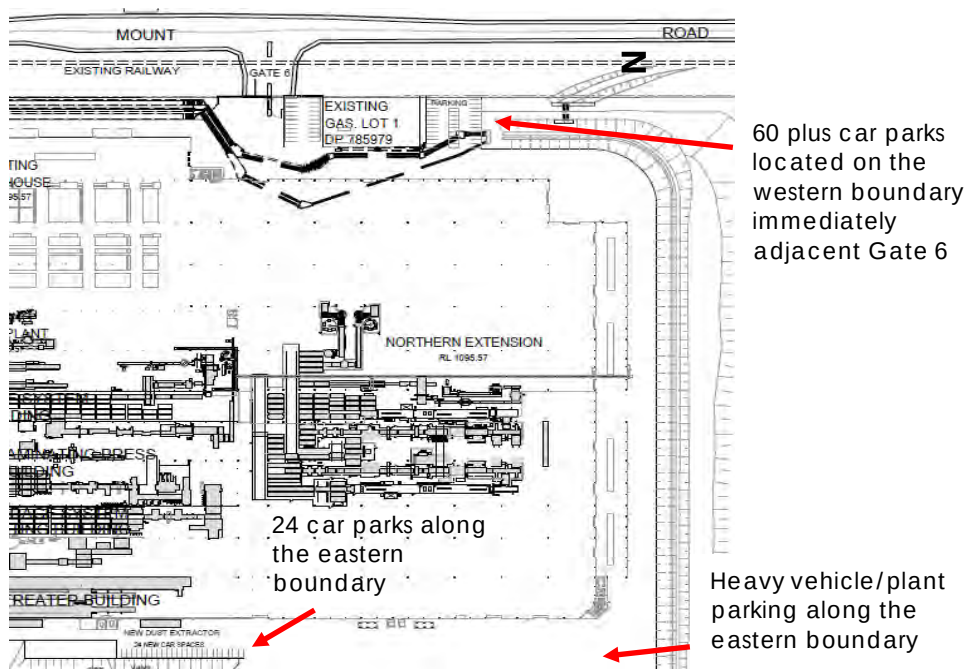
All construction materials and plant are expected to be wholly stored within the works site. It is not expected that any public road would be required for such purposes. As such, there would be no Works zone as part of these works.

However, if temporary use of any public road is required, prior consultation with Council shall be undertaken. All relevant permit approvals would also be acquired prior to the commencement of activities within the roadway.

3.3.4 Construction Staff Parking

Car parking for construction staff is provided on site as shown below in Figure 4. These parking areas are accessible via Gate 6.

Figure 4: Construction Staff Parking



3.4 Site Access and Internal Circulation

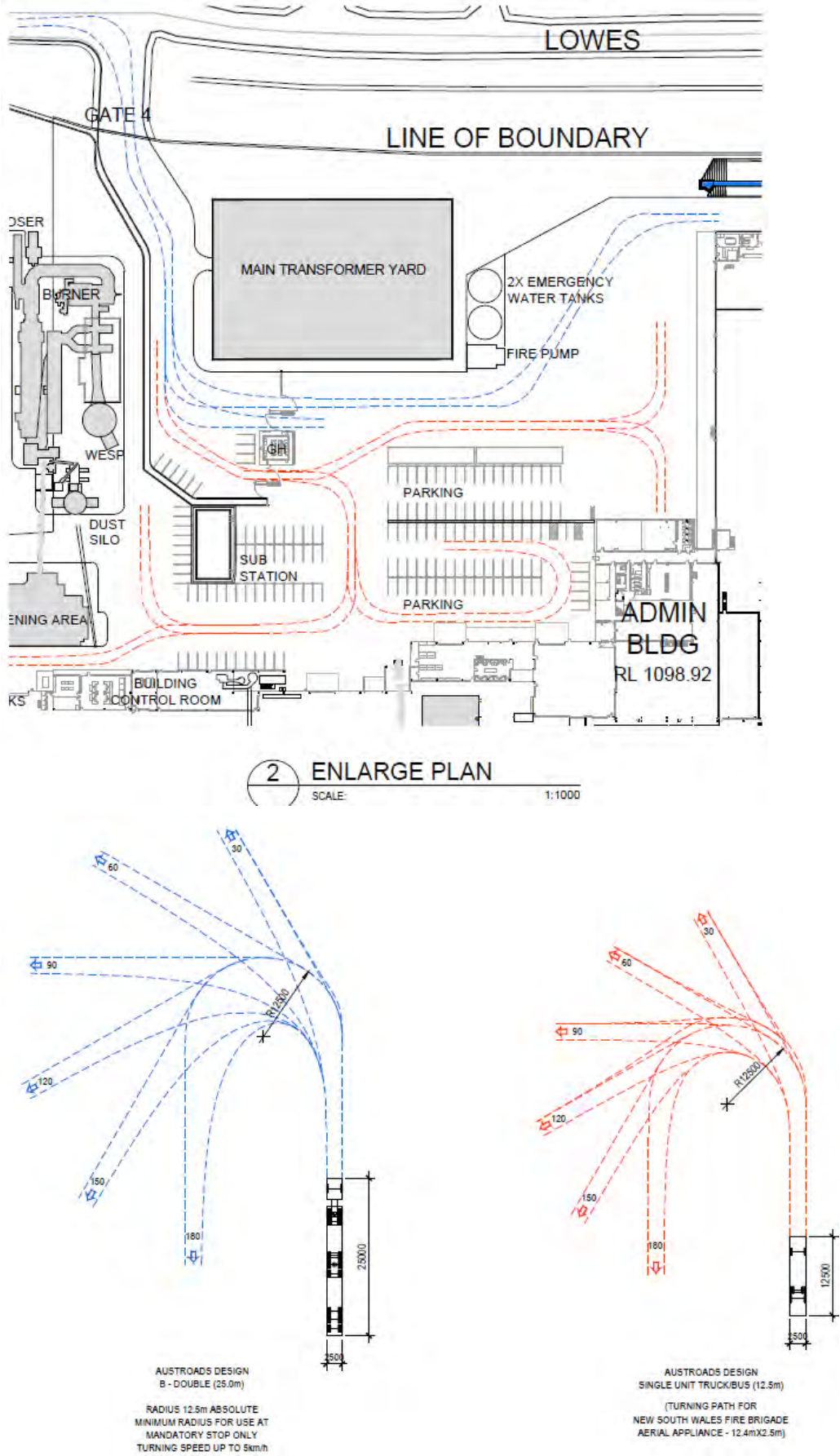
Ingress and egress of construction vehicles will generally be via Gate 6. Access for NSW Rural Fire Service, Fire and Rescue NSW or other emergency vehicles will be via Gate 4.

Construction traffic generation is based on the construction works as described in Section 3, and the number of staff engaged during the construction phase. The delivery of materials that are to be used in the manufacture of the physical infrastructure will be undertaken using 19m semi-trailers and tipper trucks. Traffic due to staffing is expected to comprise only private cars.

The site has an established internal road network with give way/stop controls which can accommodate two-way vehicle flow across the full site. Of the vehicles associated with the construction phase, a 19m semi-trailer is anticipated to be largest vehicle to circulate throughout the site. The internal circulation route is already established to accommodate the turn paths of a heavy vehicle as large as a 25m B-double truck. The turning radius of 25m B-double is 15.0m and 19m semi-trailer is 12.5m. Therefore, a semi-trailer would be able to adequately circulate throughout the site without any implications. The layout of the internal road network is illustrated in Figure 5.

In relation to the rest of the site, the parking area located east of Gate 4 would be considered to have the greatest limitations for vehicle manoeuvrability. Although, this area can still adequately accommodate one-way flow by Rural Fire Service trucks which are typically heavy rigid vehicles that are 12.5m in length and have a turning radius of 12.5m. The swept path for this type of truck circulating through the parking area is illustrated in Figure 5, while a full-scale plan is contained in Appendix C.

Figure 5: Internal Road Network



3.5 Construction Vehicle Haul Routes

Generally, construction vehicles would have origins and destinations in Bathurst and Sydney. Current designated heavy vehicle haul routes to the site would be utilised by construction vehicles travelling from Bathurst and Sydney. These routes include O'Connell Road-Albion Street (from Bathurst) and Duckmaloi Road-Albion Street (from Sydney). Beyond the context of Oberon, the route to/from Sydney includes travelling on Jenolan Caves Road and The Great Western Highway.

All heavy vehicle drivers will be advised of the designated truck routes to/from the site and would be required to adhere to the nominated routes.

The designated truck routes to/from the construction site are as follows:

- Approach routes:
 - o From Bathurst – from the north-west, travel on O'Connell Road, turn left onto Albion Street before turning left onto Lowes Mount Road or Endeavour Street.
 - o From Sydney – from the east, travel on Duckmaloi Road, turn right onto Albion Street before turning right onto Endeavour Street or Lowes Mount Road.
- Departure routes:
 - o To Bathurst – head south on Lowes Mount Road or Endeavour Street, turn right onto Albion Street before turning right onto O'Connell Road.
 - o To Sydney – head south on Lowes Mount Road or Endeavour Street, turn left onto Albion Street before turning left onto Duckmaloi Road.

The routes described above are presented in Figure 6 and Figure 7.

Figure 6: Haul Routes to the Site



Base map source: Google Maps 2017

Figure 7: Haul Routes from the Site



Base map source: Google Maps 2017

During the planning process, the Contractor will schedule all deliveries ahead of time. Therefore, the Contractor will be aware of the approximate arrival times of construction vehicles and would be able to accommodate them onsite upon arrival.

This operation would eliminate the potential for queuing or marshalling/ parking on public streets. As a precaution, construction vehicles are to radio or call ahead to ensure access to the construction site is available.

4 Construction Traffic Assessment

4.1 Construction Traffic Generation

Traffic generation associated with the transportation of plant was undertaken during the establishment of the site and generally limited to off-peak periods. Once plant has been delivered to the site, it will remain onsite until the completion of the construction works.

Construction traffic generation is based on the construction works as described in Section 3, and the number of staff engaged during the construction phase. The delivery of materials that are to be used in the manufacture of the physical infrastructure will be undertaken using semi-trailers and tipper trucks. Traffic due to staffing is expected to comprise only private cars.

Construction traffic generation in the peak construction period is summarised in Table 3.

Table 3: Construction Phase Traffic Generation

Type of Vehicle	Hourly Two-way Movements	Daily Two-way Movements	Number of Staff
Light vehicles	Before shift start (6:00am - 7:00am): 100 inbound trips	240 trips	Maximum 100 per day
	After shift end (7:00pm – 8:00pm): 100 outbound trips		
Heavy vehicles	Up to 10 trips	Up to 60 trips	-

As indicated in Table 3, the maximum daily number of construction staff is 100. Staff will be engaged on a 12-hour shift between 7:00am-7:00pm. Therefore, it is expected that a maximum of 100 cars would be driving into the car park between 6:00am-7:00 am before the start of the shift and driving out between 7:00pm-8:00pm following completion of the shift. This equates to an average of two vehicles accessing or departing the site per minute during the stated hours.

Gate 4 and Gate 6 are indented from the property boundary line approximately 150m and 75m, respectively, from the roadway on Lowes Mount Road. Driveways leading to the gatehouses at the Gates could accommodate around 20 cars (Gate 4) and 10 cars (Gate 6). Furthermore, the right turn lane into Gate 6 on Lowes Mount Road is 60m in length and can store up to eight cars at any time. Thus, traffic generated due to the arrival of construction staff can be adequately accommodated onsite without causing impact on the function of Lowes Mount Road.

During peak construction operation, there are up to 60 two-way heavy vehicle trips expected on a daily basis. In any peak hour, it is anticipated that there will be no more than 10 two-way trips made by heavy vehicles (i.e. five heavy vehicles).

4.2 Cumulative Traffic Generation

Separately, it is noted that normal operation of the Development and Woodchem sites would continue during the construction phase. The Development and Woodchem staff vehicle access is provided at Gate 4 and Gate 5, separated from construction staff access at Gate 6.

Traffic generation due to construction works, as summarised in Table 3, will occur outside of the AM and PM local road network peak periods, namely, 7:30am – 9:00am and 3:30pm – 5:00pm. Therefore, traffic generated due to the construction phase would not have a significant impact on the existing road network during these times.

The start and end of construction work times also occur outside of shift change-overs for employees at the Development and Woodchem sites. The shift times for employees at the latter sites are as follows:

- Morning shift, 6:30am to 2:30pm
- Day shift, 2:30pm to 10:30pm
- Night shift, 10:30pm to 6:30am
- Full day shift, 6:00am to 6:00pm.

Hours of work for construction staff and Porta Products employees along with

thesurrounding road network peak periods are illustrated in Figure 8.

Figure 8: Construction and Operational Staff Working Hours

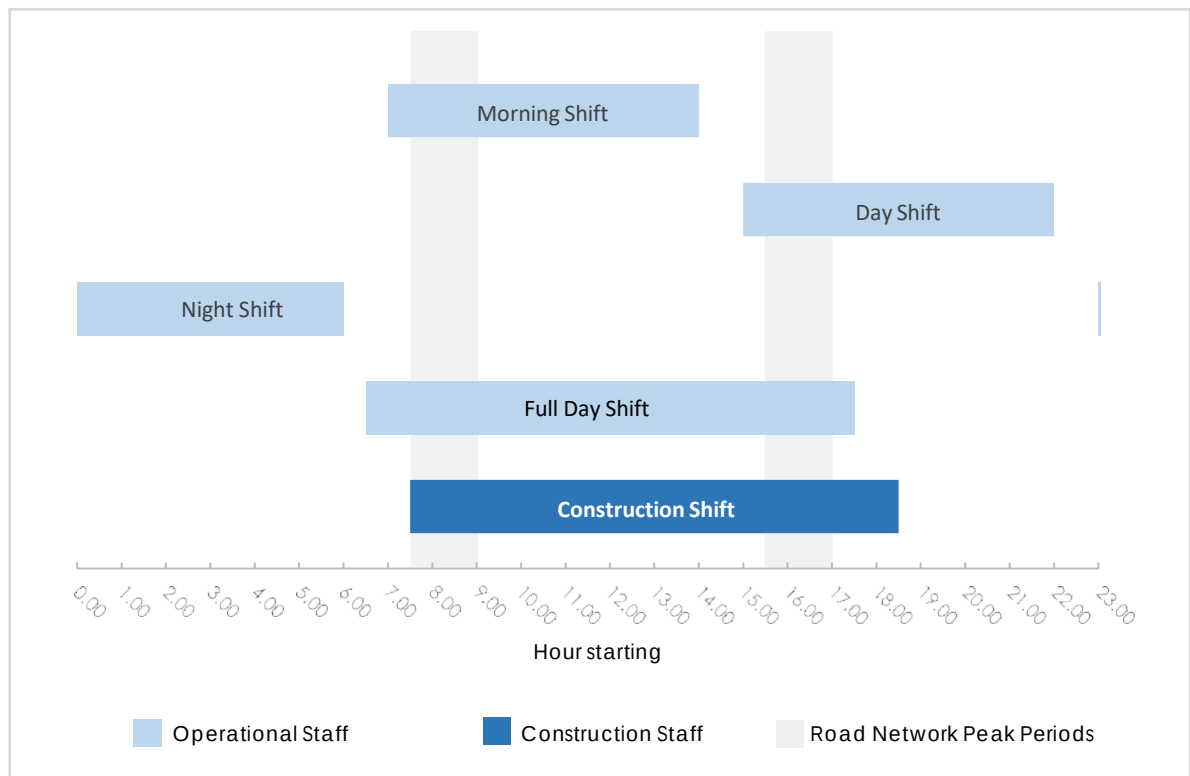


Figure 8 demonstrates that the start and end times of the construction shift fall outside of those times for Porta Products staff. The construction shift also falls outside of the local road network peak periods. Overall, the peak vehicle movements associated with construction traffic are separate to all other busy periods at the site. Therefore, the cumulative impact is considered to be low and is not expected to result in any adverse impact on the surrounding road network.

4.3 Pedestrian and Cycle Access

Pedestrian and cycle access at all site entrances will not be impacted by the construction works, and hence, would remain as existing.

4.4 Security Equipment

The existing site will be fully enclosed by large security gates around the site perimeter.

4.5 Public Transport

The proposed construction activities are unlikely to impact on the public transport in the vicinity.

4.6 Emergency Vehicles and Oversize Vehicles

No special provisions for emergency services vehicles are required as part of any of the construction works.

Oversize flat racks would be used during the construction phase. Over the duration of the construction phase, it is estimated that 82 oversize flat racks and 450 40-foot

containers would be transported to the site.

The Development is to obtain special permits for oversize flat racks and other oversize transport as from the relevant authorities when required.

4.7 Community Information

Traffic movements and construction activities associated with the construction phase of the project are not expected to cause disruptions to the surrounding road network and public transport network. From a traffic and transport perspective, the impact on the local community during construction is anticipated to be negligible.

Where minor and temporary changes to the road network would be applied such as trucks turning left or right on Lowes Mount Road and Horace Street, acceptable measures have been implemented to ensure the safety of road users. This has been detailed in Section 5 of this CTMP.

Community information will be provided on the Website, Community notice boards and signposting at the site entry points. Over the duration of the project, information pertaining to the site expansion would remain available to the public via Department of Planning, Industry and Environment's Major Projects website.

Based on the above, the proposed measures for informing the community of impacts due to the works are considered sufficient, and hence, no other measures are deemed to be required.

5 Construction Traffic Management Measures

Two site specific traffic control plans (TCP) were prepared and implemented during the initial construction works associated with SSD 7016 approval date 29 May 2017. Since then, site access Gates 4 and 6 have become fully operational and the activities under the initial approval are complete, making these TCPs obsolete.

If it is identified that advisory road signage is necessary, it shall be installed in accordance with AS1742.3 Manual of uniform traffic control devices – Traffic control devices for works on roads and the RMS Traffic Control at Worksites Manual. Signs shall be installed and maintained throughout the construction period.

5.1 Vehicle Access

All vehicles are to enter and exit the construction site in a forward direction. Vehicles must not be permitted to reverse into the site from the road unless prior approval is obtained. It is noted that vehicles will not be required to reverse into the site as there is sufficient space onsite for vehicles to circulate internally and exit in a forward direction.

Construction vehicles shall radio/ call the site office on approach to the site to ensure access to the site is available. All loading and unloading shall be undertaken onsite during the approved work hours. As noted previously, queuing or marshalling of

construction vehicles shall not be permitted on public roads.

During the transportation of materials to/from the site, if there are any materials spilt onto the roadway, site personnel and equipment shall rectify the issue accordingly, subject to appropriate OH&S provision.

All truck drivers are required to read and sign the Drivers Code of Conduct, which informs drivers of the acceptable behaviour when operating a heavy vehicle. The Code provides instructions to truck drivers on where access to the site is permitted as well as the approved haul routes to the site.

The Drivers Code of Conduct is contained in Appendix A of this CTMP.

5.2 Truck Routes

Protocols must be in place to ensure:

- Site induction shall include procedures for accessing the site;
- Drivers shall adhere to the nominated truck routes, as shown in Figure 6 and Figure 7;
- Drivers shall be aware of pedestrians and cyclists in the vicinity of the site; and
- Driver shall be aware that posted speed limit on Albion Street, O'Connell Road, and Lowes Mount Road is 60km/hr while the appropriate speed limit on Horace Street is 50km/hr.

5.3 Site Inspections and Record Keeping

The construction operation shall be monitored to ensure that it proceeds as set out in the Contractor's Construction Management Plan. A daily inspection before the start of construction activity shall take place to ensure that conditions accord with those stipulated in the plan and that there are no potential hazards.

To assist the orderly resolution of issues and complaint the Construction Site Manager will keep a register itemising all report incidents and adverse traffic matters. The incident register is to include details such as date and time, location, driver and vehicle details contact details of the persons involved and a recount of the incident.

Incidents and complaints are to be managed in accordance with the procedures documented in the Construction Environmental Management Plan (CEMP).

5.4 Site Induction

All staff employed on the site by the Contractor shall be required to undergo a site induction.

The induction shall include permitted access routes to and from the construction site for site staff and delivery vehicles, as well as standard environmental, OH&S, driver protocols and emergency procedures.

Construction staff are to be informed of the appropriate access gate of which they are expected to arrive to carry out their induction.

Table 4 summarises a comprehensive list of the measures and controls currently enforced at the site by the Contractor.

Table 4: Australian Panels Control Documents

Form/ Document	Description
Site Induction	- The form ensures that visitors or staff on the site are inducted about the site features, PPE requirements and procedures for reporting and emergency. - The form is to be signed by both site inductor and inductee.
Site WHS Management Plan	This document lists: - Responsibilities of all people working on site - Training and induction procedure - Risk management procedure - Plant and equipment requirements and controls - Electrical, hazardous chemical reporting and control measure - Fitness for work requirements - Managing hazards - Site safety rules - Legislation and references - Existing form and documents This document is to be signed by subcontractors and Person with WHS responsibilities
Driver Behaviour	- This document clarifies duty of care and responsibilities of all workers who drive a company vehicle - The document is to be signed by the drivers
Log Haulage Induction Manual	The document lists and assess if the driver understand and acknowledge the following: - Drivers' duties of care - Site entry requirements - PPE safety requirements - Traffic regulation on site, incident report, emergency procedures, - Responsibilities and consequence of breaching procedure Porta Products Assessor will pass or fail the driver according to his understanding of the above points. The manual is to be signed by both driver and Porta Products assessor
Standard Operating Procedure	Listing of required licenses, operational procedure for log haulage of log trucks and loaders

6 Monitoring Program

The following monitoring program shall be implemented to ensure that the CTMP and Drivers Code of Conduct performs effectively and achieves the objectives set out in this CTMP.

6.1 Implementation of CTMP and Drivers Code of Conduct

The CTMP and Drivers Code of Conduct shall be included with all new site inductions for heavy vehicle drivers regularly accessing the site. One-off truck delivery drivers must agree to abide by the Drivers Code of Conduct by having read and signed the Code.

Prior to commencement of construction works, all drivers shall be provided with a copy of Drivers Code of Conduct. It is intended that all truck drivers will have signed the Drivers Code of Conduct declaration and agreed to be bound by its behavioural requirements before entering the site.

A copy of the Code has been included in Appendix A of this report.

6.2 Complaints/ Compliments Register

A complaints and compliments register detailing matters such as truck driver behaviours and truck related noise issues shall be developed and maintained by The Development.

The register shall be reviewed every three months to determine if any systematic issues are arising from the implementation of the CTMP and Drivers Code of Conduct.

Positive and negative feedback shall be documented using a Customer, Community and Stakeholder Complaint/ Compliment Form. The Development shall gather as much information as possible which will allow them to take appropriate action. Appropriate action may include:

- Arranging a meeting to discuss and/ or resolve issues
- Calling the customer, member of community or stakeholder to acknowledge feedback
- Writing a letter responding to the feedback.

Drivers shall also be provided the opportunity to give feedback on the implementation of the Drivers Code of Conduct and other measures which could be considered for implementation into the Code.

6.3 Hazards and Incidents Register

A procedure for detailing hazards and incidents relating to safety, environment and process during the construction phase has been established by The Development in the HSEQ Management System. The system and associated documents have been prepared

as a requirement under the WHS Regulations 2011.

The HSEQ Management System details the responsibilities specific to all stakeholders involved in the construction phase, including:

- Borg Construction, as the principal contractor
- Porta Products Officers
- Construction Manager
- Site Supervisor

- Workers, contractors and visitors
- WHS Coordinator
- Group HR and WHS Manager.

6.3.1 Hazard Reporting

Hazards are to be either addressed by the worker who first observes it, or if that is not reasonably practicable and safe, then it must be reported to the Construction Manager or Supervisor to address. This shall apply to all workers including contractors.

6.3.2 Injury Reporting

All injuries are to be reported in the 'Register of Injury' book which shall be kept on site in the site office or where the primary first aid kit is kept. A copy of the page shall be forwarded to the WHS Team within 24 hours of the injury and where required it shall be accompanied by a completed Incident Report Form. Any injury requiring medical treatment must be reported to the Australian Panels Return to Work Coordinator immediately.

If the injury is of a serious nature and is deemed a 'Notifiable Incident' under the criteria of the State or Territory Regulator then the Construction Manager or other person in control shall contact the Australian Panels Group HR and WHS Manager who will in turn contact the relevant authority. For clarification of what injury is deemed as Notifiable refer to the WHSMS Procedure Incident Management and Investigation available on SharePoint.

6.3.3 Near Miss/ Damage and Environmental Incident Reporting

As soon as is reasonably practicable an Incident Report Form shall be submitted to the WHS Team for any near miss, damage or environmental incident. In circumstances where the incident involves the potential escape of substances from the site this must be conveyed to Porta Products Officers as soon as possible should authorities need to be notified.

Where the incident is deemed a 'Dangerous Incident' such as; an electric shock, a collapsed trench, excavation or structure, the fall or release of an object from height, or collapse or overturn of plant, the Group HR and WHS Manager shall be informed as soon as possible in order for them to contact the Regulator.

7 Conclusion

This CTMP has been prepared to document the construction activities and associated construction traffic management measures necessary to facilitate the expansion of the existing timber panel manufacturing facility at 124 Lowes Mount Road, Oberon.

Based on the findings contained in this CTMP, it is concluded that:

- The construction of the proposed development is expected to generate, in the busiest hour, 100 vehicle trips by staff either entering or departing the site. The busiest periods for vehicles entering and exiting the site are anticipated to be between 6:00am – 7:00am (before commencement of shift) and 7:00pm –

8:00pm (following completion of shift), respectively.

- On average, the arrival rate for construction staff at the site would be around two vehicles per minute. This is not expected to cause any noticeable impacts on the adjacent roadway (Lowes Mount Road) as any queued vehicles would be accommodated within the site's driveways at Gate 4 and Gate 6.
- In the busiest hours, there would be up to 10 two-way heavy vehicle trips to the site which would be accommodated onsite upon arrival.
- The start and end times of the construction shift occur outside of those times for Porta Products staff and the local road network peak periods. Therefore, the cumulative impact is considered to be low and is not expected to cause any adverse impacts on the surrounding road network and regular site operation.
- Special permits for oversize vehicles are to be obtained from relevant authorities when required.
- No pedestrian or cyclist facilities would be impacted as a result of the construction activities
- It is proposed for all loading and unloading of trucks to occur onsite, and without any interruption on surrounding streets
- To ensure safety of motorists, pedestrian and cyclists around the site, driver protocols shall be enforced and monitored during the construction phase as outlined within this CTMP and the Drivers Code of Conduct.
- Truck drivers are to be instructed to use the designated truck routes to/from the site.

Appendix A

Drivers Code of Conduct



Borg Construction Drivers Code of Conduct

This document sets out the requirements for all employees and contractors to Borg Construction.

DECLARATION

I, the undersigned, hereby agree to abide by Borg Construction's Driver Code of Conduct for the transportation of construction materials to/ from the site in Oberon in a safe manner.

I have read and understand the requirements outlined in the Code and will, to the best of my ability, comply and assist with their implementation, requirements and ongoing administration.

Truck Driver

Full Name: _____

Organisation: _____

Signature: _____

Date: _____

General Requirements

The Drivers Code of Conduct would be distributed to all sub-contractors with fleet accessing the site prior to the commencement of works. The Code would be provided to each driver to read and sign to confirm they have understood and pledge to follow the haulage instructions. Once completed, a copy of the signed Code would be supplied by the sub-contractor to The Development for record keeping.

Heavy vehicle drivers hauling to and from the subject site must:

- Have read and signed the Drivers Code of Conduct (this document) prior to entry to the site;
- Hold a valid driver's license for the class of vehicle that it being operated;
- Operate the vehicle in a safe manner while on site and public road network;
- Comply with the direction of authorised site personnel when onsite;
- All drivers are to use seat belts when driving; and
- All drivers are to drive to the sign posted speed limit, both on public roads and within the site.

Site Access

All access to the construction site is to be via Gate 6 or Gate 4 on Lowes Mount Road, Gate 5 off Endeavour Street.

Heavy Vehicle Haul Routes

All heavy vehicle drivers must adhere to the designated truck routes to/from the site as follows:

- Approach routes:
 - o From Bathurst – from the north-west, travel on O'Connell Road, turn left onto Albion Street before turning left onto Lowes Mount Road or Endeavour Street.
 - o From Sydney – from the east, travel on Duckmaloi Road, turn right onto Albion Street before turning right onto Endeavour Street or Lowes Mount Road.
- Departure routes:
 - o To Bathurst – head south on Lowes Mount Road or Endeavour Street, turn right onto Albion Street before turning right onto O'Connell Road.
 - o To Sydney – head south on Lowes Mount Road or Endeavour Street, turn left onto Albion Street before turning left onto Duckmaloi Road.

Heavy Vehicle Speed

Truck drivers must comply with the Australian Road Rules with travelling along public roads. Drivers are to observe the posted speed limits and adjust speed appropriately to suit the road and weather conditions at the time.

Speed limits on route to the site from Bathurst and Sydney vary between 40km/hr (school zones) up to 100km/hr. The maximum speed that a vehicle must travel is the signposted speed. Warning signs indicating a reduction in speed ahead must also be obeyed. These signs are shown below.

NSW Road Speed Limit Signs



Speed Reduction Ahead Warning Sign



The speed limit within the site is 15km/hr (unless sign posted otherwise in an area) which is to be strictly maintained.

Heavy Vehicles Driver Fatigue

The heavy vehicle driver fatigue law commenced in NSW in 2008 and applies to trucks and truck combinations over 12 tonnes GVM (however, Ministerial Exemption Notices may apply).

Under the law, industry has the choice of operating under three fatigue management schemes, namely:

1. Standard Hours of Operation
2. Basic Fatigue Management (BFM)
3. Advanced Fatigue management (AFM).

All heavy vehicle drivers associated with the construction works at the subject site must be aware of their adopted fatigue management scheme and operate within its requirements.

Heavy Vehicle Compression Braking

Compression braking is not permitted within the vicinity of the Oberon township, that includes, internal to and surrounding the subject site. Compression braking through rural areas of the haul route should only be used when required and for safety reasons.

Heavy Vehicle Noise

Permitted times of construction works at the site are as follows:

- Monday to Friday - 7:00am – 7:00pm
- Saturday - 8:00am – 1:00 pm.
- Sunday and public holidays – no construction works permitted.

Load Covering

All loaded trucks arriving at and departing from the construction site are required to have an effective cover over their load for the duration of the journey. The load cover may be removed only upon arrival at the destination (i.e. at the site).

Care must be taken to ensure that all loose debris from vehicles and wheels is removed prior to exiting the site.

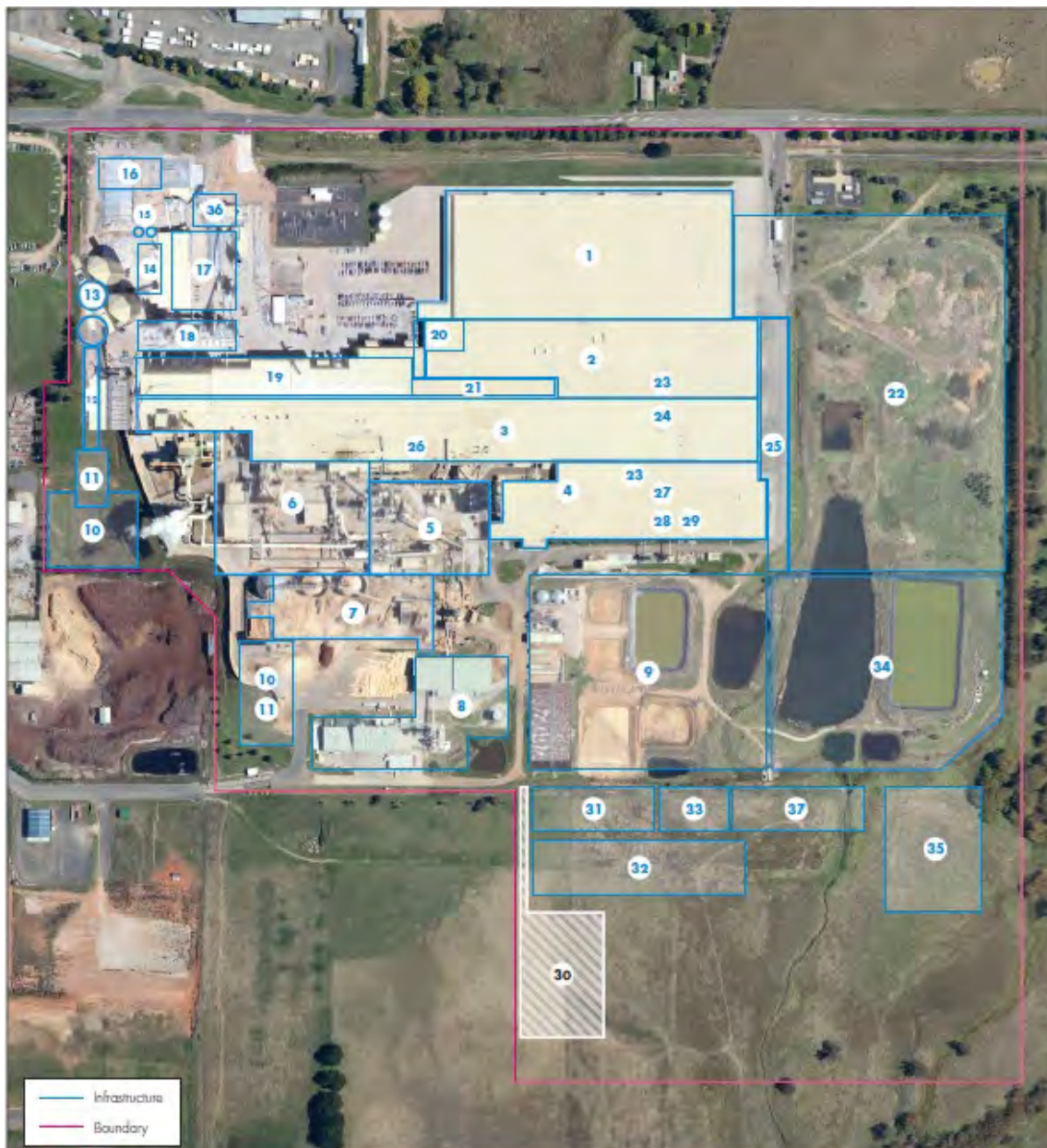
Site management is to monitor loose material on the side of the haul route and take appropriate action regularly.

Other Safety Considerations Along the Haul Route

Heavy vehicle drivers should be aware of the following:

- Concealed driveways – drivers are to drive with caution around any signed concealed driveways
- Wet weather safety – drivers should adjust their driving speed to suit weather condition at the time.
- Wild life on country roads – drivers should stay alert to kangaroos, wombats and stray stock on haul routes from Bathurst and Sydney.

Appendix B Site Infrastructure



Infrastructure Key

1 Warehouse 2 Mouldings Plant 3 Existing Manufacturing Plant 4 Existing Manufacturing Plant 5 Heat Plant 6 Manufacturing and Processing Plant 7 Log Yard 8 Lot 22 DP1017457 – (not included in submission) 9 Water Recycling Plant 10 Log Yard 11 Enclosed Chipper / Debarler 12 Conveyor 13 Silos	14 Flaking Building 15 Silos 16 Building for Fines and Sawdust Storage 17 Dryer Area 18 Screening Area 19 New Press Production Hall 20 New Administration Area 21 Automated Particle Board Warehouse 22 Automated Storage Warehouse System 23 Automated Storage Warehouse System 24 Additional laminating Line 25 Building Extension 26 Additional Sanding Line	27 Automated Paper Storage 28 Impregnated Paper Tractor 29 Impregnated Paper Tractor 30 Proposed Hardland 31 Effluent Storage 32 First Flush Basin 33 Emergency Catchment 34 Hardland Include Western Area 35 Hardland Include Eastern Area 36 Gas Turbine 37 Effluent Storage

Appendix C

Internal Road Network Site Plan

The Transport Planning Partnership
Suite 402 Level 4, 22 Atchison Street
St Leonards NSW 2065

P.O. Box 368
Summer Hill NSW 2130

02 8437 7800

info@tpp.net.au

www.tpp.net.au

Appendix E – Unexpected Contaminated Land Finds Protocol

Unexpected Finds Protocol – Contaminated Land

Discovery of potentially contaminated soil / material. STOP WORK IMMEDIATELY in affected area.
Immediately contact Project Manager for assistance. Project Manager to liaise with Environmental Manager and Safety Officer.
Undertake a contamination assessment by a suitably qualified and experienced contaminated land expert. The report is to determine whether the land is suitable (for the intended land use) or can be made suitable through remediation.
Where the investigations identify that the site is suitable for the intended operations and that there is no need for a specific remediation strategy, measures to identify, handle and manage potential contaminated soils, materials and groundwater shall be identified and incorporated into the Construction Environmental Management Plan.
Where the investigations identify that the site is suitable for the intended operations and that a remediation strategy is required, the contamination assessment shall include a remediation strategy for addressing the site contamination, and how the environmental and human health risks will be managed during the disturbance, remediation and/or removal of contaminated soil or groundwater, and be incorporated into the Construction Environmental Management Plan.
Where remediation is required, a Site Validation Report shall be prepared verifying that the site has been remediated to a standard consistent with the intended land use.

Appendix F – Mobile Wood Chipper Operation Management Plan

EMS0029

Mobile Wood Chipper Operation

Management Plan

Porta Products

124 Lowes Mount Road, Oberon NSW

Porta Products Pty Ltd

5 September 2024

This document should be read in conjunction with EMS0060 Construction Environment Management Plan, EMS0001 Operational Environmental Management Plan, EMS0061 Construction Noise Management Plan and EMS0005 Operational Noise Management Plan

Revision History

Rev No.	Revision Date	Author	Details	Authorised	
				Name	Signature
0	28/03/17	Carly McCormack	Draft for Site Consultation	Victor Bendevski	
1	27/04/17	C McCormack	Final Draft	V Bendevski	
2	01/06/17	C McCormack	Final	V Bendevski	
3	02/11/18	Jacqueline Blomberg	Review as per SSD7016 C10	V Bendevski	
4	8/07/20	J Blomberg	Review as per SSD7016 C10 No changes	V Bendevski	
5	2/11/21	J Blomberg	Review as per SSD7016 C10 (d) Updates to section 1 and 6	A Brady	
6	16/08/22	Andrew Brady	Review as per SSD7016 C10 (a) & (c) Name change, include MOD 4	J Blomberg	
7	25/08/23	A Brady	Review as per SSD7016 C10(c)	V Bendevski	
8	5/09/24	A Brady	Review as per SSD7016 C10 (a) & (c) and name change, include MOD 5	A Brady	
9	14/08/25	A Brady	Review as per SSD7016 C10(c) and name change	A Brady	

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1 Introduction

This Management Plan has been prepared for the Porta Products Pty Ltd (Formally Borg Manufacturing, Borg Panels, Australian Panels) Oberon site (and will be referred to herein as the 'Development')

The purpose of this Mobile Wood Chipper Operation Management Plan is to minimise noise impacts on nearby noise sensitive receivers resulting from operation of Mobile Wood Chippers at The Development.

Mobile chipping plant are the highest noise emitters on site by a significant margin. Operation of mobile chippers does not form part of 'normal' operations. They are typically only used during breakdown of electric plant.

The Noise Impact Assessment prepared by EMM (Formally Global Acoustics) in May 2016 for the initial Development Consent SSD 7016 (approved 29 May 2017) predicted minor to moderate exceedances for noise sensitive receivers south of site for the day period when mobile chipping plant is operational during prevailing (enhancing) meteorological conditions.

Subsequent noise impact assessments prepared by EMM in January 2018 for MOD 1, in January 2019 for MOD 2, in March 2020 for MOD 3 and in September 2021 for MOD 4 concluded that the modifications to the Porta Products Oberon timber manufacturing facility would not materially change site noise emission levels and that continued compliance is predicted for all receptors.

This Mobile Wood Chipper Operation Management Plan documents mitigation and management measures to assist the Development in meeting noise limits. Exceedances can be avoided through monitoring weather and restricting use of mobile chipping plant during periods of meteorological enhancement.

Routine noise compliance monitoring is undertaken to measure compliance with noise limits.

2 Compliance Requirements

2.1 Development Consent

The Development Consent SSD 7016 conditions relevant to mobile chipper operation that have been considered in this Plan are detailed in Table 1.

Table 1 – Development Consent Conditions

No.	Requirement	Document Reference
	Mobile Wood Chippers	
B22	During construction, the Applicant must ensure that mobile wood chippers are not operating simultaneously with rock/concrete breaking activities.	Section 4.4

B23	The use of mobile wood chippers on site is restricted to the day time period only and to periods of breakdown or maintenance of the permanent wood debarkers and electric chippers, and must not operate under the following conditions: a) in the open when winds are from the north-west through to the north-east (315°, through 0°, to 45°); and b) when winds are from the west through to the east (270°, through 0°, to 90°), two or more mobile wood chippers are not to operate simultaneously.	Section 4.2 Section 4.3 Section 4.1 Section 4.1
B24	Within 6 months of the date of this consent or the commencement of construction of the Project, whichever occurs first, the Applicant must prepare a Mobile Wood Chipper Operation Management Plan for the Development. The plan must outline how the requirements under Conditions B22 and B23 will be achieved and must include any reasonable and feasible mitigation measures to limit operation to periods of breakdown or maintenance of the permanent debarkers and electric chippers.	This Plan Section 4.3

Development Consent SSD 7016 also stipulates noise limits, which are not to be exceeded, for noise generated by the Development as shown in Table 2.

Table 2 Noise Limits dB(A)

Location	Day LAeq (15 minute)	Evening LAeq (15 minute)	Night LAeq (15 minute)
All sensitive receivers	55	50	45

2.2 Environment Protection Licence

The Environment Protection Licence 3035 (EPL 3035) conditions relevant to mobile chipper operation that have been considered in this Plan are detailed in Table 2.

EPL 3035 also stipulates noise limits, which are not to be exceeded, for noise generated by the Development. These limits mirror those noted in Table 2.

Table 3– Environment Protection Licence Conditions

No.	Requirement	Document Reference
L5	Hours of Operation	
L5.1	The Hours of Operation for any mobile log chipper used on the premises are limited to 7:00am to 6:00pm Mondays to Saturdays and 8:00am to 6:00pm Sundays and Public Holidays.	Section 4.2

3 Meteorological Monitoring

The Development operates a meteorological monitoring station located on-site, south east of the Spring Dam. This is a real-time weather station that monitors wind speed, wind direction, air temperature, rainfall, barometric pressure, relative humidity, dew point, evaporation, peak wind gust and solar radiation.

Wind directional data clearly signifying when one or two mobile chippers may be operated, or when they are not to be operated, is to be displayed as a live feed from the meteorological station in full view of the Log Yard Supervisor. The Supervisor will review data and advise operators when wind direction prevents operation and to shut down equipment.

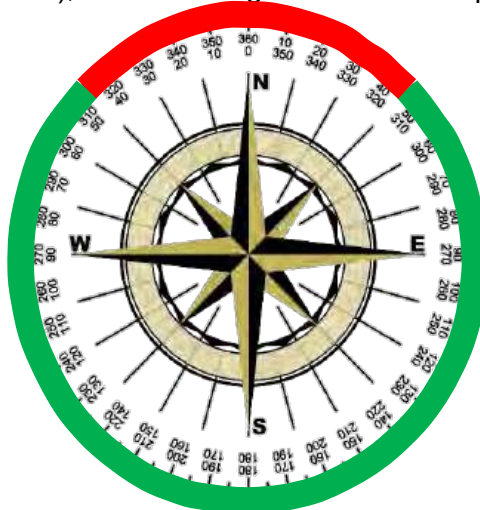
Note: If wind speed falls below 5 km/hr (1.4 m/s) the wind direction sensor (wind vane) becomes inaccurate.

4 Operating Conditions

4.1 Wind Direction

One Mobile Chipper

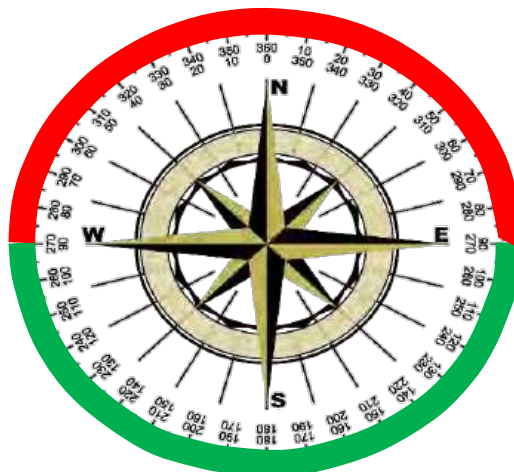
One mobile chipper **MAY** be operated when wind direction is from north-east through to north west (45°, through 180°, to 315°), as shown in green on the compass below.



One mobile chipper must **NOT** operate when wind direction is from the north-west through to the north-east (315°, through 0°, to 45°), as shown in red on the compass above.

Two Mobile Chippers

Two mobile chippers **MAY** be operated simultaneously when wind direction is from east through to west (90°, through 180°, to 270°), as shown in green on the compass below.



Two mobile chippers must **NOT** operate simultaneously when wind direction is from the west through to the east (270°, through 0°, to 90°), as shown in red on the compass above.

4.2 Timing

Mobile wood chippers are **ONLY** to be operated during the daytime period, defined as:

- 7:00am to 6:00pm Monday to Saturday
- 8:00am to 6:00pm Sundays and Public Holidays

4.3 Electric Chippers

The use of mobile wood chippers on site is restricted to periods of breakdown or maintenance of the permanent wood debarkers and electric chippers.

4.4 Rock/Concrete Breaking Permit to Work

Mobile wood chippers are not to operate simultaneously with rock/concrete breaking activities.

Construction activities involving rock/ concrete breaking require a completed Permit to Work to be submitted to both the Construction Project Manager and Log Yard Supervisor. Approval of both parties is required prior to commencement of rock/concrete breaking activities.

5 Responsibilities

Table 4 Roles & Responsibilities

Position	Responsibility
Area Manager	Ensure that the requirements of this Plan are met.
Log Yard Supervisor	Inform, instruct and train operators regarding the requirements of this Plan. Monitor and review meteorological station data and advise when mobile wood chipper operation to cease Enforce and discipline staff for non-conformance of this plan, where necessary.
Mobile Chipper Operators	Operate mobile wood chippers in accordance with this Plan.
Environmental Manager	Review, and if necessary revise, this plan following a modification to either Development Consent SSD 7016 or EPL 3035, or submission of an incident report to either Department of Planning and Environment or Environment Protection Authority.

6 References

Global Acoustics (May 2016). *Borg Panels Timber Panel Processing Facility Oberon NSW – Noise and Vibration Impact Assessment*. Prepared for Borg Manufacturing.

Global Acoustics (January 2018) *Borg Panels Oberon, S96(1A) modification to Development Consent SSD 7016*

Global Acoustics (January 2019) *Borg Panels Oberon, S96(1A) modification to Development Consent SSD 7016*

Global Acoustics (March 2020) *Borg Panels Oberon, Modification 3 to Development Consent SSD 7016*

Global Acoustics (September 2021) *Borg Panels Oberon. Modification 4 to Development Consent SSD 7016*

Appendix G – Spring Fed Dam Reclamation Plan

EMS0099

Spring Fed Dam Reclamation Plan

Porta Products

124 Lowes Mount Road, Oberon NSW

Porta Products Pty Ltd

14 August 2025

This document should be read in conjunction with EMS0060 Construction Environment Management Plan, EMS0006 Surface Water Management Plan and EMS0008 Erosion & Sediment Control Plan.

Revision History

Rev No.	Revision Date	Author	Comments	Details	Authorised	
					Name	Signature
0	29/03/19	Jacqueline Blomberg		Draft	Victor Bendevski	
0.1	28/05/19	J Blomberg	Following DILW/NRAR review	Draft	V Bendevski	
1	28/05/19	J Blomberg	For issue		V Bendevski	
2	24/08/22	Andrew Brady		As per MOD 4 condition B33B	V Bendevski	
3	25/08/23	A Brady		Review and update as per SSD 7016 condition C10(c)	V Bendevski	
4	5/09/24	A Brady	Name change, inclusion of MOD 5	Review as per SSD7016 C10 (a) & (c)	A Brady	
5	14/08/25	A Brady	A Brady	Review and update as per SSD 7016 condition C10(c) and name change	A Brady	

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Appendices

Appendix A Edge Geotechnical *Borg Panels Timber Processing Facility Modification 1 (MOD 4) Comments on Full Reclamation of Spring Fed Dam (17 May 2021).*

Appendix B Geosyntec *Review of Groundwater Access associated with the Spring Fed Dam Reclamation, Borg Panels Timber Processing Facility, Oberon NSW (21 February 2022).*

Appendix C Envirowest Consulting – *Partial filling of Spring Dam 124 Lowes Mount Road, Oberon NSW (28 June 2022).*

1 INTRODUCTION

1.1 Background

This Management Plan has been prepared for the Porta Products Pty Ltd (Formally Borg Manufacturing, Borg Panels, Australian Panels) Oberon site (and will be referred to herein as the 'Development')

The development operates as an existing Medium Density Fibre (MDF) and particleboard production facility in Oberon, NSW, manufacturing a range of Customwood MDF products and particleboard products including:

- Standard MDF;
- Moisture Resistant MDF;
- E0 (Low Formaldehyde Emitting) MDF;
- Ultraprime MDF Mouldings;
- Standard particleboard;
- Moisture resistance particleboard;
- Particleboard flooring products for structural applications;
- Decorative Laminated MDF and particleboard; and
- Treated paper for the lamination of MDF and particleboard.

On 29 May 2017 Development Consent SSD 7016 was granted by the Minister for Planning to construct a particleboard manufacturing facility, modify the existing MDF manufacturing facility and undertake general site works at the existing Australian Panels site located on 124 Lowes Mount Road, Oberon.

On 20 November 2018 modification of Development Consent SSD 7016 MOD 1 was approved by the Director, Industry Assessments as a delegate of the Minister for Planning under section 4.55(1A) of the *Environmental Planning and Assessment Act 1979*. This modification included for the extension of the warehouse at the north-east area of the site which required reclamation of approximately 30% of the manmade spring fed dam to provide suitable structural footing for the building and driveway and allowed sufficient space for the changes to the surface water management system.

On 20 May 2022 modification of SSD 7016 (MOD 4) was approved by the Team Leader, Industry Assessments which included the reclamation of the remaining area of the spring fed dam to enable the increase in size of the hardstand at the north-eastern corner of the site to facilitate the relocation of the existing site mechanic's workshop.

1.2 Purpose and Objectives

The purpose of this Plan is to:

- Address the relevant conditions of Development Consent SSD 7016 including modifications and to manage the reclamation of the remaining area of the spring fed dam at the Development.

The objectives of the Plan are to:

- Identify potential impacts to the water resulting from construction activities, specifically the reclamation works;
- Implement appropriate mitigation and management measures as required, ensuring they meet relevant legislative requirements;
- Address comments received concerning the construction works approved in modification 4 to reclaim the remaining portion of the spring fed dam; and
- Define a protocol for reporting environmental incidents.

1.3 Structure of this Plan

This Spring Fed Dam Reclamation Plan (the Plan) was initially developed to manage potential impacts to the dam during the reclamation works to a portion of the dam, and to satisfy requirements set out in conditions SSD 7016 C1, C9 and B33A. Those works were completed in 2020.

The Development received approval from DPE on 20 May 2022 to undertake works to reclaim the remainder of the spring dam (MOD 4). Therefore, this Plan is now updated to include management & mitigation measures for these works as specified in condition B33B.

This is a sub plan to EMS0060 Construction Environmental Management Plan (CEMP) and includes information on the following:

- Section 2 – Legislative, Regulatory & License Compliance
- Section 3 – Overview
- Section 4 – Environmental Impact Assessment
- Section 5 – Mitigation & Management Measures
- Section 6 – Fill Design & Methodology
- Section 7 – Inspections & Reporting
- Section 8 – Plan Review

1.4 Consultation

Consultation with the NSW EPA, the Department of Planning and Environment (DPE), the Natural Resources Access Regulator (NRAR) and DPE Water was undertaken during the assessment of SSD 7016 modification 4 application.

The Final Plan will be submitted to the Secretary DPE for approval prior to the commencement of construction works associated with the reclamation of the remaining section of the spring fed dam.

1.5 Responsibilities

Name	Title	Responsibility
Zac Kay Zac Kay	Construction Coordinator (CM)	• Instruct employees/contractors on how to comply with environmental procedures including this Plan and requirements relevant to their respective work activities • Ensure SS is aware of and complies with the environmental obligations as detailed in this Plan • Evaluate effectiveness of environmental controls associated with the works detailed in this Plan • Implement and support remedial measures as recommended by the EM • Engage with EM and environmental consultants where required to provide support in implementing this Plan • Investigate any environmental incidents or complaints with EM where required, and ensure corrective action is implemented • Manage employees/contractors and construction activities on a daily basis to ensure the appropriate environmental controls are implemented and maintained • Undertake daily site inspections of environmental controls • Implement actions identified as a result of site inspections or reported environmental issues • Report any environmental management concerns or incidents immediately to the Environmental Manager
Andrew Brady	Environmental Manager (EM)	• Train employees/contractors on how to comply with environmental procedures including this Plan • Undertake regular site inspections, documented at least monthly to ensure environmental issues are identified and managed and controls are adequate • General environmental compliance observations and recommend actions where necessary • Investigate any environmental incidents or complaints with CM or SS where required, and ensure corrective action is implemented • Track compliance against the Conditions of Consent for the scope of works detailed in this Plan • Provide necessary support CM/SS • Conduct review as per Section 8 of this Plan

2 Legislative, Regulatory & Licence Compliance

2.1 Relevant Legislation

Key environmental legislation for the Existing Development includes:

- *Protection of the Environment Operations Act 1997; and*
- *Environmental Planning and Assessment Act 1979.*

Other relevant legislative framework associated with the spring dam reclamation works is the *Water Management Act 2000*. The NSW Aquifer Interference Policy is the governing policy for licensing and assessment of aquifer interference activities under this Act and therefore is considered for this activity.

2.2 Conditions of Consent

The development operations pertaining to this Plan are subject to the conditions contained in Development Consent SSD 7016 MOD 1 approved 20 November 2018 and SSD 7016 MOD 4 approved 20 May 2022.

The specific requirement for a Spring Fed Dam Reclamation Management Plan were first described in Schedule 2, condition B33A of modification 1 as follows:

The Applicant must prepare a Spring Fed Dam Reclamation Management Plan for the Project. The plan must form part of the CEMP as required by Condition C1 and be prepared in accordance with Condition C9 and must:

- *Be prepared in consultation with DILW;*
- *Be submitted to the Secretary for approval prior to commencement of the spring fed dam reclamation works;*
- *Include details of the reclamation materials and reclamation methodology for the spring fed dam reclamation works;*
- *Detail the management measures to mitigate water quality impacts during the spring fed dam reclamation works; and*
- *Incorporate the recommendations outlined in Appendix A of Borg Construction Pty Ltd's Letter to Department of Industry, dated 2 August 2018 as described in Modification Assessments.*

This Plan has been updated to include modification 4 condition B33B which states that:

Prior to commencement of the construction works associated with SSD-7016-Mod-4, the Applicant must update the Spring Fed Dam Reclamation Management Plan required under Condition B33A, to incorporate the dam reclamation works described under SSD-7016-Mod-4 and its management, to the satisfaction of the Secretary. The updated plan must be prepared in accordance with the requirements of Condition B33A, and must incorporate the following:

- (a) description of additional infrastructure that would be installed to facilitate permanent groundwater collection and storage of groundwater inflows from the Spring Fed Dam; and*
- (b) details of the measures and procedures to be implemented, including quality testing procedures, to ensure backfill material used for the reclamation works does not contaminate groundwater.*

2.3 Water Access Supply Licence

The existing development has approval from the Department of Primary Industries Water (DPI) for water supply works under approval 80WA715797 allocating 28 units per financial year to be extracted from the aquifer (spring dam). The Statement of Approval issued under the *Water Management Act 2000*, must be referred to during the reclamation works to ensure the conditions of approval are met, including nil exceedance of extraction limits.

If it is determined during design (or similar investigations) that the current water allocation is not sufficient, an application to DPI will be submitted requesting a temporary increase to the approved allocation units for the duration of the reclamation works.

3 OVERVIEW

3.1 Site Environment

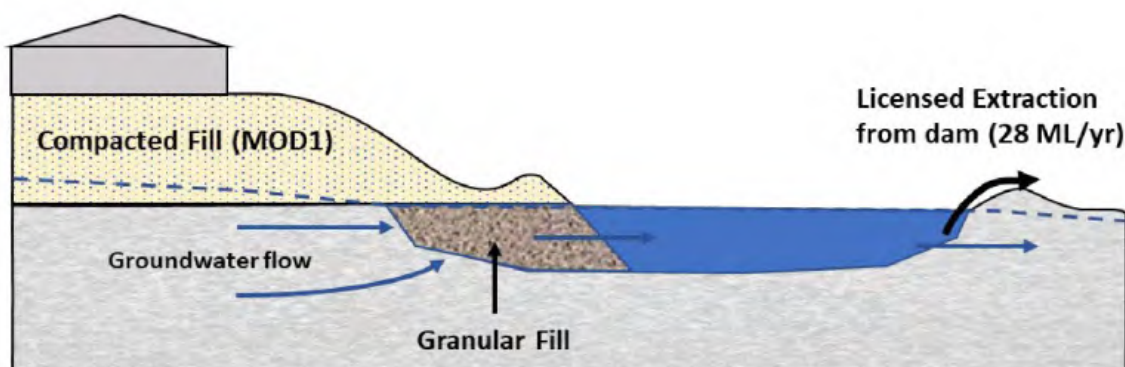
The site is currently developed for the purposes of a manufacturing facility for Medium Density Fibreboard (MDF) and particleboard. This includes:

- A number of large scale industrial buildings which contain various processes involved with the manufacture of MDF and MDF products
- Concrete hard stand areas between the buildings
- A two-story administration/amenity building with associated staff car parking
- Various necessary items of infrastructure including venting, dust collection and wood particle conveyors, other facilities/buildings associated with the use of the land (including maintenance areas, security entry/exit gates and weigh bridges)
- Fencing, landscaping, surface water drainage and other site facilities

The expansion works that have been undertaken under SSD 7016 allowed for the construction of a dedicated particleboard manufacturing line, whilst providing additional infrastructure including within existing buildings, to value add existing products.

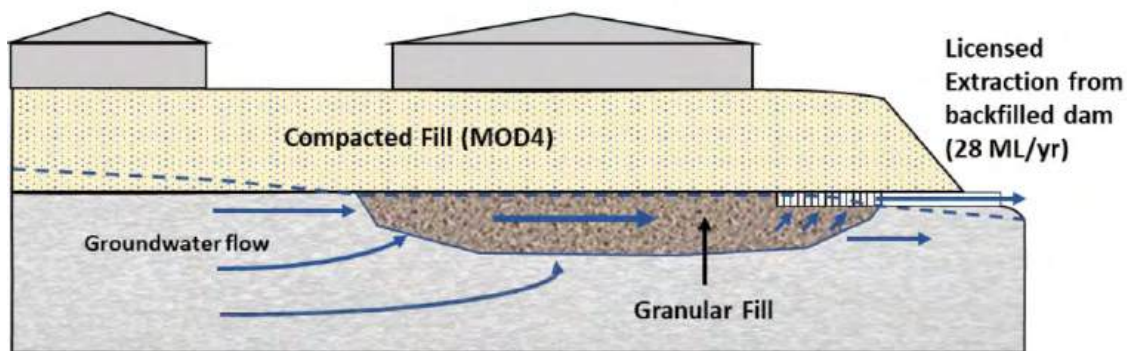
Reclamation of a portion of the spring fed dam for extension of the northern warehouse under modification 1 was completed in 2020. Figure 1 illustrates this work.

Figure 1 Spring Fed Dam 30% reclamation with granular fill (MOD1)



Source: Geosyntec Consultants February 2022

Further extension of the hardstand area at the north-east of the site has now reclaimed the remainder of the spring dam. Figure 2 shows the remainder of the reclamation works.

Figure 2 Spring Fed Dam 100% reclamation with granular fill (MOD 4)

Source: Geosyntec Consultants February 2022

3.2 Identification of Issues

Additional works as approved under SSD 7016 MOD 4, namely extension of the northern hardstand and relocation and expansion of the existing mechanic's workshop, has affected the spring fed dam.

Potential issues associated with the additional reclamation works included:

- whether material disturbed during construction or material placed for the reclamation may be contaminated;
- will groundwater flow paths change as a result of the reclamation;
- how Australian Panels will retain access to groundwater from the spring fed dam;
- are the works an aquifer interference activity; and
- potential for polluted stormwater runoff to contribute to the water levels in the spring dam.

The Development engaged Edge Geotechnical to review the Developments proposal to reclaim of the remainder of the spring fed dam, providing advice on the impact of reclamation on the groundwater (see Appendix A).

Geosyntec Consultants were engaged to review Edge Geotechnical advice and provide hydrological advice regarding the influence of the local groundwater resource of the reclamation, addressing comments raised by DPE and NRAR (see Appendix B).

Fill design was provided by Envirowest Consulting who also provided design advice for part reclamation works undertaken under modification 1 (see Appendix C).

These issues are discussed in section 4 below.

4 ENVIRONMENTAL IMPACT ASSESSMENT

4.1 Existing Environment

The spring dam was created as a result of an excavation for a source of clean fill during development of the site (by others) in the late 1990s. The source of water in the dam is primarily groundwater inflow from the surrounding shallow aquifer, with a component of precipitation that falls directly on the dam. The spring dam continuously overflows via a spillway located at the eastern end, even when the licensed allocation is extracted. With the

exception of direct rainfall, stormwater runoff from the site is captured in a separate stormwater drainage system at the site and is prevented from entering the spring dam by a perimeter bund around the dam. In 2020 approximately 30% of the dam footprint was reclaimed as part of site development works approved under modification 1. The pre reclamation groundwater flow yield was maintained in the remaining portion of the dam, and the dam continued to overflow as it did prior to the partial reclamation.

4.2 Potential Impacts

Potential impacts from the activity could occur during both construction and operational phases.

4.2.1 Construction

Identified issues during the construction or 'reclamation' phase of works include the following:

1. whether material disturbed during construction or material placed for the reclamation may be contaminated;
2. are the works an aquifer interference activity; and
3. potential for polluted stormwater runoff to contribute to the water levels in the spring dam.

The expansion works requires fill placement plus additional fill for reclamation of the remainder of the spring dam. Similar to the reclamation of the initial 30% portion of the dam, reclamation will be carried out using a granular or crushed rock fill (or blend of both) which has a high permeability thus having minimal impact on local groundwater flow paths, and can be placed below the water line and compacted sufficiently when the new surface level is achieved. Any fill material imported for this activity will be suitably verified prior to coming to site to ensure it will be geotechnically suitable and it will not degrade the environmental values of the local groundwater resource. It is not expected that any material will be excavated/removed from the dam for the reclamation works.

With regards to aquifer interference, Geosyntec Consultants provided the following advice:

With respect to the Aquifer Interference Policy, reclamation of the SFD will not interfere with the local groundwater flow system (as it will be more permeable than the surrounding aquifer), will not degrade the quality of the local groundwater resource, and licensed extraction from the reclaimed SFD (in accordance with the current WAL) will have an equivalent effect to the current extraction from the SFD. Reclamation of the SFD does not directly meet the definitions of a high-risk activity as listed in the NSW Aquifer Interference Policy. A cumulative pressure head decline is not anticipated.

As discussed above in section 4.1 Existing Environment, stormwater runoff from the site is captured in a separate stormwater drainage system at the site and is prevented from entering the spring dam by a perimeter bund around the dam. Therefore, the potential for polluted stormwater runoff to contribute to the spring dam water is low.

4.2.2 Operation

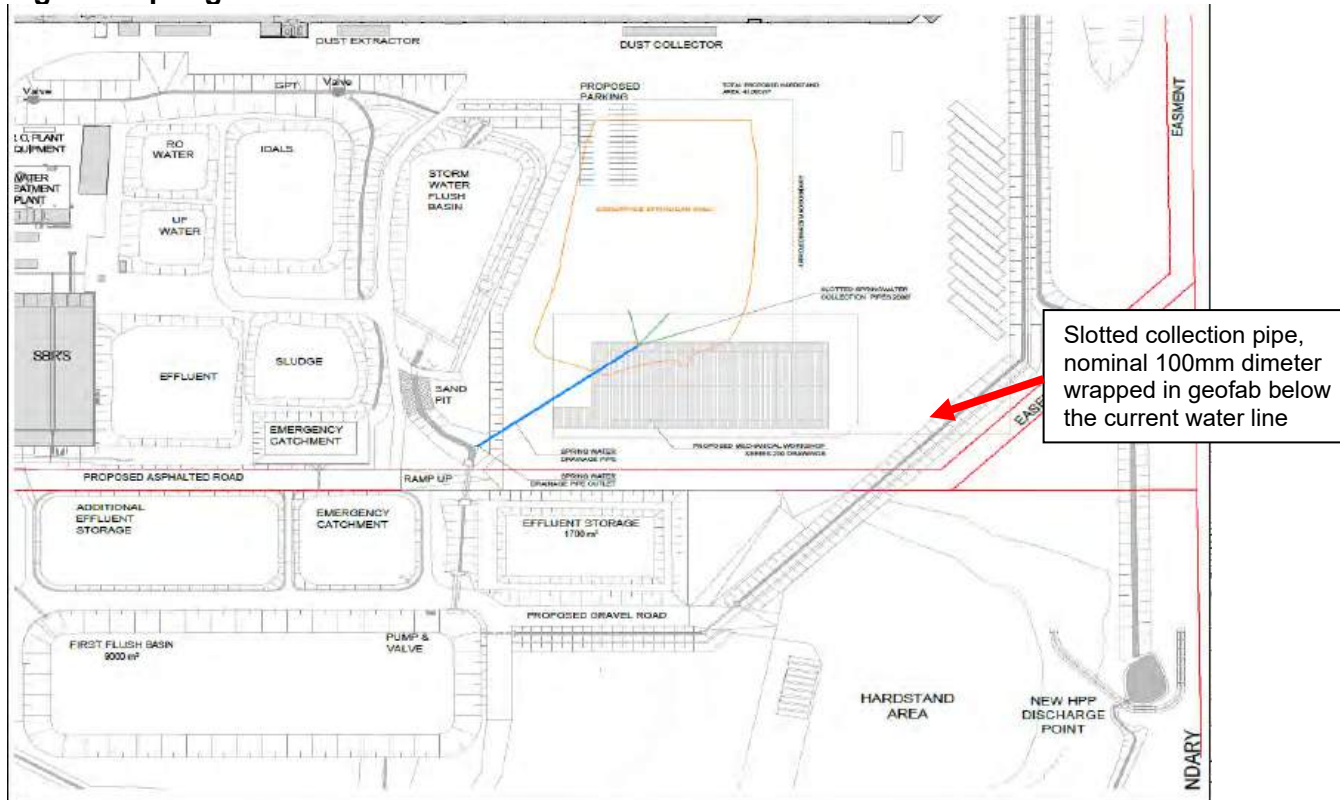
Issues identified that may affect the operational phase of the development include the following:

1. will groundwater flow paths change as a result of the reclamation; and
2. how the Development will retain access to groundwater from the spring fed dam.

Figure 2 in section 3.1 Site Environment illustrates the groundwater flow path with 100% of the spring dam reclaimed. Backfilling the dam with coarse permeable material will result in the dam having a higher permeability than the surrounding formation and act as a preferential flow path for groundwater in the surrounding shallow aquifer. Geosyntec (2022) concluded that it is likely that the reclamation works will have no impact to the closest water supply works (which are located >2km from the spring dam) or to the base water flows of Kings Stockyard Creek. Groundwater in the backfilled dam that is not captured by the collection system (described in the below paragraph) will flow back into a shallow aquifer and continue towards the east, as it currently does from the spring dam.

The infilled dam will serve as a groundwater collection and storage system. The design will include a buried overflow collection pipe network (see Figure 3) at the height of the existing water surface table that will act as a groundwater drain which will facilitate access to the groundwater at the same volume and rate as the current licensed extraction from the spring fed dam. Gravity will direct water to a pit and pipe system connected to a constructed embankment to the east of the dam which will allow flows to be pumped to the water treatment plant with overflow being directed into the stormwater drainage system.

Figure 3 Spring Dam Reclamation Infrastructure



5 MITIGATION & MANAGEMENT MEASURES

The following will be implemented for the spring fed dam reclamation works:

- Implement the Spring Fed Dam Reclamation Management Plan (this Plan) for the site
- Implement erosion and sediment control measures over the development site whilst construction works are underway as part of CEMP
- Fill imported to site to be suitably certified
- Engage a geotechnical engineer to review subsurface conditions during construction stages and to confirm that subsurface conditions are consistent with design assumptions (see section 6. Fill Design), and provide advice on fill placement methodology
- Ensure flow path for groundwater is maintained
- Daily monitoring to ensure no discharge of dam water off site, pump into the existing stormwater flush basin to be used as site process water
- Follow the fill design (including reclamation materials) provided by Envirowest Consulting and outlined in this Plan in Section 6. Fill Design & Methodology
- Undertake daily site inspection to maintain and ensure ERS&D controls are working effectively
- Undertake (at least monthly) environmental inspections using a checklist to record site condition, monitor environmental performance of the construction works, and capture required actions to address identified adverse environmental impacts

Provided that a 'closed site' approach is adopted during construction to ensure no dam water leaves the site, the risk of causing pollution under the POEO Act will be minimised.

6 FILL DESIGN & METHODOLOGY

The remaining section of the spring fed dam shown in Figure 3 was filled utilising the same methodology employed for the part reclamation works under MOD 1. Thus, permeability of the dam void was maintained in the filling process. The fill comprised boulders, ballast, general fill and stabilised fill (Table 1). Geotextile, geogrid will assist the stabilisation process.

Boulders were placed in the base of the dam to provide a stable layer for compaction. The fill material in the dam void is crushed coarse cobbles or ballast comprising gravel, concrete and ceramic tile (Figure 4). The aggregate was placed from the base of the dam to the water level. The aggregate was placed on the edge of the dam and pushed into the dam filling approximately half of the dam. The estimated depth of the dam is 5m. The aggregate does not contain fines. Voids between the cobbles enable movement of water and ensure the permeability is maintained and spring remains active to maintain flows.

At the water level a layer of geotextile matting was placed above the cobbles. Subsequent layers consist of a sandy clay fill material with gravel. The fill contains two layers of geogrid geotextile and geotextile matting which bridge the aggregate above the dam. Advice was provided from geotextile suppliers for the optimum product for the bank and pad area.

The final fill level is approximately 10 m above the dam water level and the geotextile. The upper 300mm of fill comprises DGB 20mm gravel stabilised with 5% cement. The final wearing surface layer will be steel reinforced concrete and the thickness determined by the expected loads.

The level of stabilised layer will be verified for no deformation by proof rolling with a 10t truck or similar prior to installation of concrete layer or building construction activities. Compaction testing should be undertaken at each lift above the water level to check for compaction density.

Table 1: Fill Layers in the Spring Fed Dam

Layer	Description	Comments
Surface layer	Concrete	-
Base and subbase (300mm)	Stabilised DGB gravel	Compacted
General fill (5m)	Sandy clay with gravel with two layers of geogrid separated by 2m	Compacted
Water level	Geotextile	-
Dam void (5m)	Ballast/cobbles (>75mm dia)	Washed with no fines
Base of dam	Boulders (>200mm dia)	Base of dam in sediment

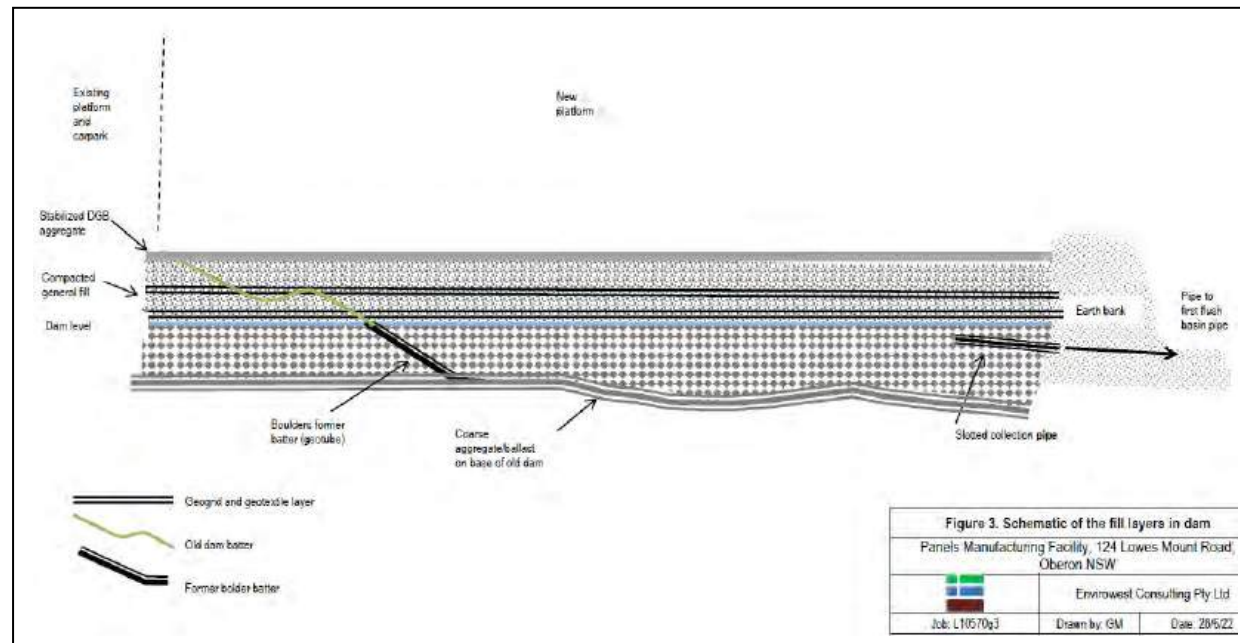


Figure 4 Schematic of fill layers in dam

7 INSPECTIONS & REPORTING

The Development will continue to manage all internal and external reporting requirements in accordance with EMS0060 Construction Environment Management Plan (CEMP). Any environmental concerns regarding the reclamation works will be immediately reported to the Construction Manager and/or the Environmental Manager.

7.1 Inspections

Either the Environmental Manager or Site Supervisor will perform daily inspections of the construction area during site activities. Any environmental issues identified such as ineffective erosion or sediment controls will be addressed immediately. A monthly site inspection will be conducted and recorded by the Environmental Manager. Checklists will be used to report on activities for compliance with this Plan and to identify issues specific to the reclamation works that require attention.

Pre-rainfall and post-rainfall inspections will also be undertaken and recorded by the Environmental Manager to ensure erosion and sediment control devices are adequate, working effectively and replaced if necessary.

All workers will be responsible for reporting identified environmental issues immediately to the Site Supervisor and implementing the requirements of this Plan as they conduct their works.

7.2 Unlicensed discharge

In the event of an unlicensed discharge during the reclamation works, The Development will notify the EPA immediately and undertake an investigation of the discharge event. In the unlikely event that a discharge poses a threat to the health of surrounding property owners and occupiers, The Development will implement the Pollution Incident Response Management Plan (PIRMP), which includes notification with those likely to be affected. A list containing surrounding property owner's and occupier's contact details is held by The Development.

The notification procedure is to be initiated by the Environmental Manager for The Development. In the absence of the Environmental Manager, the notification procedure is to be initiated by the person designated as fulfilling the responsibilities of the Environmental Manager.

An investigation report on the unlicensed discharge will be prepared and provided to the EPA or other relevant agency, including the DPE.

7.3 Annual Review

In accordance with Development Consent SSD 7016 an Annual Review report is prepared and submitted to the Secretary Department of Planning and Environment on an annual basis. The review will be prepared in accordance with Condition C11.

8 PLAN REVIEW

In accordance with Development Consent SSD 7016 Condition C10, this Plan will be reviewed and if necessary revised within 3 months of an:

- Approval of a modification;
- Submission of an incident report under Condition C13;

-
- Approval of an Annual Review under Condition C11; or
 - Completion of an audit under Condition C15.

The Plan will also be updated as required to reflect any change to on-site management or monitoring programs referred to in this document, or any changes to Development Consent SSD 7016 or EPL 3035.

Revisions to the Plan will be submitted to the Secretary DPE for approval.

Appendix A
Edge Geotechnical *Borg Panels Timber Processing Facility*
Modification 1 (MOD 4) Comments on Full Reclamation of Spring
Fed Dam (17 May 2021)

Appendix B

Geosyntec Review of Groundwater Access associated with the Spring Fed Dam Reclamation, Borg Panels Timber Processing Facility, Oberon NSW (21 February 2022)

Appendix C
Envirowest Consulting *Partial filling of Spring Dam 124 Lowes*
Mount Road, Oberon NSW (28 June 2022)

Appendix H – Site Inspection Checklists

Daily Inspection Checklist for Site Supervisor

Note:

On a daily basis, site supervisory staff will inspect the site and any issues arising will be noted in the daily diaries and communicated to the Project Manager.

The inspections will be conducted visually prior to commencement of each day's work and where appropriate during the working day.

A final daily inspection will also be undertaken at the end of the workday to ensure that systems and structures are in place.

Visual inspection of the site for:

- excessive dust generation
- weather conditions and activities being carried out
- condition of stabilised site work access controls
- truck load covers
- no tracking of dirt onto public roads
- public roads are clean
- excessive exhaust emission from plant and equipment
- no odour present
- visual inspection of excavations to detect presence of contamination

Construction Environmental Management Plan

Timber Processing Facility – Particle Board

124 Lowes Mount Road, Oberon NSW

Borg Construction Pty Ltd

17 May 2021

Revision History

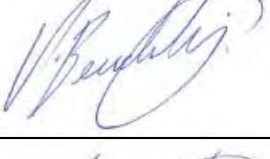
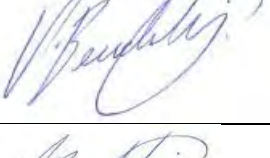
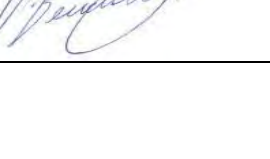
Rev No.	Revision Date	Author / Position	Details	Authorised	
				Name / Position	Signature
0	13/04/17	Carly McCormack Planning and Environmental Officer	Draft	Victor Bendevski Environmental and Regulatory Compliance	
1	27/04/17	Carly McCormack Planning and Environmental Officer	Final Draft	Victor Bendevski Environmental and Regulatory Compliance	
2	31/05/17	Carly McCormack Planning and Environmental Officer	Final	Victor Bendevski Environmental and Regulatory Compliance	
3	29/10/18	J Blomberg Environmental Manager	Review post IEA of SSD 7016	V Bendevski Environmental and Regulatory Compliance	
4	17/05/21	J Blomberg Environmental Manager	Review and update as per SSD 7016 condition C10	V Bendevski Environmental and Regulatory Compliance	

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1 Introduction

1.1 Purpose of the CEMP

This Construction Environmental Management Plan (CEMP) details the environmental management and control measures which are to be implemented for construction activities associated with installation of the particle board manufacturing facility, and alterations and additions to the existing medium density fibreboard facility (the Project), to ensure the works are managed so as to reduce adverse impacts on the environment.

The CEMP specifies actions, responsibilities, conformance requirements and mitigation activities to be followed during the construction phase of the Project.

The mitigations and measures detailed in this plan are required to achieve compliance with the requirements of Development Consent SSD 7016 and commitments contained in the Environmental Impact Statement (EIS) and Response to Submissions (RTS) Report.

Prior to the commencement of construction, this CEMP was approved by the Secretary of the then Department of Planning and Environment (now Department of Planning, Industry and Environment (DPIE) on 2 June 2017.

This CEMP is a live document and will be reviewed and updated where necessary to reflect changes introduced by the Project team, site specific outcomes, non-conformances and recommendations arising out of inspections, meetings and audits

Though initially prepared to satisfy the requirements of Conditions C1 and C2 of Schedule 2 in Development Consent SSD 7016 for the Project, this CEMP has been reviewed and updated where necessary as per condition C10.

This CEMP should be read in conjunction with other Project construction and operational plans including:

- Construction Noise Management Plan;
- Construction Traffic Management Plan;
- Spring Fed Dam Reclamation Plan;
- Borg Panels Operational Environmental Management Plan (OEMP);
- Borg Panels Emergency Plan;
- Borg Work Health and Safety Management System;
- Fire Safety Study;
- Hazard and Operability Study;
- Final Hazard Analysis; and
- Construction Safety Study.

1.2 Objectives of the CEMP

The objectives for the Project CEMP are summarised in **Table 1**.

Table 1 – CEMP Objectives

Objectives	Targets	Execution
Compliance with Environmental Legislation	100% compliance with all legal requirements	Review of audit reports
Compliance with Development Consent Conditions	100% compliance with consent conditions	Review of audit reports
Avoidance of Environmental Harm	Compliance with CEMP and environmental procedures	- Installation and monitoring of environmental controls - Environmental reporting, auditing and recording - Awareness and education
Conformance with best practice environmental management procedures	- Conduct environmental site inductions - Achieve targets in plans and checklists - Undertake environmental inspections - Undertake audits as per audit program - Report and log all environmental incidents and non-conformances - Assign and complete corrective actions in designated timeframe	- Training of personnel in CEMP measures - Environmental monitoring and audits - Review of incidents and non-conformances register - Review of environmental reports
Maintain commitments to stakeholders and community	- Minimal complaints - Respond to all complaints within 48 hour period	Review of complaints register

1.3 Document Control

This CEMP will be issued to the Borg Construction Project Manager and relevant extracts to other parties as controlled copies.

Revisions to this CEMP may be required during the Project to reflect changing circumstances. Revisions may result from:

- Management review;
- Audit (either internal or external);
- Complaints, incidents or non-conformance reports; and
- Changes in legislation.

1.4 Records

The Borg Construction Project Manager shall maintain environmental records as part of the Project records. The following records (**Table 2**) will be maintained during construction.

Table 2 – Environmental Records

Record	Type	Minimum length of time to keep record from completion of construction
Daily diaries	Hard copy	4 years
Inspections	Electronic copy	4 years
Waste dockets (if any)	Hard/Electronic copy	4 years
Monitoring results (including test results as required)	Electronic copy	4 years
Audit reports	Electronic copy	4 years
Incident reports	Electronic copy	4 years
Training records (e.g. Induction)	Electronic copy	4 years
Complaints records	Electronic copy	4 years
Monthly environmental management reports	Electronic copy	4 years
Materials tracking documentation (VENM, ENM, wastes listed in EPL3035)	Hard/Electronic copy	4 years

1.5 Corporate Safety, Health and Environment Policy

Borg Construction is committed to the management of our business in an environmentally responsible manner, to care for the environment in which we live, work and to sustain its quality for the benefit of future generations.

We are committed to being a world-class leader in Safety, Health and Environmental Management.

Safety No job is so important and no task so urgent that we cannot take time to perform our work safely. The safety of people must come first.

Environment We will use resources efficiently, minimise waste and emissions, observe all relevant laws and respect the interests of the community.

Borg believes continuous development of our people and processes will ensure we are always using our finite resources in the most efficient way.

2 Compliance Requirements

2.1 Development Consent Conditions

The construction phase of the Development is subject to conditions contained in Development Consent SSD 7016 dated 29th May 2017 and the following modifications:

- MOD 1 – extension of mouldings warehouse, reorientation of materials handling building, layout changes to particleboard chipper/debarker building, extension of northern noise bund, reconfiguration of elements of the surface water management system, reclamation of the Spring Dam (approved 20th November 2018);

- MOD 2 – installation of an electricity generation gas turbine and ancillary equipment (approved 29th November 2019); and
- MOD 3 – additional materials handling equipment, extension to northern warehouse, changes to the site surface water system and construction of further hardstand (approved 22nd May 2020).

There was one new consent condition included in MOD 1 (C2(h)) which required a Spring Fed Dam Reclamation Plan (as shown in Table 1). Since being approved by DPIE on 12th of July 2019 the works associated with this condition are now complete and this Plan therefore does not require a review or update under condition C10.

There were no new consent conditions for construction in MOD 2 or MOD 3.

The specific conditions relevant to the construction phase are detailed in Table 1 below. The full set of Development Consent conditions can be made available upon request.

Table 1 – Development Consent Conditions

No.	Requirement	Document Reference
	Construction Environmental Management Plan	
C1	The Applicant must prepare a Construction Environmental Management Plan (CEMP) to the satisfaction of the Secretary. The CEMP must:	This Plan
	a) be approved by the Secretary prior to the commencement of construction;	
	b) identify the statutory approvals that apply to the Project;	Section 2.3
	c) outline all environmental management practices and procedures to be followed during construction works associated with the Project;	Section 7
	d) describe all activities to be undertaken on the site during construction of the Project, including a clear indication of construction stages;	Section 4
	e) detail how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts;	Sections 7 & 8
	f) describe the roles and responsibilities for all relevant employees involved in construction works associated with the Project; and	Section 5
	g) include the management plans required under Condition C2 of this consent.	See below
C2	As part of the CEMP required under Condition C1 of this consent, the Applicant must include the following:	
	a) Traffic Management (Condition B34);	Section 7.8 Appendix D
	b) Dust Management (Condition B3);	Section 7.5
	c) Noise Management (Condition B15);	Section 7.4 Appendix C
	d) Mobile Wood Chipper Operation Management (Condition B24);	Section 7.11 Appendix F
	e) Erosion and Sediment Management (Condition B29);	Section 7.3
	f) Waste Management (Condition B50); and	Section 7.7

	g) Community Consultation and Complaints Handling (Condition B58).	Sections 2.5 & 11.4
	h) Spring Fed Dam Reclamation Plan (Condition B33A)	Section 7.12 Appendix G

2.2 Legislative Compliance

The environmental compliance requirements and legislative context of this Project are listed below and addressed in the Environmental Impact Statement for the Project. The primary statutory instruments applicable to this project include but are not limited to those listed in the following sub-sections.

2.2.1 Commonwealth Legislation

- *Environment Protection and Biodiversity Conservation Act 1999*

2.2.2 State Legislation

- *Environmental Planning and Assessment Act 1979*
- *Protection of the Environment Operations Act 1997*
- *Threatened Species Conservation Act 1995*
- *National Parks and Wildlife Act 1974*
- *Native Vegetation Act 2003*
- *Heritage Act 1977*

2.2.3 State Environmental Planning Policies

- State Environmental Planning Policy (State and Regional Development) 2011
- State Environmental Planning Policy 33 – Offensive and Hazardous Development
- State Environmental Planning Policy 55 – Remediation of Land

2.2.4 Regional Context

- Central West and Orana Regional Growth Plan

2.2.5 Local Planning Instruments and Controls

- Oberon Local Environmental Plan 2013
- Oberon Development Control Plan

2.3 Approvals, Licences and Permits

The following environmental approvals, licences or permits are associated with the Project:

- Environment Protection Licence 3035 (EPL 3035) issued under Section 55 of the *Protection of the Environment Operations Act 1997* applies to the premises for the scheduled activities chemical production and wood or timber milling or processing.
- In the event of an Aboriginal artefact or site being discovered during earthworks, excavation or disturbance, work in the immediate area must stop, and the Regional Operations Group of the OEH, Council and the Registered Aboriginal Parties are to be consulted. Under the *National Parks and Wildlife Act 1974*, a permit is required from the OEH for consent to disturb or destroy any Aboriginal artefact or site. An unexpected finds protocol for heritage items is included as **Appendix A**.
- If any archaeological relics are uncovered during the course of work, then all works shall cease immediately in that area and the OEH NSW Heritage Division contacted.

Depending on the possible significance of the relics, an archaeological assessment and an excavation permit under the *Heritage Act 1977* may be required before further works can continue in that area. An unexpected finds protocol for heritage items is included as **Appendix A**.

- Water Supply Works approval 80WA715797 issued under s87B of the Water Management Act 2000 for extraction of groundwater.
- Department of Planning, Industry and Environment Development Consent SSD 7016

Note the above list is not necessarily comprehensive and Borg Construction shall ensure necessary approvals, licences and permits are obtained where applicable for all construction activities.

2.4 Consultation with Key Agencies

Consultation has been undertaken with key agencies throughout the design phase and environmental assessment of the Project, including:

- Department of Planning, Industry and Environment
- Roads and Maritime Services (RMS)
- Department of Premier and Cabinet
- Environmental Protection Authority
- Safework NSW
- Office of Water
- Oberon Shire Council
- Department of Primary Industries
- Office of Environment and Heritage
- NSW Fire Service

Issues raised by each of the above agencies are included in the EIS, Part F Section 9.

In addition, submissions were received following the exhibition of the EIS from OEH, NSW EPA, Oberon Shire Council, Safework NSW, RMS and Office of Water. Submissions were responded to in the *Response to Submissions Timber Processing Facility (Particle Board)* Reports dated 24 October 2016 and 6 December 2016.

2.5 Community Consultation

Condition B58 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

“B58. The Applicant must consult with the community as required under Conditions C1 and C4 for the Development, including consultation with the nearby sensitive receivers, relevant regulatory authorities, Registered Aboriginal Parties and other interested stakeholders.”

Close community liaison will be maintained to ensure local residents are kept up to date on the progress of the Project, and to provide an avenue for communication between the community and the Project team.

2.5.1 Community Consultative Committee

Borg has an established joint Community Consultative Committee (CCC) that meets nominally quarterly to discuss environmental and operational aspects of the Borg Panels site. This existing CCC will be utilised to discuss and address general construction impacts

and mitigation measures. The CCC meeting will also provide a forum for feedback to Borg in relation to the environmental management of the Project.

2.5.2 Opportunities for Information Exchange

Borg has in place the following avenues to register inquiries and complaints related to construction and operational activities:

- A 24-hour free call community liaison line (1800 802 795)
- Postal address for written complaints (Borg Panels, Private Mail Bag 1, Oberon NSW 2787)
- Email address for electronic complaints (oberon_site@borgs.com.au)

The telephone number, postal and email address will be clearly displayed on a sign near the entrance to the construction site, in a position that is clearly visible to the public. This information will also be widely disseminated in the community and included on public information, which may include the website, local area advertisements, letterbox notifications and Project specific fact sheets.

3 Existing Environment

3.1 Existing Operations

Borg Panels operates an existing reconstituted wood-based manufacturing facility in Oberon, NSW. This facility manufactures a range of Customwood, MDF and particleboard products including:

- Standard MDF;
- Moisture Resistant MDF;
- E0 (Low Formaldehyde Emitting) MDF;
- Ultraprime MDF Mouldings;
- Standard particleboard;
- Moisture resistance particleboard;
- Decorative Laminated MDF and Particle Board; and
- Treated paper for the lamination of MDF and Particle Board.

The infrastructure includes:

- A number of large industrial scale buildings which contain various processes involved with the manufacture, storage and dispatch of MDF, value add MDF products and particleboard products;
- Concrete hard stand areas;
- A two-storey administration/amenities building with associated staff car parking;
- Various necessary items of infrastructure including venting, conveyors and the like;
- Other facilities/buildings associated with the use of the land (including maintenance areas, security entry/exit gates, weigh bridges and the like); and
- Fencing, landscaping, drainage and other site facilities.

The current maximum output of the site is 380,000m³ of MDF board and 500,000m³ of particleboard annually.

Figure 1 below displays the site, site boundary and site facilities both existing and proposed.

The site operates under Development Consent SSD 7016. In addition, Environment Protection Licence 3035 (EPL3035) applies to the site.

Figure 1 Borg Panels Facility

4 Project Description

4.1 General Description of the Project

The Project is the expansion of the existing Borg Panels timber processing facility. The components of the expansion under the initial Development Consent SSD 7016 approval date 29th May 2017 are:

- Allow for the construction of a dedicated Particle Board Manufacturing Line to allow Borg to continue their growth and remain internationally competitive;
- Provide additional infrastructure within existing buildings to value add to existing product;
- Demolition of existing infrastructure to make way for new assets;
- Modernise the existing facility;
- Allow for expansion to Lot 1 and 2 DP 1085563 for the purposes of a wood flake preparation area;
- Construct a new automated storage warehouse part on Lot 24 DP 1148073 and part on Lot 26 DP 1200697;
- Construction of hardstand on Lot 24 DP 1148073;
- Allow for expansion to Lot 1 DP 1076346 for hardstand, water quality ponds and emergency catchment;
- Rationalise the current Conditions of Consent that apply to a number of different lots, all under fragmented ownership and operation;
- Allow for an increase in production by up to 500,000m³, with a commensurate increase in staff levels;
- Boundary adjustment of Lot 1 DP 1076346 to rectify the current split zoning, consolidating the IN1 zoned land into Lot 26, retaining all the RU1 zoned land under the current Lot and DP;
- Lot consolidation of all lots the subject of this application; and
- Surrender of the existing approval (DA 27/95) issued by the Department of Planning for the land identified as being the subject of this application.

Description of works under MOD 1 (approval date 20th November 2018) include:

- Extension of mouldings warehouse
- Reorientation of materials handling building
- Layout changes to particleboard chipper/debarker building
- Extension of northern noise bund
- Reconfiguration of elements of the surface water management system
- Reclamation of a portion of the Spring Dam

Description of works under MOD 2 (approval date 29th November 2019) include:

- Installation of an electricity generation gas turbine and ancillary equipment

Description of works under MOD 3 (approval date 22nd May 2020) include:

- Additional materials handling equipment
- Extension to northern warehouse
- Changes to the site surface water system
- Construction of further hardstand area

4.2 Program of Construction Works

Construction works commenced in June 2017 under approved SSD 7016 dated 29th May 2017, and essentially followed the Stages as outlined below:

- Stage 1 – Demolition of office building and site works, construction of detention basin (required for erosion and sediment control for later stages) and hardstand areas. Within this stage the construction of the detention basin and drainage swales will be undertaken first in order to ensure that the appropriate erosion and sediment control measures can be implemented as support for following stages. Stage 1 is to commence upon approval and is estimated to take approximately 6 months.
- Stage 2 – construction of Particle Board Manufacturing Facility and installation of related plant and equipment, including modernisation of the existing plant. Stage 2 is to commence upon approval or slightly thereafter and is estimated to take up to 18-24 months, dependent on equipment and labour availability.
- Stage 3 – alterations and additions to existing MDF site and construction of new automated storage warehouse. Stage 3 is to commence post completion of Stage 2 and is estimated that this will take up to 9 months.
- Stage 4 – debarker chipper building and chip preparation area. Stage 4 may commence approximately six (6) months after approval and is estimated to take up to 12 months to complete.

The activities included in the above four stages are complete.

The description of works outlined above in Section 4.1 for modifications 1, 2 and 3 have commenced with works under MOD 1 essentially complete. MOD 2 works have been completed with commissioning of the turbine to follow. It is expected that final commissioning will be May/June 2021. Activities under MOD 3 are progressing.

4.3 Outline of Main Construction Activities

The key construction activities included:

- Excavation and construction of new first flush and emergency basin in east of the site;
- Demolition of existing site infrastructure;
- Construction of new site access and hardstand;
- Installation of new services and support infrastructure;
- Construction of new industrial buildings to the south west and north west of the subject site to house new plant and equipment, as well as to provide storage;
- Installation of new plant and equipment in existing industrial buildings;
- Reclamation of a portion of the Spring Dam; and
- Installation of gas turbine.

The above activities have been completed. The following activities have commenced:

- Reconfiguration of elements of the site surface water management system;
- Extensions to existing and new build warehouses;
- Layout changes to new builds; and
- Construction of additional equipment to new builds.

These new builds are generally as follows:

- Debarker and chipping plants were constructed to the south and east of the existing production building. The chippers have been contained in concrete and acoustic panel enclosures;
- A materials handling building has been constructed to the west of the production hall. The building is enclosed with concrete panelling to the north, south and west side with an opening on the eastern side to allow for material to be brought in using a front end loader for processing;
- A flaker building was constructed to the west of the production hall. The building is fully enclosed with acoustic panelling;
- Production building which facilitates the board pressing process. The building is fully enclosed using sheet metal and concrete panelling; and
- Automated storage warehouse building located at the northern end of the site. The building is fully enclosed using sheet metal.

4.4 Construction Site Facilities

Existing site facilities (offices, amenities, dry storage and any chemical storage) will be used where possible during construction activities. Where existing site facilities are insufficient, the following considerations will be made when selecting the location for the construction facilities:

- Within the footprint of the proposed Project;
- Away from natural surface drainage lines;
- Suitable vehicle access;
- Separate storage for fuels, chemicals and hazardous goods, inside bunded area(s);
- Minimise potential for work near dry vegetation which could cause fire; and
- If lighting is required for night-time security, lights will be installed to avoid nuisance to neighbours.

All site sheds and other facilities will present a neat appearance with safety signs erected as required. The construction areas will be regularly maintained and will be kept tidy and free of rubbish. Covered rubbish bins will be provided.

5 Structure and Responsibilities

The Project delivery team, as per the list presented below, shall manage the Project.

During the construction period, all personnel including the Project Manager, Environmental Officer, Safety Officer, Site Supervisor, Work Assistants, and engaged Contractors have general responsibilities in the development of a positive environmental management culture and for ensuring all activities are conducted in a manner that is consistent with the CEMP. Specific project responsibilities in relation to environmental management are shown below.

Borg Managing Director

The Borg Managing Director is responsible for:

- approving appointment of the Project Manager;
- periodic management review of the CEMP and its implementation; and
- investigating any serious incidents, complaints or non-conformances and ensuring necessary corrective action is implemented.

Borg Construction Project Manager

The Borg Construction Project Manager reports to the Borg Managing Director and is responsible for the day-to-day management of environmental performance on the project. The Project Manager is ultimately accountable for the implementation of the requirements contained within this CEMP. The Project Manager is responsible for:

- approving and implementing the CEMP;
- approving any revisions to the CEMP;
- instructing project personnel on how to comply with environmental policy and procedures;
- ensuring the Site Supervisor is aware of and complies with the environmental obligations as detailed within this CEMP;
- ensuring that employees, contractors and sub-contractors are aware of, and comply with, the conditions of consent and requirements of the CEMP relevant to their respective activities;
- tracking and compliance against the conditions of consent for the scope of works being performed;
- evaluation of how effectively environmental controls are performing;
- initiating remedial measures, as recommended by the Environment Officer, when environmental deficiencies are observed or in response to environmental complaints;
- engaging Borg Environment Officer and/or environmental consultants where required to provide support in relation to implementing the CEMP; and
- investigating any incidents or complaints and ensuring necessary corrective action is implemented (in consultation with Borg Managing Director for significant incidents / complaints).

Environment Officer

The Environment Officer will assist the Project Manager in meeting environmental performance targets for the project. The Environmental Officer is responsible for:

- preparing and updating the CEMP;
- assisting the Project Manager in implementing the CEMP;
- assisting in training project personnel on how to comply with environmental policy and procedures;
- undertaking, and/or arranging suitably trained personnel, for periodic monitoring and inspection;
- regular site inspections and the active pursuit of opportunities to enhance environmental outcomes;
- spot checks and general environmental compliance observations;
- tracking and reporting environmental performance;
- monthly evaluation of how effectively environmental controls are performing;
- recommending remedial measures when environmental deficiencies are observed or in response to environmental complaints;
- maintaining environmental performance records;
- investigating any incidents or complaints and ensuring necessary corrective action is implemented (in consultation with Borg Managing Director and Project Manager for significant incidents / complaints).

Safety Officer

The Safety Officer will assist the Project Manager in meeting safety and environmental performance targets for the project. The Safety Officer is responsible for:

- advising on all issues related to work health and safety;

- inducting employees, contractors and sub-contractors to the Project;
- maintaining the SDS register;
- maintaining the hazardous substances register;
- hazardous materials clearance prior to demolition of buildings.

Site Supervisor

The Site Supervisor will report to the Project Manager and is responsible for:

- Managing employees / contractors and construction activities on a daily basis to ensure the appropriate environmental controls are implemented and maintained in accordance with the requirements of the CEMP;
- Ensuring all staff are inducted into the site and undertake daily toolbox talks;
- Undertake daily site inspections of environmental controls and maintain records of environmental actions;
- Reporting any environmental management concerns or incidents immediately to the Project Manager;
- Recommending improvements to the CEMP to the Project Manager; and
- Implementing any corrective actions issued as a result of any site inspections, audits or meetings.

Works Assistants and Contractors

The Work Assistants and Contractors will report to the Site Supervisor and are responsible for:

- Implementing the requirements of the CEMP as they conduct their works; and
- Reporting any environmental management concerns or incidents immediately to the Site Supervisor.

6 Environmental Risk Assessment

Environmental aspects and potential construction stage environmental impacts have been identified based on the Environmental Impact Statement and supporting studies, the Development Consent Conditions and Borg Construction general experience on construction projects as shown on **Table 5**.

The Risk Assessment Matrix in **Table 3** has been used to assess the unmitigated risk of each individual environmental aspect relevant to the construction of the Project.

The level of risk assessed from the matrix informs the level of mitigations required for that environmental aspect. These risks are to be mitigated through the application of measures identified in this CEMP.

Table 3 – Risk Assessment Matrix

	Probability					
		A	B	C	D	E
Consequence	1	H	H	H	H	M
	2	H	H	H	M	M
	3	H	H	M	M	L
	4	M	M	M	L	L
	5	M	L	L	L	L

Table 4 provides explanatory notes on the selection of the consequence and probability for each environmental aspect.

Table 4 – Risk Matrix Explanation

Probability			Consequence		
A	Almost Certain	Expected to occur, quite common	1	Major	Major environmental harm. e.g. major pollution incident causing significant damage or potential to health or the environment.
B	Likely	Will probably occur, has happened	2	Significant	- Long term or serious environmental damage - Numerous complaints received - Potential for prosecution
C	Possible	Might occur at some time	3	Moderate	- Moderate environmental impact - Will cause complaints - Possible fine
D	Unlikely	Could occur at some time although unlikely	4	Minor	- Minimal environmental harm - Potential for complaints - Fine unlikely
E	Rare	Might occur at some time in exceptional circumstances	5	Insignificant	- Little or no environmental harm - Little potential for fines or complaints

Table 5 – Risk Matrix Explanation

Aspect	Potential Construction Stage Impact	Probability	Consequence	Risk Ranking	Controls
Site security and access	Entry of unauthorised persons or vehicles onto the site	D	4	Low	Refer Section 7.1
Sedimentation and erosion control and construction stormwater management	Erosion of sediments from stockpiles or exposed areas	B	3	High	Refer Section 7.3
	Discharge of sediment laden stormwater leading to potential impacts to downstream environment	B	3	High	
Unsuitable fill material used in the partial reclamation of the Spring Fed Dam	Localised groundwater mounding negatively effecting on water quality	C	3	Medium	Refer Section 7.12
Noise	Excessive noise generated by construction activities, and/or truck and vehicle movements	C	3	Medium	Refer Section 7.4
	Excessive noise generated from simultaneous operation of mobile wood chippers and rock/ concrete breaking activities	C	3	Medium	Refer Section 7.11
Air quality and dust	Generation of dust from soil stockpiles and other exposed areas	B	3	High	Refer Section 7.5
	Generation of dust during handling of soil	B	3	High	
	Generation of dust from vehicle movements	C	4	Medium	
	Unacceptable emissions from vehicles / plant	D	4	Low	
Hazardous materials	Leaking or spillage of fuels or chemicals stored or used on the Site leading to potential impacts to soil, groundwater or surface water	C	1	High	Refer Section 7.6
	Explosion of fuels or chemicals stored or used on the Site	E	1	Medium	
Waste management	Inappropriate disposal of waste	D	2	Medium	Refer Section 7.7
	Not minimising generation of waste	D	4	Low	

Aspect	Potential Construction Stage Impact	Probability	Consequence	Risk Ranking	Controls
Traffic management	Traffic causing congestion or damage on local roadways	D	3	Medium	Refer Section 7.8
	Traffic incident / accident	D	2	Medium	
Materials management	Unintended mixing of materials (clean vs yet to be validated etc)	C	2	High	Refer Section 7.9
Contamination management	Covered in remedial action plan for fuel depot	B	2	High	Refer Section 7.9
Heritage	Disturbance of aboriginal artefacts or skeletal remains during excavation activities	E	2	Medium	Refer Section 7.10

7 Environmental Management and Controls

This section identifies the management measures which will be implemented during the construction of the Project to mitigate against the environmental aspects identified in **Table 5**. The Project Manager will ensure that personnel responsible for undertaking the works are aware of their roles and responsibilities as detailed in this CEMP.

The following sub-plans, which are attached as appendices to this CEMP, have been prepared:

- Construction Traffic Management Sub-Plan;
- Construction Noise Management Sub-Plan;
- Mobile Wood Chipper Operation Management Plan; and
- Spring Fed Dam Reclamation Plan.

Where a sub-plan has been prepared for a particular aspect, the environmental management activities and management measures to be implemented are detailed in the sub-plan. It is intended that this CEMP be a live document and that it be regularly reviewed for effectiveness, with procedures to be modified where considered beneficial. Procedures for review are discussed in **Section 10.1**.

7.1 Site Security and Access

7.1.1 Objectives

- Prevent entrance of unauthorised people to site during construction activities.

7.1.2 Management Measures

- 1) The site currently operates 24 hours per day 7 days per week and is security fenced. Access is provided via Gate 4, 5 and Gate 6, which are security controlled. Visitors and contractors to the site are required to complete a site induction prior to entry. This aspect will be managed by the Safety Officer.
- 2) As the site will continue to be operational during the construction phase, existing security measures will be maintained during the construction period.
- 3) All construction site personnel must undergo site contractor induction, including the requirements of this CEMP. For deliveries and visitors, a separate smaller induction will be undertaken.
- 4) If deemed necessary, the separation between the Woodchem operations and the rest of the site will be reinforced through additional fencing to clearly delineate the different operations and ensure that access can be achieved without any intrusion into areas of construction or storage.
- 5) Lighting is currently provided on site to allow the full 24-hour operation of the site in line with the current consent. Lighting is designed to project downwards to minimise impacts on the amenity of the area and to increase overall site safety.

7.1.3 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
Visual check that perimeter fence in tact	Monthly	Site Supervisor / Environment Officer	Monthly Inspection Checklist
All visitors and contractors complete site induction	Daily	Project Manager / Safety Officer	WHSMS Audits

7.2 Hours of Operation

7.2.1 Objectives

- Prevent outside of hours noise and traffic impacts resulting from construction activities.

7.2.2 Applicable Conditions of Approval

Conditions B13 and B14 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

“B13. The Applicant must comply with the hours detailed in Table 1, unless otherwise agreed in writing by the Secretary.

Table 1: Hours of Work

Activity	Day	Time
Earthworks and Construction	Monday – Friday	7 am to 7 pm
	Saturday	8 am to 1 pm
Operation	Monday – Sunday	24 hours

B14. Works outside of the hours identified in Condition B13 may be undertaken in the following circumstances:

- works that are inaudible at the nearest sensitive receivers;*
- works agreed to in writing by the Secretary;*
- for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or*
- where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.”*

7.2.3 Management Measures

- Construction work shall be conducted within the approved hours as per the above table in **Section 7.2.2**.
- Construction work may be also undertaken outside these hours if work meets the circumstances in Condition B14.
- Quarterly construction noise monitoring events performed by an independent third party suitably qualified consultant

7.2.4 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
No construction related complaints	24 hour complaints hotline	Project Manager / Environment Officer	Complaints Register

7.3 Soil and Water Management

7.3.1 Objectives

- The objective of the Soil and Water Management Plan (SWMP) is to set out strategies to control soil erosion and sediment generation close to the source and thereby minimise the potential for construction activities to adversely affect water quality leaving the site.

- Comply with the requirements of the latest version of the *Managing Urban Stormwater: Soils and Construction Guideline* (Landcom, 2004).

7.3.2 Applicable Conditions of Approval

Condition B29 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

“B29. Prior to the commencement of construction, the Applicant must install and maintain suitable erosion and sediment control measures on-site, in accordance with the relevant requirements in the latest version of the Managing Urban Stormwater: Soils and Construction Guideline and the Erosion and Sediment Control Plan included in the CEMP required by Condition C1.”

7.3.3 Responsible Officer(s)

An Environmental Officer will be assigned to the Project delivery team. The Environmental Officer will supervise soil and water management controls during construction and respond to environmental incidents.

Borg construction staff have been trained in sediment and erosion control and know how to implement these control measures.

7.3.4 Design Criteria

Assumed Soil Hydrological Group and Type of Basin

It has been assumed that soils on the site are part of hydrological group C, fine clays with mildly dispersible particles that will result in runoff from most but not every rainfall event, i.e. the site soils possess some infiltration capacity. A type D basin would be required for these soil conditions. Some flocculation may be required to hasten settlement.

Rainfall Data

Analysis of several local rainfall gauges indicate an annual average rainfall depth for calculation purposes of 800mm/year. This is based on rainfall at the Jenolan Caves Road gauge, as well as the Spring Bank gauge close to the site. Spring Bank has an annual average rainfall of 840mm and Jenolan Caves Road 745mm/year.

Design Rainfall Depth

A design rainfall depth of the 5 day 75th percentile event has been chosen in accordance with the Blue Book noting that Kings Stockyard Creek is not a sensitive waterway. For example a SEPP14 Wetland would be considered sensitive. A 5 day, 75th percentile rainfall depth for Oberon is 22.50mm.

7.3.5 Mitigation Measures

Localised Sediment Controls

Localised sediment controls shall be used to minimise and prevent sediment laden runoff from entering any waterway. Localised controls would include the use of:

- Sediment fences;
- Geofabric wrapped hay bales within swales;
- Rock check dams; and
- Filter sausages around the opening of all impacted stormwater pits.

Typical details for each of these controls is shown in **Appendix B**.

Figure 2 shows local sediment controls to be installed across the Project site. Where identified necessary, additional sediment controls will be installed by construction staff.

Work Site Access Controls

A minimum of 15m of railway ballast is to be placed at the point of access and egress to all areas with exposed earth works to facilitate the removal of mud from vehicles. The ballast shall be washed down weekly when the site is dry or when clogged.

Stockpiles

Topsoil stockpiles are to be limited to 2m in height to preserve soil microbes. Stockpiles shall be surrounded by a sediment fence and located away from waterways. If stockpiles are to be kept for more than 3 months it is suggested that stockpiles are sprayed with a bitumen emulsion to prevent erosion and promote grass growth.

Main Sediment Basin Sizing

Parameter	Value Assigned	Comment
Soil Hydrologic Group	C	Appendix F, moderate to high runoff potential, moderately fine clay loam etc.
Mean annual rainfall (mm)	800	744.8mm/year at Jenolan Caves rd station and 840.5 at Springbank Station, estimated interpolated value of 800mm/yr assumed
$R_{(75\%,5day)}$	22.50	
C_v	0.35	Appendix F Table F2, depends on soil hydraulic group and design rainfall depth
A	13.77 Ha	Total area draining to southern swale and therefore directed into main sed basin. Only 5.63Ha disturbed.
Settling Zone	1084.4m ³	$S_z = A \times C_v \times R$
Storage Zone	542.2m ³	50% of Settling zone.
Total required Volume	1626.6m ³	Only approx 20% of the total proposed water quality pond will be required during construction as a sediment basin.
Total required volume if soil type D	2,323 m ³	

NOTES:

LOT BOUNDARIES FOR CONSOLIDATION ARE NOT SHOWN ON THIS PLAN FOR CLARITY - REFER TO THE CONSOLIDATION PLAN FOR DETAIL

REFER TO KEY PLAN FOR REFERENCES TO DOCUMENTATION OF NEW WORKS

TOTAL SITE AREA: 604,000m²

NO.	DESCRIPTION	DATE	DRAWN	AUTH.
1	Construction Certificate	2004-2007	CC	CC
2	Construction Certificate	24-10-2015	CC	CC
3	Construction Certificate	24-10-2015	CC	CC
4	Construction Certificate	03-11-2015	CC	CC
5	Construction Certificate	20-06-2016	CC	CC
6	Construction Certificate	20-06-2016	CC	CC
7	Construction Certificate	20-06-2016	CC	CC

CROSSMULLER CONSTRUCTION

120 CROSSMULLER RD, JENOLAN CAVES NSW 2755 AUSTRALIA
Tel: 02 4542 0001 Fax: 02 4542 0001

PROJECT: PROPOSED PARTICLE BOARD MANUFACTURING PLANT & ADDITIONAL WORKS

LOCATION: 124 LOWES MOUNT ROAD, OBERON NEW SOUTH WALES

DRAWN: EROSION & SEDIMENT CONTROL PLAN EXISTING APPROVED SITE PLAN

SCALE: 1:11750 @ A1 OR 1:3500 @ A3

Project Number: 2021/01

Drawing Number: CC 540

Page: CC

Sediment Control Basin

In accordance with the Water Cycle Impact Assessment (Sustainability Workshop, May 2016) and the Blue Book, which requires a basin where the disturbed area exceeds 2,500 square meters, Borg did operate a construction phase sediment basin shown on Figure 2 as First Flush Basin. This basin is now effectively an operational basin however does continue to manage runoff from construction activities.

The basin was designed in accordance with the Blue Book as detailed below.

Minimum Sediment Basin Volumes Required by Blue Book		
Parameter	Value Adopted	Comment or Source of Data
Soil Hydrologic Group	C	Appendix F, moderate to high runoff potential, moderately fine clay loam etc
Mean Annual Rainfall (mm)	800	744.8mm/year at Jenolan Caves Rd station and 840.5mm at Springbank Station, estimated interpolated value of 800mm/yr assumed
R/(75%, 5day)	22.5	
C/v	0.35	Appendix F Table F2, depending on soil hydraulic group and design rainfall depth
A	13.77 Ha	Total area draining to southern swale and therefore directed into main sediment basin. Only 6.63Ha disturbed
Settling Zone	1084.4m ³	$S_z = A \times C_v \times R$
Storage Zone	542.2m ³	50% of Settling Zone
Total Required Volume	1626.6m ³	9,000 m ³ of volume are proposed
Total Required Volume if Soil Type D	2,323 m ³	As above

Assuming a worst-case scenario with type D soils, the sediment basin volume would need to be 2,323 m³ to comply with the Blue Book. Borg constructed a 9,000 m³ basin which substantially exceeded the minimum volumes required under the Blue Book.

This basin currently operates at nil discharge as the stormwater is harvested by the site water treatment plant and used in the production process.

Any additional temporary construction sediment basins that are deemed necessary for future modification construction works will be designed in accordance with the Blue Book where appropriate and managed under this Plan including but not limited to the following:

- Installation and maintenance of sediment and erosion controls where required
- Placing topsoil in swales to promote grass growth
- Vegetate or spray grass swales and line base with turf

7.3.7 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
Ensure localised erosion and sediment control devices are installed	Prior to commencement of earthworks	Site Supervisor / Environment Officer	Initial inspection
Work access controls installed at the point of access and egress to all areas with exposed earth works	Prior to commencement of earthworks	Site Supervisor / Environment Officer	Initial inspection
Topsoil stockpiles to be managed in accordance with the SWMP	Monthly	Site Supervisor / Environment Officer	Monthly inspection
Keep records of sediment basin operation	As required	Site Supervisor	Sediment basin operation SOP
Erosion and sediment control devices inspected post-rainfall	During and/or immediately following rainfall event	Site Supervisor / Environment Officer	Post-rainfall inspection
Erosion and sediment control devices inspected routinely	Monthly	Environment Officer	Monthly Inspection Checklist
Follow-up inspection after sediment removal from devices	Within 1 week of sediment removal requirement identified	Environment Officer	Post maintenance inspection

7.4 Noise Management

Refer to the Construction Noise Management Sub-Plan in **Appendix C** for objectives, management measures and monitoring requirements related to construction noise impacts.

7.5 Air Quality (Dust) Management

7.5.1 Objectives

- Minimise air pollution from construction activities.
- Minimise the exposure of areas for wind erosion.
- Control, to the maximum extent practicable, the generation of dust on site and migration of dust offsite.
- Undertake activities with the objective of preventing visible dust emissions from the site.

7.5.2 Applicable Conditions of Approval

Condition B2 and B3 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

“B2. The Applicant must implement all reasonable and feasible measures to minimise dust generated by the Development.

B3. During construction, the Applicant must ensure that:
(a) exposed surfaces and stockpiles are suppressed by regular watering;
(b) all trucks entering or leaving the site with loads have their loads covered;

- (c) trucks associated with the Development do not track dirt onto the public road network;
- (d) public roads used by these trucks are kept clean; and
- (e) land stabilisation works are carried out progressively on site to minimise exposed surfaces.”

7.5.3 Management Measures

- 1) Toolbox meetings will be held to ensure all personnel on site are made aware that if they observe excessive dust in the air leaving the site, they are to immediately inform the Site Supervisor. In such cases, the Site Supervisor will investigate the source of the dust and ensure that proper controls are in place. If those controls prove ineffective that activity will cease until methods to successfully control the dust are employed.
- 2) The following measures will be implemented to manage dust generation from stockpiles of soil:
 - Minimise the period and volume of stockpiling where practicable;
 - Where any long-term stockpiling is required, stabilise the stockpiles; and
 - Use of water sprays on any un-stabilised stockpiles.
- 3) Evaluate prevailing weather conditions - excavation/fill works to ceased or be modified if dust generation observed.
- 4) Stabilise exposed areas as soon as practicable.
- 5) Spray water on unsealed areas.
- 6) Minimise the height from which dust-generating material is dropped.
- 7) Minimise the surface area of a work zone.
- 8) Construction plant and equipment are to be maintained and serviced regularly.
- 9) Efficient use of plant and equipment, e.g. turning off idling plant and equipment.
- 10) Covering of truck loads before leaving the site.
- 11) Remove dirt and debris from the tyres and underside of trucks prior to leaving the site.
- 12) Daily visual inspections by the Site Supervisor of the immediate surrounding area to ensure no materials have been lost from vehicles entering or leaving the site, and to assess general dust generation.
- 13) Visual inspection of plant on a daily basis by the Site Supervisor for excessive exhaust emissions. Defective plant will be stood down until repaired.
- 14) Offensive odours are not expected to be generated from the site. If this does occur work involved is to stop temporarily, the source of odour investigated, and solutions actioned so that offensive odour production does not continue.

7.5.4 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
Visual inspection of site for excessive dust generation, weather conditions, truck load covers, condition of stabilised site work access controls	Daily	Site Supervisor	Daily Diaries
Visual inspection of stockpile stability	Monthly	Site Supervisor / Environment Officer	Monthly Inspection
Toolbox talks to include reminders about reporting	Weekly	Site Supervisor	Toolbox Record

excessive dust from either internal or external sources, covering loads, efficient use of plant and equipment			

7.6 Storage of Hazardous Materials

7.6.1 Objectives

- Prevent leaks or spills of hazardous materials
- Prevent pollution arising from leakage or spillage of hazardous materials

7.6.2 Applicable Conditions of Approval

Condition B44 and B45 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

“B44. The quantities of dangerous goods stored and handled at the site must be below the threshold quantities listed in the Department’s Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 at all times.

B45. The Applicant must store all chemicals, fuels and oils used on-site in appropriately bunded areas in accordance with the requirements of all relevant Australian Standards, and/or the EPA’s Storing and Handling of Liquids: Environmental Protection – Participants Handbook.”

7.6.3 Management Measures

- 1) Manufacturer’s instructions / Safety Data Sheets (SDS) for substances and materials shall be obtained and kept in a file on site, which will be readily available to site construction personnel when needed.
- 2) Substance risk assessments to be completed for all hazardous materials brought onto site for construction
- 3) Minimise fuel and chemical storage on site.
- 4) Bunds around any chemical, fuel or oil storage (to contain 110% of largest tank / container, or 25% of the total volume of all drums, whichever is greater). Any bunds shall be designed and installed in accordance with the requirements of all relevant Australian Standards, and/or EPA’s *Storage and Handling of Liquids: Environmental Protection – Participant’s Manual*.
- 5) Spill kits to be kept onsite in marked containers (containing absorbent materials – granular vermiculite, mats, and pillows) and personnel should be trained in spill response.
- 6) Vehicles transporting materials on-site will be operated in a manner to prevent any loss of materials during loading, transport and unloading.

7.6.4 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
Visual inspection of chemical and fuel storage areas and bunding	Monthly	Site Supervisor / Environment Officer	Monthly Inspection Checklist
Maintain SDS register	As required	Site Supervisor / Safety Officer	SDS register
Visual inspection of spill kits	Monthly	Site Supervisor /	Monthly Inspection

contents		Environment Officer	Checklist
Maintain Hazardous Substances Register	As required	Site Supervisor / Safety Officer	Hazardous Substances Register

7.7 Construction and Demolition Waste Management Plan

7.7.1 Objectives

- To develop a plan for management of wastes on the site in accordance with the *NSW Waste Avoidance and Resource Recovery Strategy 2014-21* (WARR). This involves managing the waste in accordance with the waste hierarchy established under the *Waste Avoidance and Resource Recovery Act 2001*. The waste hierarchy is shown below in **Figure 3**.



Figure 3 – The Waste Hierarchy

The NSW WARR aims to maximise conservation of natural resources and to minimise environmental harm from waste management and disposal of solid waste.

The specific objectives of the waste management plan include:

- Reduce waste generation associated with site construction activities;
- Where waste generation is unavoidable, promote reuse and recycling;
- Where on-site reuse or recycling is not practicable, appropriate off-site recycling or disposal facilities should be employed, ensuring the responsible treatment of all waste streams; and
- Ensuring all waste disposal is undertaken lawfully.

Contingency procedures will also need to be in place to deal with any waste generated as a result of hazardous material spills (**Section 7.6**).

7.7.2 Applicable Conditions of Approval

Condition B50 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

“B50. Prior to the commencement of construction of the Project, the Applicant must prepare a Construction and Demolition Waste Management Plan for the Project to the satisfaction of the Secretary. The plan must form part of the CEMP required by Condition C1 and must:

(a) detail the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations; and

(b) be implemented for the duration of construction works.

7.7.3 Management Measures

Table 6 details the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations.

Two Site Environmental Plans have been developed showing stockpile material type and location on site, and waste storage areas including waste type. These Plans will be separate Plans to this CEMP and the Waste Management Plan due to their dynamic nature. The *Site Environment Plan – Waste Storage Areas* and the *Site Environment Plan – Stockpile Map* will be communicated to the workforce via Toolbox talks and displayed in prominent areas at the site. As each Plan is updated as site conditions change, they will be recommunicated to the workforce in the same manner described.

Table 6: Waste types, disposal methods and disposal locations

Construction activity	Waste type	Waste classification	Likely quantity	Disposal methods	Waste disposal location
Clearing and grubbing	Green waste – vegetation	General solid waste (non-putrescible)	20 Cubic metres (m ³)	Re-use on-site as mulch bunds for erosion and sediment controls, landscaping and boosting topsoil organic matter content	On-site
Demolition	Timber	General solid waste (non-putrescible)	5 Tonne (t)	Recycle/reuse of material on-site or send offsite to recycling facility	On-site OR Oberon Council Waste Depot
	Metal – pipes, sheets, reo, fencing	General solid waste (non-putrescible)	20 t	Recycle/reuse of material on-site or send offsite to recycling facility	On-site OR Oberon Council Waste Depot
	Concrete, bitumen, bricks and tiles	General solid waste (non-putrescible)	120 t	General demolition waste expected to be disposed of, unless a reuse option is identified	On-site OR Oberon Council Waste Depot
	Asbestos	Special waste	To be confirmed if encountered	Assessed by a licensed assessor. Managed and disposed of by licenced sub-contractor.	Oberon Council Waste Depot following Council approval
	Cabling and lighting	General solid waste (non-putrescible)	5 t	Where possible send offsite to a recycling facility. Fluorescent light globes and tubes recycled at Oberon Council waste depot.	Oberon Council Waste Depot

Construction activity	Waste type	Waste classification	Likely quantity	Disposal methods	Waste disposal location
	Redundant utility services	General solid waste (non-putrescible)	2 t	Copper wires and pipes send off-site to recycling facility. Separately stockpiled at various locations onsite before being sent offsite to a licensed waste facility.	Oberon Council Waste Depot
	Plastics – PVC pipes, sheeting	General solid waste (non-putrescible)	2 t	Recycle/reuse of material onsite or send offsite to recycling facility.	On-site OR Oberon Council Waste Depot
Excavation and earthworks	Topsoil	General solid waste (non-putrescible)	20 t	Stockpiled and reused on-site	On-site
	Subsoils – soils and clay materials	General solid waste (non-putrescible)	20 t	Reuse onsite for pond linings (clay), batters or landscaping (soils)	On-site
	Potentially contaminated soils	Classified based on soil tests and in accordance with Waste Classification Guidelines (DECCW 2009)	To be confirmed if encountered	Unless soil can be appropriately treated and validated, it will be disposed of in accordance with a Contaminated Land Management Plan	Landfarm on-site or Oberon Council Waste Depot following Council approval

Construction activity	Waste type	Waste classification	Likely quantity	Disposal methods	Waste disposal location
General construction	General waste and recyclables – paper, glass, plastics, silt fences, aluminium, cans, etc	General solid waste (non-putrescible)	20 t	Recyclables placed in recycling bins and removed offsite to recycling facility (metals, glass, aluminium cans, plastics, batteries, paper products). General waste taken to a licensed waste facility.	Oberon Council Waste Depot
	Excess construction materials – asphalt, concrete, metal, steel, timber, temporary fencing, timber from formworks, guard rails etc.	General solid waste (non-putrescible)	Limited	Reused on-site. Re-processed (concrete, asphalt) for use as road base. Removed off-site to a recycling facility or to a licensed waste facility.	On-site OR Oberon Council Waste Depot
	Sediment/sludge from sediment basin desilting	General solid waste (non-putrescible)	15 t	Collected and reused on-site as general fill material or incorporated within landscaping / topsoil material where practical	On-site

Construction activity	Waste type	Waste classification	Likely quantity	Disposal methods	Waste disposal location
	Storm water site run-off captured in sediment basins	Liquid waste	To be confirmed, rainfall dependent	Water captured in sediment basins pumped to water treatment plant for treatment and reuse on-site. Any water discharged offsite will be in accordance with EPL 3035..	On-site
	Waste water from contaminated runoff	Liquid waste	To be confirmed	Water captured in dirty water system and pumped to water treatment plant for treatment and reuse onsite.	On-site
	Packaging – pallets, crates, cartons, plastics and wrapping materials	General solid waste (non-putrescible)	100 t	Return to material supplier or send off-site for recycling.	Return to supplier OR Oberon Council Waste Depot

Construction activity	Waste type	Waste classification	Likely quantity	Disposal methods	Waste disposal location
	Empty Containers used for pesticides, herbicides, fuel, lubricants, paints and other hazardous chemicals.	Hazardous waste	2 t	Stored in appropriate locked and bunded areas until disposal at licensed waste facility. Steel drums will be recycled where practical if a reliable drum reconditioning service is available. Chemical drums that have been triple rinsed will be disposed of by Drum-muster collection at Oberon Council Waste Depot.	Drum reconditioning service OR Oberon Council Waste Depot

Construction vehicles will be serviced by the existing workshop, and as such materials associated with mechanical servicing and repairs will be managed and disposed of through the existing site waste management system.

As for the workshop, existing office and bathroom facilities will be utilised by construction personnel, and wastes will be managed and disposed of through the existing site waste management system. An exception may be the use of portable toilets where construction activities are located away from existing facilities. These portable toilets will be serviced by the hire company on a contractual basis.

7.7.5 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
Visual inspection of surface, loads, bins and portable toilets	Monthly	Site Supervisor / Environment Officer	Monthly Inspection Checklist
Records kept for all waste removed from site	As required	Site Supervisor	Waste Disposal Records

7.8 Traffic Management

Refer to the Construction Traffic Management Sub-Plan in **Appendix D** for objectives, management measures and monitoring requirements related to construction traffic management.

7.9 Contamination Management / Remediation

7.9.1 Objectives

- Avoid and minimise the environmental and human health risks arising from the disturbance of contaminated land if encountered during construction of the project.
- No degradation to the receiving environment as a result of disturbance of contaminated land (if encountered).
- No contamination of soil, air or water as a result of spillages or other impacts arising from construction activities.
- No importation of potentially contaminated soils to site.

7.9.2 Applicable Conditions of Approval

Conditions B28 and B53 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

“B28. The Applicant must:

- (a) ensure that only VENM, or ENM, or other material approved in writing by the EPA is used as fill on the site;*
- (b) keep accurate records of the volume and type of fill to be used; and*
- (c) make these records available to the Secretary upon request.*

B53. Prior to the commencement of construction of the Project, the Applicant must prepare a site validation report for Lot 1 DP 1085563, which demonstrates the site is suitable for its intended use(s). A copy of the site validation report must be provided to the Secretary and Council.

7.9.3 Management Measures

- 1) Removal of fuel tanks from the fuel depot on Lot 1 DP 1085563 has already been undertaken. Envirowest Consulting was engaged to undertake a contamination investigation and validation of the Lot, outside the scope of this CEMP. The validation report concluded that the area is suitable for ongoing industrial land use as defined in the UPSS Regulation 2008 and NEPC 1999 (Validation Investigation Report, 20 June 2017).
- 2) All buildings and immediate surrounds will be checked against the site hazardous materials register, i.e. for asbestos materials, prior to demolition. Any hazardous materials identified in these areas would need to be removed, in accordance with

relevant legislative requirements, from the site and disposed of at an EPA licenced facility.

- 3) The site Pollution Incident Response Management Plan (PIRMP) would be enacted in the event of a major fuel or chemical spill. Minor spills will be contained and cleaned up in accordance with the SDS, using available spill kits.
- 4) If potentially contaminated material is encountered the Unexpected Contaminated Land Finds Protocol (**Appendix E**) will be followed. Works in the vicinity will be stopped or modified and will not recommence until the material has been analysed and management measures developed.
- 5) All potentially affected spoil will be stockpiled on a bunded, impermeable surface.
- 6) If soils are to be disposed off-site, then testing would be undertaken to assess the appropriate waste classification of the soils according to the EPA guidelines.
- 7) All imported VENM, or ENM, shall be classified based on soil tests and in accordance with Waste Classification Guidelines (DECCW 2009). For material to be considered VENM, it must meet the requirements of the Protection of the Environment Operations Act 1997. Where an excavated material cannot be classified as VENM, it may be eligible for reuse under the ENM order and exemption.
- 8) Other material imported to site for reuse must meet the requirements of the relevant NSW EPA Resource Recovery Exemption.

7.9.4 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
Contamination clearance for Lot 1 DP 1085563	Prior to construction commencing	Project Manager / Site Supervisor / Environment Officer	Site Validation Report
Hazardous materials clearance prior to demolition of buildings	Prior to demolition	Project Manager / Site Supervisor / Safety Officer	Clearance Report
Visual inspection of excavations to detect presence of contamination	Daily	Site Supervisor	Daily Diary
Record of unexpected contaminated land finds	As required	Site Supervisor / Environment Officer	Incident Report
Record of all environmental incidents/spills	As required	Site Supervisor / Environment Officer	Incident Report
Record of imported or exported materials from site	As required	Site Supervisor / Environment Officer	Waste docket / VENM/ENM certificates

7.10 Aboriginal and European Heritage

7.10.1 Objectives

- Implement contingency measures to appropriately manage Aboriginal artefacts, skeletal material or historic relics in the unexpected event that they be encountered during site earthworks. The Heritage Assessment undertaken as part of the EIS concluded that the proposed development is unlikely to encounter Aboriginal objects or historic relics.

7.10.2 Applicable Conditions of Approval

Conditions B54 and B55 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

“B54. If Aboriginal objects are uncovered during earthworks, excavation or disturbance, work in the immediate area must stop and the Regional Operations Group of the OEH and the Registered Aboriginal Parties are to be consulted.

B55. If any archaeological relics are uncovered during the course of the work, then all works must cease immediately in that area and the OEH NSW Heritage Division contacted. Depending on the possible significance of the relics, an archaeological assessment and an excavation permit under the Heritage Act 1977 may be required before further works can continue in that area.”

7.10.3 Management Measures

1) All personnel working on the Site are to be made aware of the:

- NPW Act 1974 and the fact that it is an offence to move, disturb or destroy Aboriginal objects without the written permission of the Director General of the OEH.
- Heritage Act 1977 and the fact that it may be an offence to move, disturb or destroy archaeological relics without consultation with the OEH NSW Heritage Division.

2) Should Aboriginal objects be identified during the course of site works, all work must cease immediately and the Unexpected Finds Protocol – Aboriginal objects/features encountered during construction activities (**Appendix A**) enacted.

3) Should archaeological relics be identified during the course of site works, all work must cease immediately and the Unexpected Finds Protocol – Discovery of historic relics during construction activities (**Appendix A**) enacted.

4) Should suspected skeletal material be identified during construction, all works must cease immediately and the Unexpected Finds Protocol – Discovery of human remains during construction activities (**Appendix A**) enacted.

7.10.4 Monitoring and Reporting

Monitoring	Frequency	Person Responsible	Record
Site Induction	Once, before work on site Commences	Site Supervisor / Safety Officer	Induction Register
Toolbox talks reminding personnel of processes regarding heritage items	Weekly	Site Supervisor	Toolbox Record

7.11 Mobile Wood Chippers

Refer to the Mobile Wood Chipper Operation Management Plan in **Appendix F** for objectives, and management and mitigation measures related to mobile wood chipper operation.

7.12 Spring Fed Dam Reclamation

Refer to the Spring Fed Dam Reclamation Plan in **Appendix G** for objectives and management and mitigation measures related to the reclamation work associated with the spring fed dam.

8 Contingencies

Table 7 summarises issues that can reasonably be expected to be encountered during construction and how these may be resolved.

Table 7 – Contingencies

Potential Anticipated Issue	Corrective Action
Excessive dust generation	Temporarily stop work activity that is causing dust generation. Review dust controls currently in place and assess need for additional measures. Such measures may include additional use of water sprays, cease dust-generating activity until better dust control can be achieved, temporarily cover dust producing areas, etc.
Excessive noise generation	Identify source, review noise attenuation equipment and as necessary provide silencers on noisy equipment or remove equipment from site.
Erosion and sediment control ineffective	Stop work, review appropriateness of environmental controls. Consider alternative measures. Consult Drainage Engineer if repeated/major issues occurring.
Release of fuel/oil from machinery	Remove source, use spill kit to remove oil, make any repairs as required.
Chemical spill/exposure	Stop work, refer to Section 11.1 for response procedure.
Inspections reveal damage to Environmental Controls	Repair as required and assess cause of damage. Eliminate cause where possible, otherwise strengthen control to limit impact of cause.

9 Training and Implementation

9.1 Site Induction

All employees, sub-consultants and sub-contractors must undertake a site induction prior to their commencement of work on site. The induction of employees and contractors is the Site Supervisor's responsibility.

The site induction will inform employees of their environmental responsibilities on site. It details the most significant environmental aspects and introduces this CEMP as the management tool used to address the controls and mitigation measures required to minimise environmental impact of the Project.

The induction will cover the following:

- Contents of the CEMP;
- Critical environmental protection procedures including spill responses, emergency procedures, hazardous substances and dangerous goods handling, and monitoring of imported fill quality;
- The location of the CEMP during works; and
- General obligations.

All visitors to the site must undergo a visitor's induction. All visitors must be accompanied by a fully inducted member of staff at all times.

Site personnel shall be encouraged to be proactive and report any instances of environmental control measures not operating properly.

9.2 Tool Box Talks

Toolbox talks will be conducted daily by the Site Supervisor for employees and sub-contractors. Toolbox talks will be undertaken in response to evolving issues on the ground, particularly in response to significant environmental and safety incidents and non-conformance issues.

9.3 Environmental Awareness Training

The CEMP requires all employees receive an appropriate level of environmental awareness training. This training is designed to suit the various needs and levels. Training covers environmental legislation, due diligence, performance criteria, reporting requirements and emergency response procedures. All employees are made aware of the Company's Environmental Policy and the need to meet its obligations.

Environmental awareness training is undertaken as part of staff, employees and contractor's induction training.

10 Compliance

10.1 Environmental Audit Program

The CEMP implementation system will be audited internally to ensure effective compliance with environmental controls, reporting and incident management requirements.

The internal audits will occur within three months of commencement of construction activities on site and every twelve months minimum or as required thereafter. This activity will be planned, programmed and fully documented. The audits should be undertaken by the Borg Construction Environment Officer and include:

- A site visit;
- Review of monthly and other checklists;
- Compliance with the CEMP;
- Update on project status;
- Report on any on-site environmental incidents occurring since the last audit;
- Checks for any repeat issues; and
- Any new initiatives in environmental management.

The audits will be documented in a summary report.

Audit reports findings will be provided to the Project Manager for determining corrective action and reply. On a twelve monthly basis the Borg Construction Project Manager shall undertake a management review of the CEMP.

10.2 Environmental Monitoring

Monitoring that is required during the construction phase of the Project is defined in **Section 7** of this CEMP.

Any measuring equipment used for monitoring shall be regularly serviced and calibrated.

10.3 Environmental Inspections

In addition to formal auditing and monitoring identified in this CEMP, the following inspections will also be undertaken:

- On a daily basis, site supervisory staff will inspect the site and any issues arising will be noted in the daily diaries and communicated to the Project Manager. The inspections will be conducted visually prior to commencement of each day's work and where appropriate during the working day. A final daily inspection will also be undertaken at the end of the workday to ensure that systems and structures are in place.
- A monthly site inspection will be conducted by the Environment Officer. Checklists will be used to record and report on activities for compliance with this CEMP and specific issues presenting significant environmental risks will be addressed, such as noisy works, sediment basin management, etc. An example checklist is shown in **Appendix H**. Checklists may be edited to reflect changing site conditions.

Where necessary, any damage or reduced capacity of environmental control measures will be corrected. If required, environmental control measures may be upgraded.

11 Incident Management and Complaints

11.1 Environmental Incidents

Condition C12 and C13 of Schedule 2 in Development Consent SSD 7016 for the Project requires:

"C12. The Applicant must notify the Secretary and any other relevant agencies of any incident or potential incident with actual or potential significant off-site impacts on people or the biophysical environment associated with the Development immediately after the Applicant becomes aware of the incident.

C13. Within seven days of the date of this incident, the Proponent must provide the Secretary and any relevant agencies with a detailed report on the incident."

An environmental incident is an unplanned event which occurs on-site and has the potential to result in adverse environmental impacts either on-site or in the surrounding area. Environmental incidents include spills, uncontrolled discharges or emissions, unintended damage to native vegetation, or injury to wildlife.

Depending on the nature of the incident and the risk posed to site personnel, all practical steps will be taken to minimise the risk of environmental damage as soon as possible after the event.

In the case of an environmental incident, actions to be taken are:

- Notify the Site Supervisor immediately;
- Immediately cease work in that area and remove people from the incident zone;
- Activate the site Pollution Incident Response Management Plan (PIRMP) if appropriate;
- Notify emergency services as/if required;
- Where safe to do so, attempt to contain the hazard and prevent it from spreading;
- If the incident is a spill:

- o Use silt fences, bunding or interception pits;
 - o Use absorbent materials stored on site to clean up spill;
 - o Contain contaminated soil/absorbent material waste in appropriate containers, and dispose of contaminated soil/absorbent material to an appropriately licensed off-site disposal facility;
- Notify any relevant agencies when an incident causes or threatens material harm to the environment and /or an exceedance or limit of the performance criteria in the approval and /or when legislation requires;
- The Site Supervisor is to notify the Environment Officer and Project Manager of any environmental incident as soon as practicable;
- Temporarily repair or isolate the failed plant or equipment component;
- Determine actions to rectify the incident in consultation with the Environment Officer;
- Sample the impacted site media be it soil and/or surface water; and
- Implement any longer term remedial measures that may be required.

In accordance with Condition C12 and C13 of Schedule 2 in Development Consent SSD7016, the Borg Construction Environment Officer shall notify the Secretary DPIE and any other relevant agencies, including the EPA, of any incident associated with the Project as soon as practicable after becoming aware of the incident. Within seven days of the date of the incident, the Proponent shall provide the Secretary DPIE and any relevant agencies with a detailed report on the incident.

The Environment Officer will be responsible for notifying NSW EPA of the pollution incident. Information to be provided under section 150 of the POEO Act includes:

- Time, date, nature, duration and location of the incident;
- Location of the place where pollution is occurring or is likely to occur;
- Nature, the estimated quantity or volume and concentration of any pollutants involved;
- Circumstances in which the incident occurred (including the cause of the incident, if known); and
- Action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution.

The Environment Officer is to collect and document (to the extent practicable) the above information. For example, this would include taking photographs, collecting surface water samples of any unplanned water discharges both from the source of the pollution and upstream and downstream in the receiving waterway (for analysis and comparison).

Any environmental incidents, spills, uncontrolled discharges or emissions, unintended damage to native vegetation, etc , and the corrective actions undertaken, shall be recorded in DataStation, Borgs incident management system.

In accordance with Condition C10 of Schedule 2 in Development Consent SSD 7016, within three months of the submission of an incident report under Condition C12 Borg Construction shall review, and if necessary revise the CEMP to the satisfaction of the Secretary DPIE.

11.3 Emergency Contacts

Emergency contact details are listed in the Borg Panel – Oberon Emergency Response Plan, which includes the Pollution Incident Response Management Plan (PIRMP).

11.4 Complaints Handling

The Environment Officer is to be notified of any received complaints. The Environment Officer is to follow the Borg complaints handling procedure (**Section 11.4.1**) and notify the Project Manager as soon as practicable. The Project Manager will notify the Borg Managing Director, as appropriate.

11.4.1 Inquiry and Complaints Handling Process

Borg's community and stakeholder management system includes procedures for recording, investigating, tracking and handling of all inquiries and complaints.

Once Borg has received verbal or written inquiries and/or complaints via telephone, email or post, the Environment Officer or their nominated delegate will:

- undertake an immediate investigation into the nature/cause of the inquiry and/or complaint;
- make initial contact with the community or stakeholder representative within 48 hours to clarify the reason for the inquiry and/or complaint and to notify of the investigation process including an appropriate re-notification time;
- record the enquiry and/or complaint on the Community Complaints register. This register includes the following details:
 - Complaint date and time;
 - Site;
 - Title;
 - Category;
 - Description;
 - Caller details;
 - Action;
 - Status;
 - Follow-up;
 - Complaint validity; and
 - Attachments.
- further investigate the inquiry and/or complaint and provide the community or stakeholder representative with an explanation of the cause and details of any actions taken to mitigate its effect.

It should be noted that if the inquiry and/or complaint is classified as an incident of significance under the site Emergency Response Plan (ERP), the Environment Officer must follow the incident reporting process in that document and ensure appropriate resolution and sign-off.

Records of complaints will be maintained in the complaints register database for at least four years after the complaint was made.

12 Non-Conformance

12.1 Non-Conformance and Corrective Action Report

All non-conformances noted in the Site Inspections, Audits, Incident Reports, or reported to the Project Manager by staff or other parties/authorities will be investigated and recorded in a Non-Conformance and Corrective Action Report which will be provided to the Project Manager on a monthly basis. Details of the non-conformance, including any immediate corrective actions undertaken, are to be recorded by the Environment Officer.

It is the responsibility of the Site Supervisor to immediately initiate corrective actions, if required. The Non-Conformance and Corrective Action Report must include details of the corrective action proposed and an appropriate close out date. Corrective Actions will include containment measures, clean-up and restoration of the affected area and of any deficient operational controls or monitoring controls. On completion, the Environment Officer will re-inspect the outcomes to ensure that they are acceptable before signing, dating and filing the Non-conformance Report.

The occurrence of such an event will be brought to the attention of personnel responsible, and environmental controls will be updated to prevent a reoccurrence.

12.2 Environmental Incidents Register

Environmental incidents are recorded in DataStation, Borgs incident management system. Each incident report will detail the issue, the corrective and preventative actions proposed, and the responsibilities and timing for completion of the actions. The report will include any comments and the completion date of corrective actions.

The Environment Officer shall review the Environmental Incidents Register monthly to ensure actions are completed and that controls are performing effectively. The Environment Officer shall also review the CEMP to determine if the above situations require project scope changes or if the incident identifies opportunities for improvement in mitigations or work practices.

Appendices

Appendix A - Unexpected Finds Protocol Heritage Items

Unexpected Finds Protocol – Aboriginal objects/features encountered during construction activities

Stop all work in the immediate area of the item and notify the Project Manager.
Establish a 'no-go zone' around the item. Use high visibility fencing, where practical.
Inform all site personnel about the no-go zone. No further interference, including works, ground disturbance, touching or moving the item must occur within the no-go zone.
Project Manager MUST IMMEDIATELY NOTIFY the Registered Aboriginal Parties and suitably qualified archaeologist.
Representatives of the Registered Aboriginal Parties, and the suitably qualified archaeologist must determine the extent, nature and significance of the Aboriginal object(s).
Notify OEH and submit a site card.
Project Manager, the Registered Aboriginal Parties, the suitably qualified archaeologist and OEH determine if avoidance of further impact is possible for objects of high archaeological or Aboriginal significance. If not of high significance or if avoidance is not feasible develop an appropriate salvage methodology.

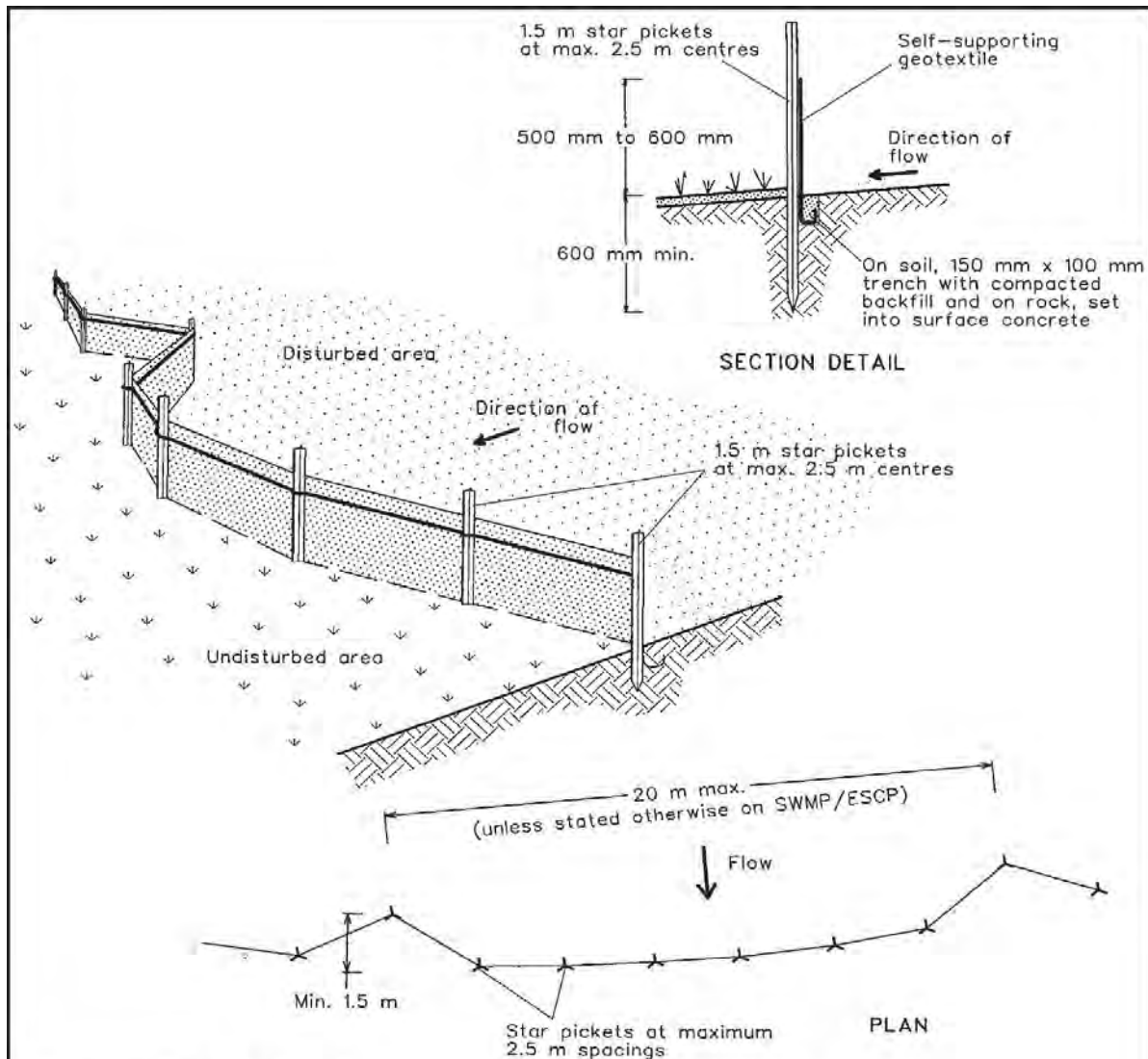
Unexpected Finds Protocol – Discovery of human remains during construction activities

When suspected human remains are exposed, all work is to cease immediately in the near vicinity of the find location.
Notify the Project Manager immediately.
Project Manager must notify the NSW Police Department, OEH on the Enviroline 131 555, the registered Aboriginal Parties and a suitably qualified archaeologist.
OEH will provide details on the current processes involved in best dealing with archaeological skeletal remains (both Aboriginal & historic).
Under the instructions of the Police, an area of 50 m radius is to be cordoned off by temporary fencing around the exposed suspected human remains site - work can continue outside of this area as long as there is no risk of interference to the human remains or the assessment of human remains.
If the remains are determined to be Aboriginal remains, then under the advice of OEH, consult with the Registered Aboriginal Parties.
Do not recommence work at the location until all legal requirements and the reasonable requirements of OEH and the Registered Aboriginal Parties have been adequately addressed.

Unexpected Finds Protocol – Discovery of historic relics during construction activities

Stop all work in the immediate area of the item and notify the Project Manager.
Establish a 'no-go zone' around the item. Use high visibility fencing, where practical.
Inform all site personnel about the no-go zone. No further interference, including works, ground disturbance, touching or moving the item must occur within the no-go zone.
Project Manager must notify a suitably qualified heritage consultant.
Suitably qualified heritage consultant to assess objects and recommend mitigation measures and salvage options if necessary.
Investigate, record or salvage in accordance with recommendations of the suitably qualified heritage consultant.
Project Manager to ensure implementation of heritage mitigation measures are documented.
Proceed with construction works.

Appendix B – ESC Standard Drawings

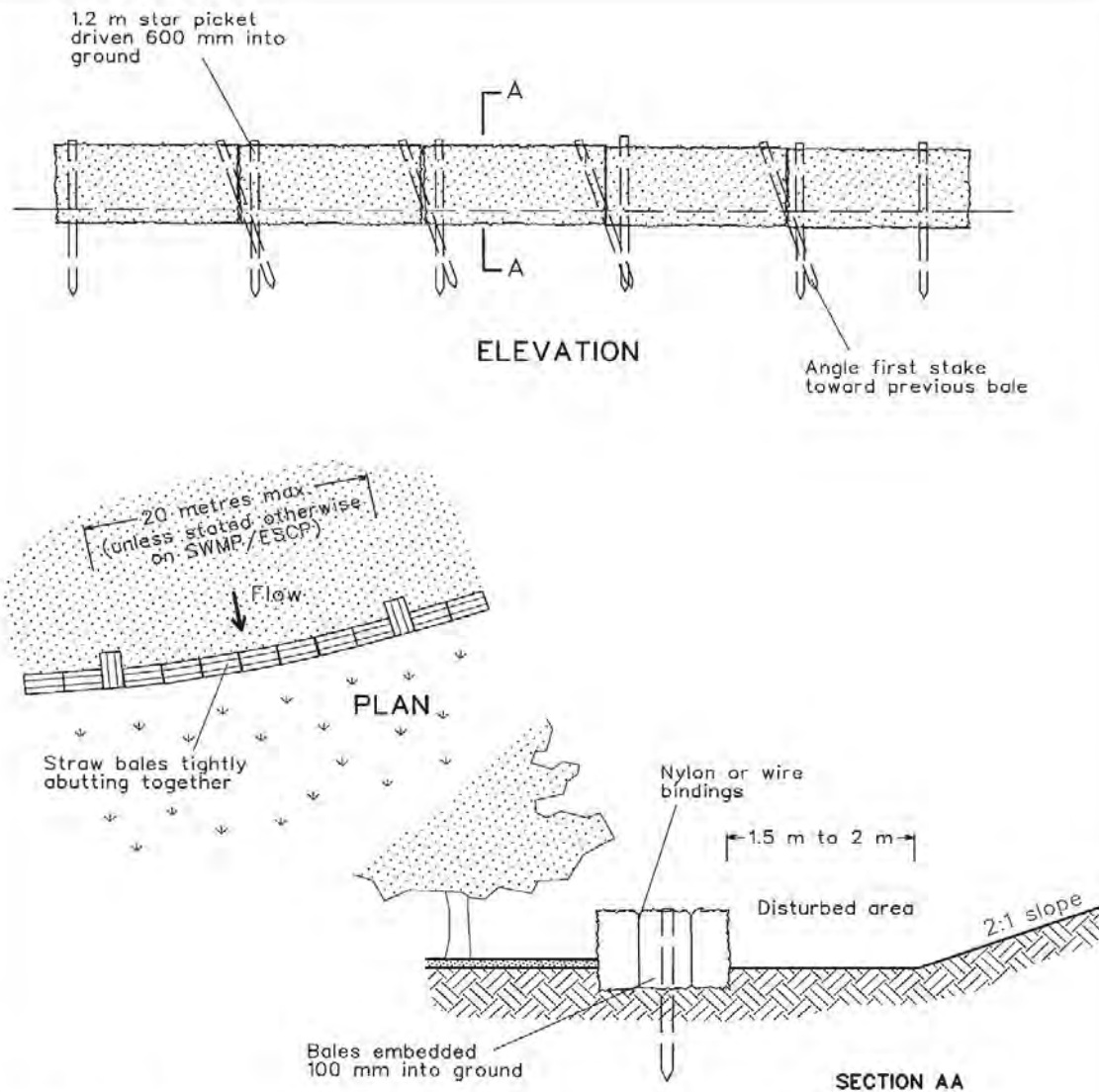


Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

SEDIMENT FENCE

SD 6-8

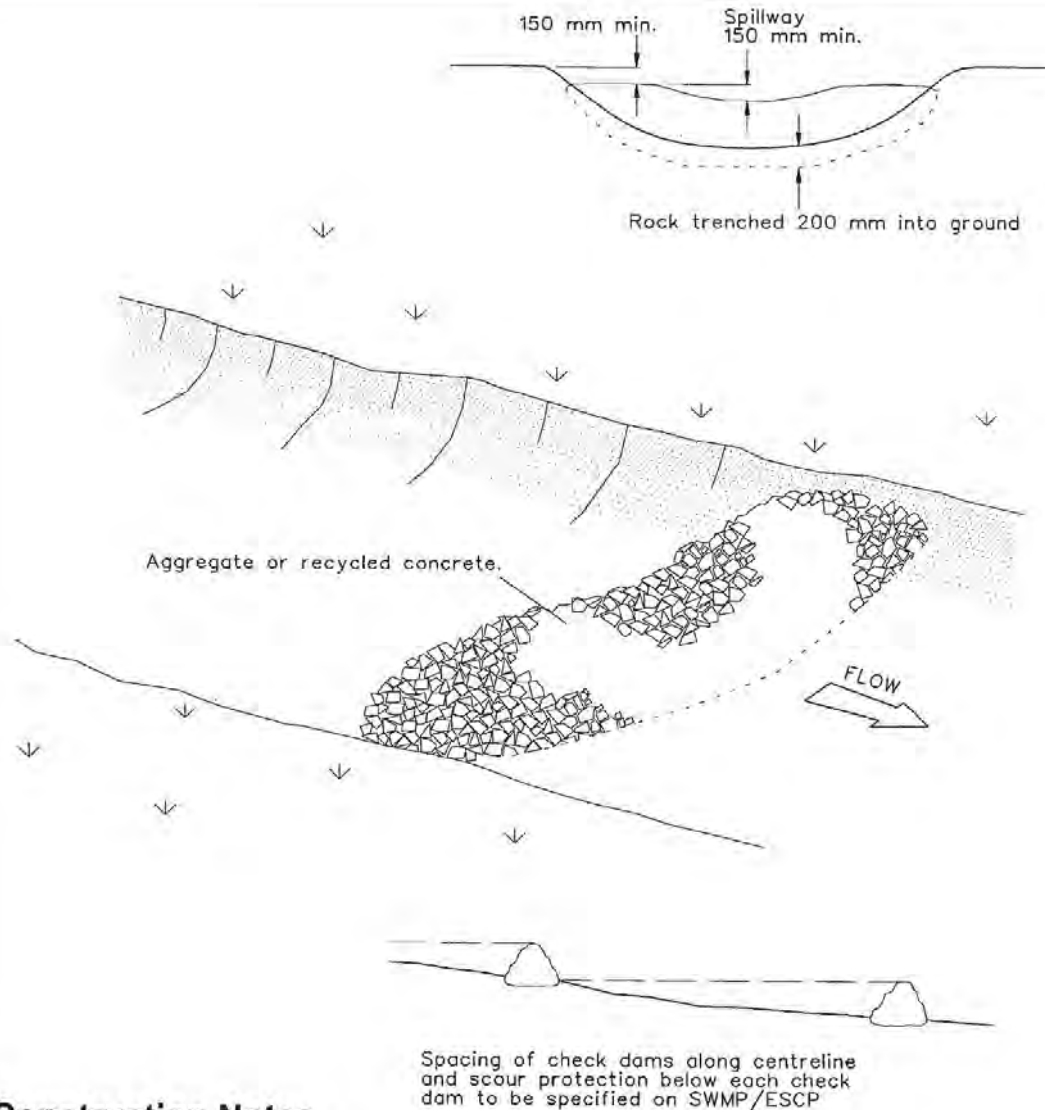


Construction Notes

1. Construct the straw bale filter as close as possible to being parallel to the contours of the site.
2. Place bales lengthwise in a row with ends tightly abutting. Use straw to fill any gaps between bales. Straws are to be placed parallel to ground.
3. Ensure that the maximum height of the filter is one bale.
4. Embed each bale in the ground 75 mm to 100 mm and anchor with two 1.2 metre star pickets or stakes. Angle the first star picket or stake in each bale towards the previously laid bale. Drive them 600 mm into the ground and, if possible, flush with the top of the bales. Where star pickets are used and they protrude above the bales, ensure they are fitted with safety caps.
5. Where a straw bale filter is constructed downslope from a disturbed batter, ensure the bales are placed 1 to 2 metres downslope from the toe.
6. Establish a maintenance program that ensures the integrity of the bales is retained - they could require replacement each two to four months.

STRAW BALE FILTER

SD 6-7

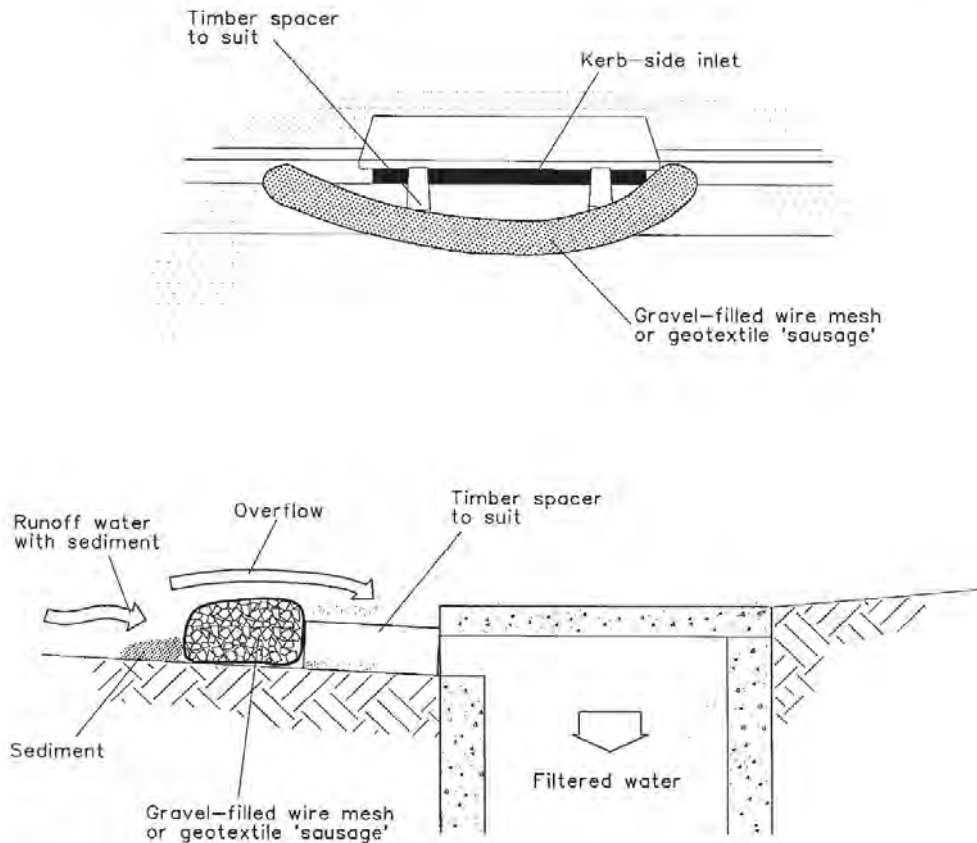


Construction Notes

1. Check dams can be built with various materials, including rocks, logs, sandbags and straw bales. The maintenance program should ensure their integrity is retained, especially where constructed with straw bales. In the case of bales, this might require their replacement each two to four months.
2. Trench the check dam 200 mm into the ground across its whole width. Where rock is used, fill the trenches to at least 100 mm above the ground surface to reduce the risk of undercutting.
3. Normally, their maximum height should not exceed 600 mm above the gully floor. The centre should act as a spillway, being at least 150 mm lower than the outer edges.
4. Space the dams so the toe of the upstream dam is level with the spillway of the next downstream dam.

ROCK CHECK DAM

SD 5-4



NOTE: This practice only to be used where specified in an approved SWMP/ESCP.

Construction Notes

1. Install filters to kerb inlets only at sag points.
2. Fabricate a sleeve made from geotextile or wire mesh longer than the length of the inlet pit and fill it with 25 mm to 50 mm gravel.
3. Form an elliptical cross-section about 150 mm high x 400 mm wide.
4. Place the filter at the opening leaving at least a 100-mm space between it and the kerb inlet. Maintain the opening with spacer blocks.
5. Form a seal with the kerb to prevent sediment bypassing the filter.
6. Sandbags filled with gravel can substitute for the mesh or geotextile providing they are placed so that they firmly abut each other and sediment-laden waters cannot pass between.

MESH AND GRAVEL INLET FILTER

SD 6-11

Appendix C – Construction Noise Management Plan

Construction Noise Management Plan

Timber Processing Facility – Particle Board

124 Lowes Mount Road, Oberon NSW

Borg Construction Pty Ltd

19th May 2021

Revision History

Rev No.	Revision Date	Author / Position	Details	Reviewed / Authorised	
				Name / Position	Signature
0	04/04/17	Carly McCormack Planning and Environmental Officer	Draft	Jeremy Welbourne Acoustics Engineer – Global Acoustics Victor Bendevski Environmental and Regulatory Compliance	
1	20/04/17	Carly McCormack Planning and Environmental Officer	Final Draft	Jeremy Welbourne Acoustics Engineer – Global Acoustics Victor Bendevski Environmental and Regulatory Compliance	
2	01/06/17	Carly McCormack Planning and Environmental Officer	Final	Victor Bendevski Environmental and Regulatory Compliance	
3	19/05/21	J Blomberg Environmental Manager	Review and update as per SSD 7016 condition C10, for submission to DPIE	V Bendevski Environmental & Regulatory Compliance	

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Definitions and Abbreviations

Abbreviation	Description
ABL	Assessment background level (ABL), the 10th percentile background noise level for a single period (day, evening or night) of a 24 hour monitoring period.
Ambient Noise	The all-encompassing noise associated within a given environment at a given time, usually composed of sound from all sources near and far.
Background Noise	Background noise is the term used to describe the underlying level of noise present in the ambient noise, measured in the absence of the noise under investigation, when extraneous noise is removed.
CEMP	Construction Environmental Management Plan
Day	The period from 7:00am to 6:00pm on Monday to Saturday, and 8:00am to 6:00pm on Sundays and Public Holidays
dB(A)	Noise level measurement units are decibels (dB). The “A” weighting scale is used to describe human response to noise.
DP&E	NSW Department of Planning and Environment
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence issued by the EPA under the POEO Act
Evening	The period from 6:00pm to 10:00pm
Incident	A set of circumstances causing or threatening material harm to the environment, and/or exceedance of the limits of performance criteria in Development Consent SSD 7016
L_{Aeq} (15 min)	The average noise energy during a 15 minute period.
Night	The period from 10:00pm to 7:00am on Monday to Saturday, and 10:00pm to 8:00am on Sundays and Public Holidays
RBL	Rating background level (RBL), the background noise level for a period (day, evening or night) determined from ABL data.
Sound Level Meter (SLM)	An instrument consisting of a microphone, amplifier and indicating device, having a declared performance and designed to measure sound pressure levels.

1 Introduction

1.1 Background

Borg Panels operates an existing Medium Density Fibre (MDF) and particleboard production facility in Oberon, NSW, manufacturing a range of Customwood MDF products and particleboard products including:

- Standard MDF;
- Moisture Resistant MDF;
- E0 (Low Formaldehyde Emitting) MDF;
- Ultraprime MDF Mouldings;
- Standard particleboard;
- Moisture resistance particleboard;
- Decorative Laminated MDF and particleboard; and
- Treated paper for the lamination of MDF and particleboard.

On 29 May 2017 Development Consent (SSD 7016) was granted by the Minister for Planning to construct a particleboard manufacturing facility, modify the existing MDF Board manufacturing facility and undertake general site works (the Project) at the existing Borg Panels facility located on 124 Lowes Mount Road, Oberon.

The main components of the Project are:

- Construction of a dedicated particleboard manufacturing line;
- Provide additional infrastructure within existing buildings;
- Modernise the existing facility;
- Construct a new automated storage warehouse; and
- Construction of hardstand, water quality ponds and emergency catchment.

Since that date, the Minister for Planning has approved three modifications (MOD) to SSD 7016:

- MOD 1 – extension of mouldings warehouse, reorientation of materials handling building, layout changes to particleboard chipper/debarker building, extension of northern noise bund, reconfiguration of elements of the surface water management system, reclamation of the Spring Dam (approved 20th November 2018);
- MOD 2 – installation of an electricity generation gas turbine and ancillary equipment (approved 29th November 2019); and
- MOD 3 – additional materials handling equipment, extension to northern warehouse, changes to the site surface water system and construction of further hardstand (approved 22nd May 2020).

No additional conditions were imposed by the Minister during the assessment and approval of these modifications with regards to this Construction Noise Management Plan.

This Construction Noise Management Plan (CNMP) is a sub plan to the Construction Environment Management Plan (CEMP).

1.2 Construction Staging

Construction works commenced in June 2017 under approved SSD 7016 dated 29th May 2017, and essentially followed the Stages as outlined below:

- Stage 1 – Demolition of office building and site works, construction of detention basin and hardstand areas. Within this stage the construction of the detention basin and drainage swales will be undertaken first in order to ensure that the appropriate erosion and sediment control measures can be implemented as support for following stages. Stage 1 is to commence upon approval and is estimated to take approximately 6 months.
- Stage 2 – construction of particleboard manufacturing facility and installation of related plant and equipment, including modernisation of the existing plant. Stage 2 is to commence upon approval or slightly thereafter and is estimated to take up to 18-24 months, dependent on equipment and labour availability.
- Stage 3 – alterations and additions to existing MDF site and construction of new automated storage warehouse. Stage 3 is to commence post completion of Stage 2 and is estimated that this will take up to 9 months.
- Stage 4 – debarker chipper building and chip preparation area. Stage 4 may commence approximately 6 months after approval and is estimated to take up to 12 months to complete.

The activities included in the above four stages are complete. The works associated with the modifications described in section 1.1 Background have since followed. Works under MOD 1 are essentially complete. Works under MOD 2 have been completed with final commissioning of the new turbine expected May/June 2021, and activities under MOD 3 are progressing.

1.3 Purpose of this Plan

This CNMP has been developed to address potential noise impacts on sensitive receivers and to satisfy the requirements set out in Condition B15 of Development Consent SSD 7016 for the Project, and includes information on the following:

- Relevant legislation and guidelines for noise generated during construction of the Project;
- Potential sensitive receivers who may be affected by noise generated by the Project;
- Noise impacts potentially arising from the Project;
- Safeguards, mitigation measures and monitoring to manage noise impacts during construction;
- Roles and responsibilities of those involved in the design and implementation of noise management controls; and
- An effective monitoring, auditing and reporting framework to assess the effectiveness of the controls implemented.

2 Legislative and Regulatory Compliance

2.1 Relevant Legislation

Key environmental legislation relating to noise management for the Project includes:

- *Protection of the Environment Operations Act 1997*; and
- *Environment Planning and Assessment Act 1979*.

2.2 Conditions of Consent

The Development Consent (SSD 7016) conditions relevant to noise that have been considered in this Plan are detailed in **Table 1**.

Table 1 – Development Consent Conditions

No.	Requirement	Document Reference									
	NOISE										
	Hours of Work										
B13	The Applicant must comply with the hours detailed in Table 1, unless otherwise agreed in writing by the Secretary. Table 1: Hours of Work <table> <tr> <th>Activity</th><th>Day</th><th>Time</th></tr> <tr> <td>Earthworks and Construction</td><td>Monday – Friday Saturday</td><td>7 am to 7 pm 8 am to 1 pm</td></tr> <tr> <td>Operation</td><td>Monday – Sunday</td><td>24 hours</td></tr> </table>	Activity	Day	Time	Earthworks and Construction	Monday – Friday Saturday	7 am to 7 pm 8 am to 1 pm	Operation	Monday – Sunday	24 hours	Section 2.6
Activity	Day	Time									
Earthworks and Construction	Monday – Friday Saturday	7 am to 7 pm 8 am to 1 pm									
Operation	Monday – Sunday	24 hours									
B14	Works outside of the hours identified in Condition B13 may be undertaken in the following circumstances: (a) works that are inaudible at the nearest sensitive receivers; (b) works agreed to in writing by the Secretary; (c) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or (d) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.	Section 2.6									
	Construction Noise Management Plan										
B15	The Applicant must prepare a Construction Noise Management Plan (CNMP) for the Project to manage construction noise. The plan must form part of the CEMP required by Condition C1 and must:	This Plan									
	(a) be prepared by a suitably qualified and experienced noise expert;	Reviewed by Global Acoustics									
	(b) be approved by the Secretary prior to the commencement of construction of the Project;										
	(c) describe procedures for achieving the noise limits in Table 2;	Section 6									
	(d) describe the measures to be implemented to manage noisy works such as rock/concrete breaking activities, in close proximity to sensitive receivers;	Section 6									

	(e) include strategies that have been developed with the community for managing noisy works;	Table 7 & Section 9.1.2								
	(f) describe the community consultation undertaken to develop the strategies in e) above; and	Section 9.1.2								
	(g) include a complaints management system that would be implemented for the duration of the Project.	Section 9.2								
	Operational Noise Limits									
B16	The Applicant must ensure that noise generated by the Development does not exceed the noise limits in Table 2. Table 2: Noise Limits dB(A) <table><tr><th>Location</th><th>Day LAeq(15 minute)</th><th>Evening LAeq(15 minute)</th><th>Night LAeq(15 minute)</th></tr><tr><td>All sensitive receivers</td><td>55</td><td>50</td><td>45</td></tr></table> Note: Noise generated by the Development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.	Location	Day LAeq(15 minute)	Evening LAeq(15 minute)	Night LAeq(15 minute)	All sensitive receivers	55	50	45	Section 5
Location	Day LAeq(15 minute)	Evening LAeq(15 minute)	Night LAeq(15 minute)							
All sensitive receivers	55	50	45							
	Mobile Wood Chippers									
B22	During construction, the Applicant must ensure that mobile wood chippers are not operating simultaneously with rock/concrete breaking activities.	Section 6 Table 7								

2.3 Mitigation Measures

This Plan also considers the requirements of the Mitigation Measures from the Environmental Impact Statement (EIS) and Response to Submissions (RTS) for the Project.

There are no noise mitigation measures specific to construction, however Borg commits to achieving noise limits prescribed for the Project, and managing noisy works including concrete breaking in close proximity to sensitive receivers. Table 7 General Construction Noise Impact Mitigation Measures of this Plan outlines the commitments made to manage noise impacts from construction activities.

2.4 Environment Protection Licence

Environment Protection Licence 3035 (EPL 3035) specifies noise limits for operation of the existing facility. Condition L4 of the EPL provides noise conditions, which are reproduced below:

L4 Noise limits

L4.1 Noise from the premises must not exceed:

- a) 55 dB(A) $L_{Aeq}(15 \text{ minute})$ during the day (7am to 6pm); and
- b) 50 dB(A) $L_{Aeq}(15 \text{ minute})$ during the evening (6pm to 10pm); and
- c) at all other times 45 dB(A) $L_{Aeq}(15 \text{ minute})$, except as expressly provided by this licence.

Where L_{Aeq} means the equivalent continuous noise level – the level of noise equivalent to the energy-average of noise levels occurring over a measurement period.

L4.2 To determine compliance with condition L4.1, noise must be measured at or computed for Oberon High School or any other noise sensitive locations (such as a residence/school). A modifying factor correction must be applied for tonal, impulsive or intermittent noise in accordance with the "NSW Industrial Noise Policy (EPA, January 2000)".

L4.3 The noise limits set out in condition L4.1 apply under all meteorological conditions except for the following:

- a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or
- b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
- c) Stability category G temperature inversion conditions.

L4.4 For the purpose of condition L4.3:

- a) Data recorded by the meteorological station identified as EPA Licence Point 26 must be used to determine meteorological conditions; and
- b) Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.

Borg will operate the Project with continuation of these existing noise limits.

2.5 Guidelines and Standards

The guidelines and standards relevant to noise management for the Project include:

- DECC 2009, *Interim Construction Noise Guideline (ICNG)*, NSW Department of Environment and Climate Change: Sydney NSW; and
- EPA 2017, *Noise Policy for Industry (NPfI)*, Environment Protection Authority. Sydney NSW.

2.6 Construction Noise Management Levels

Construction noise can represent a significant risk of impact on the amenity of sensitive receivers. The Interim Construction Noise Guideline (DECC, 2009) was developed to focus on applying work practices most suited to minimising construction noise impacts, rather than focusing only on achieving numeric noise levels. While some noise from construction sites is inevitable, the aim of the guideline is to protect the majority of residences and other sensitive land uses from noise pollution most of the time.

Table 2 sets out management levels for construction noise at residences and how they are to be applied. The rating background level (RBL), i.e. the overall background noise level measured in each relevant assessment period, is used when determining the management level.

Table 2 – Noise Management Levels from the ICNG (DECC, 2009)

Time of Day	Management Level LAeq (15 min) *	Notes
Residential Premises		
Recommended Standard Hours Monday to Friday 7am to 6pm Saturday 8am to 1pm No work on Sundays or Public Holidays	Noise affected RBL + 10 dB	The noise affected level represents the point above which there may be some community reaction to noise.
		Where the predicted or measured LAeq (15 min) is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level.
		The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.
	Highly noise affected 75 dB(A)	The highly noise affected level represents the point above which there may be strong community reaction to noise.
		Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur, taking into account:
		1. times identified by the community when they are less sensitive to noise (such as before and after school for works near schools, or midmorning or mid-afternoon for works near residences) 2. if the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.
Outside Recommended Standard Hours	Noise affected RBL + 5 dB	A strong justification would typically be required for works outside the recommended standard hours.
		The proponent should apply all feasible and reasonable work practices to meet the noise affected level.
		Where all feasible and reasonable practices have been applied and noise is more than 5 dB(A) above the noise affected level, the proponent should negotiate with the community.
Commercial Premises	70 dB(A)	External noise level at most affected point of the premises.

* Noise levels apply at the property boundary that is most exposed to construction noise at a height of 1.5 m above ground level. If the property boundary is more than 30 m from the residence, the location for measuring or predicting noise levels is at the most noise-affected point within 30 m of the residence.

Other types of sensitive land uses such as schools or recreation areas may consider noise from construction to be disruptive when the property is in use. Management levels for noise at other sensitive land uses are summarised in **Table 3**.

Table 3 – Noise Management Levels for Sensitive Land Uses other than Residences

Land Use	Management Level LAeq (15min) (Applies when property is in use)
Classrooms at schools and other educational institutions	Internal noise level: 45 dB(A)
Hospital wards and operating theatres	Internal noise level: 45 dB(A)
Places of worship	Internal noise level: 45 dB(A)
Active recreation areas (characterised by sporting activities and activities which generate their own noise or focus for participants, making them less sensitive to external noise intrusion)	External noise level: 65 dB(A)
Passive recreation areas (characterised by contemplative activities that generate little noise and where benefits are compromised by external noise intrusion, for example, reading, meditation)	External noise level: 60 dB(A)
Community centres	Depends on the intended use of the centre. Refer to the recommended 'maximum' internal levels in AS2107 for specific uses.

Construction of the infrastructure will occur concurrently with operation of the existing facility. All construction will generally be undertaken during standard construction hours, with the exception of 6pm – 7pm Monday to Friday. The operational noise criterion for the evening period would apply during these hours, as conditioned in Development Consent SSD7016 and EPL 3035. Only unforeseen circumstances would require work to continue outside of these hours. When construction work outside of these hours is required, the operational noise criterion for the relevant period would apply, as conditioned in Development Consent SSD7016 and EPL 3035.

Borg propose to generally restrict site noise emission from both construction and operational tasks combined to comply with the day period operational noise criterion of $L_{Aeq(15\text{ min})}$ 55 dB and the evening period operational noise criterion of $L_{Aeq(15\text{ min})}$ 50 dB, conditioned in Development Consent SSD7016 and EPL 3035. The exception will be for short duration high noise emitting tasks as such as rock/concrete breaking, for which the “highly noise affected” construction noise criterion of $L_{Aeq(15\text{ min})}$ 75 dB is deemed appropriate. Such construction tasks should be restricted to the least noise sensitive times of day. It is recommended all potentially affected receivers are notified in advance of any construction tasks where the operational day period criterion is likely to be exceeded.

3 Sensitive Receivers

The subject land is located on the northern outskirts of Oberon, to the east of Lowes Mount Road. As per the Oberon Council Local Environmental Plan (LEP) 2013, the land zoning classification of the subject site is IN1 General Industrial. The Borg operations are part of a larger industrial precinct operated by a number of separate companies, which generally involve timber product manufacture.

Land use north, east and west of the subject site is generally agricultural. Land use to the immediate south is industrial / recreational, and further south residential and the township of Oberon.

For the purpose of identifying and managing noise impacts representative noise sensitive receivers (NSR) have been selected, including the nearest and potentially most affected residences to the site, and Oberon High School. The following NSRs are considered representative of all potentially affected receivers and are referred to in this Plan. Refer to **Figure 1** for details.

Table 4 – Noise Sensitive Receivers

Receiver ID	Receiver Location
R01	32 O'Connell Road
R02	6 Herborn Street
R03	Oberon High School
R04	10 Tasman Street
R05	127 Hazelgrove Road
R06	26 Cunyngham Street
R07	131 Hazelgrove Road
R08	2 Herborn Street
R09	15-19 Albion Street
R10	Oberon Caravan Park



Figure 1 – Noise Sensitive Receivers (Source: Global Acoustics, May 2016)

4 Noise and Vibration Impact Assessment

Global Acoustics (May 2016) was engaged by Borg to carry out a noise and vibration impact assessment for the proposed expansion of the panel manufacturing facility. This assessment considered impacts associated with noise emission from the existing site, and, the expansion. Potential impact from operational noise, low frequency noise, sleep disturbance, cumulative noise, construction noise and road traffic noise were assessed. A model validation assessment was undertaken to provide an estimate of model prediction accuracy.

Acoustic advice was also provided for construction and operation of those items included in modifications 1 through 3. At each modification, the acoustic consultant concluded that there would be no change to site noise emission levels with continued compliance predicted for all receptors, and that construction activities should continue to be managed in accordance with the CNMP (this Plan).

4.1 Operation

Model predictions indicate the proposed expansion could generally comply with existing EPL operational noise criteria, when recommended management strategies are implemented, and if limiting sound powers for proposed infrastructure and recommended noise controls for existing plant are achieved. The exception is 15-19 Albion Street, for which a minor 1 dB exceedance is predicted for the day period during enhancing meteorological conditions if a mobile chipper is operational. Compliance was predicted for all receivers for 'normal' operations when no mobile chipping plant is operated.

4.2 Construction

4.2.1 Noise

Construction activities will be undertaken in conjunction with regular operation of the existing site. Borg propose to generally restrict site noise emission from both construction and operational tasks combined to comply with operational noise criteria conditioned in Development Consent SSD7016 and EPL 3035.

Rock or concrete breaking, earthworks, and, infrastructure installation were assessed. Model predictions for the earthworks and installation scenarios indicate general compliance with the day period operational noise criterion at all receivers, with the exception of 15-19 Albion Street. At this location, exceedances were predicted during prevailing wind conditions if a mobile chipper is operated concurrently with construction plant. Exceedance of the evening period operational noise criterion is predicted at R02, R03, R06, R08, R09 and R10. These exceedances are predicted during calm and prevailing wind conditions when a mobile chipper is operated concurrently with construction plant. Construction noise can be managed through monitoring weather conditions, restricting use of the mobile chipper during enhancing conditions if a large amount of construction plant is operating, and restricting construction activities where possible to the hours detailed in the ICNG.

Rock breaking was assessed against the “highly affected” construction noise criterion of $L_{Aeq(15min)}$ 75 dB, as the duration would be relatively short compared with other construction tasks, and few options are available to mitigate noise from this activity. Predictions were well below this criterion.

4.2.2 Vibration

Due to the distance to sensitive receivers from operational and construction areas, no vibration impact is expected.

4.2.3 Road Traffic Noise

Construction and operational road traffic noise impacts were assessed for North Street and Albion Street, the roads indicated in the Traffic Impact Assessment report to receive the greatest traffic flows. The majority of both construction and operational project traffic generated by the project will occur outside of general peak hour traffic flows. Increases to road traffic noise relative to the existing situation were found to be insignificant, and less than 1 dB. Such an increase is unlikely to be either measurable, or perceptible to the human ear.

4.2.4 Construction Plant

Table 5 lists plant included in the construction noise assessment.

Table 5 – Potential Noise Sources

Equipment Type	Earthworks	Installation	Rock Breaking
Excavator	4	0	0
Loader	1	0	0
Dozer	1	0	0
Dump truck	2	0	0
Grader	1	0	0
Roller	1	0	0
Articulated truck	2	0	0
Mobile crane	0	2	0
Concrete truck	0	1	0
Delivery Truck	0	2	0
Bobcat	0	1	0
Rock breaker	0	0	1

Predictions for the rock breaking scenarios include a plus 5 dB modifying factor penalty to account for the intermittent nature of rock breaking works. It is recommended mobile chipping plant is not operated during rock breaking works. It is considered reasonable to assess rock breaking against the “highly affected” construction noise criterion of $L_{Aeq} (15 \text{ min})$ 75 dB, as the duration would be relatively short compared with other construction tasks, and few options are available to mitigate noise from this activity. Predictions (without mobile chipping plant operating) are well below this criterion.

5 Construction Noise Management Levels

Construction activities will be undertaken simultaneously with regular operation of the existing site. Borg propose to generally restrict site noise emission from both construction and operational tasks combined to comply with operational noise criteria conditioned in Development Consent SSD 7016 and EPL 3035.

Following consideration of the ICNG (**Section 2.6**), Development Consent (SSD 7016) conditions (**Section 2.2**), EPL 3035 (**Section 2.4**) and the measured background noise levels (refer Global Acoustics, May 2016), **Table 6** summarises the Noise Management Levels (NMLs) for all residential receivers.

Table 6 – Operation and Construction Noise Management Levels

Location	Activity	Day (7am-6pm) LAeq (15 min)	Evening (6pm-10pm) LAeq (15 min)	Night (10pm-7am) LAeq (15 min)
All residential receivers	General Construction	55	50	45
	Rock/ Concrete Breaking	75		

Work outside approved construction hours are not expected, however unforeseen constraints relating to delivery of materials or equipment, or other technical requirements, may see some activities undertaken outside approved hours. Where required, out of hours works will be undertaken to meet the noise management levels in **Table 6**.

Development Consent SSD 7016 Condition B14 requires non-standard construction hour work to be inaudible at the nearest sensitive receivers. The Development Consent takes precedence over the ICNG and will be adopted in this plan.

In this instance, “inaudible” means the activity is not discernible from general operation activities.

6 Impact Management Measures

In order to ensure project goals are met and to maintain impacts at a practical minimum, the measures and safeguards summarised in **Table 7** will be implemented by Borg throughout the construction phase of the Project.

Table 7 – General Construction Noise Impact Mitigation Measures

Mitigation Measures	Timing	Responsibility
Administrative Controls		
Construction activities that are audible at any residential receptor, shall only be undertaken during the following hours: a) 7:00 am to 7:00 pm Monday to Friday b) 8:00 am to 1:00 pm Saturdays c) at no time on Sundays or public holidays.	Daily	Project Manager/ Environment Officer
The DECC construction noise management levels, and site operational levels, will be achieved as far as practicable. Where works are predicted to exceed the NMLs (refer Section 5), residents should be informed of the time, type, duration and noise level of noisy activities prior to the anticipated exceedance.	Daily	Project Manager/ Environment Officer
Provide an induction to site personnel (which includes Environmental Awareness Training) addressing the requirements of this CNMP and their responsibilities with regard to noise management.	Prior to starting work on site	Project Manager/ Environment Officer
Ensure truck drivers are informed of designated vehicle routes, parking locations, delivery hours, and minimising engine braking and idling.	Daily	Project Manager/ Environment Officer
Provide education of supervisors, operators and sub-contractors on the need to minimise noise through Toolbox meetings and on-site coaching.	As needed	Project Manager/ Environment Officer
Inform potentially noise affected residents of the nature of works to be carried out, the expected noise levels and duration, as well as relevant contact details.	As needed	Project Manager/ Environment Officer
Restrict use of mobile chippers during enhancing conditions if a large amount of construction plant is operating.	Daily	Project Manager/ Environment Officer
Where works are expected to be undertaken outside approved work hours, ensure operational noise management levels can be met for the relevant period (evening or night).	As needed	Project Manager/ Environment Officer
Procedures for handling noise complaints (Section 9) will be implemented including recording, reporting and acting on complaints.	As needed	Project Manager/ Environment Officer
Construction Controls – General		
Select appropriately sized equipment for the task, such as excavation equipment.	Daily	Project Manager/ Environment Officer

Mitigation Measures	Timing	Responsibility
Select low noise emission plant where possible.	Daily	Project Manager/ Environment Officer
Avoid, where possible, noisy plant working simultaneously close together.	Daily	Project Manager/ Environment Officer
Ensure all equipment is equipped with reasonable and feasible noise control (e.g. mufflers, acoustic enclosures, flashing lights or non-tonal reversing alarms (squawkers) as an alternative to traditional reversing beepers) and is turned off when not in use.	Daily	Project Manager/ Environment Officer
Ensure equipment is operated in the correct manner and adequately maintained - including replacement of engine covers, repair of defective silencing equipment, tightening of rattling components, repair of leakages in air lines and shutting down equipment not in use.	Daily	Project Manager/ Environment Officer
Where practicable, maintenance work on all construction plant will be carried out away from noise sensitive receivers and confined to standard construction hours.	Daily	Project Manager/ Environment Officer
The site entry and egress points will be set as far from receivers as practical.	Once-off	Project Manager/ Environment Officer
Ensure traffic movement is kept to a minimum, e.g. ensure trucks are fully loaded so that the volume of each delivery is maximised.	Daily	Project Manager/ Environment Officer
Avoid dropping material from a height into unlined metal trays or bins.	Daily	Project Manager/ Environment Officer
Construction Controls – Rock/Concrete Breaking		
Mobile wood chipper and rock/ concrete breaking activities are not to be undertaken concurrently. A permit to work is required for rock/ concrete breaking activities that requires the construction team to consult with mobile wood chipper operators to ensure operations do not occur simultaneously.	Daily	Project Manager/ Environment Officer
Consult with Oberon High School prior to rock/concrete breaking activities. Where feasible and reasonable, plan works to limit rock/concrete breaking activities during important events, e.g. examination periods.	Daily	Project Manager/ Environment Officer
Undertake rock/concrete breaking activities only between 8am and 6pm Monday to Friday, and 8am and 1pm Saturdays.	Daily	Project Manager/ Environment Officer

Mitigation Measures	Timing	Responsibility
Undertake rock/concrete breaking in continuous blocks not exceeding three hours each with a minimum respite from those activities and works of not less than one hour between each block.	Daily	Project Manager/ Environment Officer
Monitoring and Auditing		
Monitor construction noise levels to verify compliance with the CNMP. Prepare quarterly monitoring summaries for submission to the Project team.	As needed	Environment Officer
Monitor meteorological conditions (i.e. wind speed and direction) during construction activities and adjust activities when prevailing (enhancing) meteorological conditions occur.	As needed	Environment Officer
Report any exceedance of limits to DPIE and EPA in accordance with Development Consent SSD 7016 and EPL 3035.	As needed	Environment Officer

7 Noise Monitoring

7.1 Overview

The Noise Impact Assessment (Global Acoustics, May 2016) and subsequent advice provided as required for each modification indicates general compliance with the day period operational noise criterion at all receivers, when management measures are implemented. Therefore, construction noise monitoring will be undertaken to:

- Verify compliance with the noise objectives presented in **Section 5**;
- In response to any exceedance of limits; and
- In response to complaints where this is considered appropriate.

7.2 Monitoring Frequency

7.2.1 Compliance Monitoring

The following compliance monitoring, to be undertaken during construction by a suitably qualified noise expert, is recommended for the project:

- Periodic attended noise monitoring at the potentially most affected residences during the day period, with a frequency of once per quarter, during the construction phase of the Project; and
- If exceedance of limits is demonstrated, additional mitigation controls are to be implemented, and follow-up monitoring undertaken within one week of the exceedance.

Construction noise performance is reported as detailed in **Section 10**.

7.2.2 Management Monitoring

In addition to quarterly compliance monitoring, off-site management noise monitoring by suitably trained site personnel should be undertaken regularly, particularly during periods of meteorological enhancement and on commencement of new construction activities or areas, to ensure relevant noise criteria are adhered to.

Operations should be modified accordingly as required when exceedance or potential exceedances are measured. Modifications may include, but are not limited to, erection of temporary barriers or screens, temporary shutdown of equipment until adverse weather conditions change, or relocating equipment to less sensitive areas when feasible to do so.

7.3 Monitoring Locations

Four representative locations have been chosen for monitoring as summarised in **Table 8**. Refer to **Figure 2** for these locations.

Table 8 – Noise Monitoring Locations

Location ID	Monitoring Location
NM1	Oberon Caravan Park
NM2	Intersection Pine Street and Herborn Street
NM3	127 Hazelgrove Road
NM4	Intersection Tasman Street and Earl Street

Noise management levels for each monitoring location are provided in **Table 6**. Where these are exceeded by construction-related noise sources, the exceedance should be investigated (as discussed in **Section 10**) to determine the cause and any necessary mitigation.

7.3.1 Instrumentation

The following requirements should be observed whilst monitoring:

- Before commencing monitoring, ensure the Sound Level Meter's (SLM) laboratory calibration is current (refer to the sticker on the unit).
- If unsure about the functions of the SLM, refer to the instruction sheet in the case. All site environment officers should be trained in the use of the SLM and training documents kept on file.
- Ensure the windscreen is attached and that the SLM settings include a windscreen factor, the SLM is set to A-weighted and fast response.
- Prior to and completing the measurement, the SLM should be field calibrated using the supplied calibrator. Ensure that the pre- and post- measurements do not differ by more than 0.5 dB(A).



Figure 2 – Noise Monitoring Locations

7.3.2 Weather Conditions

Monitoring should be undertaken on days of light winds (<5 m/s) and no rain. Wind speed is to be monitored using a hand held wind speed monitor. Rain and too much wind will elevate the noise level. If there is no choice but to monitor in inclement weather, note the conditions on the field sheet.

NMLs listed in Table 6 apply under all meteorological conditions except for the following:

- Wind speeds greater than 3 metres/second at 10 metres above ground level; or
- Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
- Stability category G temperature inversion conditions.

Weather conditions measured at the site weather station should be used to determine applicability of meteorological exclusion rules.

7.3.3 Construction Noise Monitoring Procedure

Monitoring should be undertaken for a duration of 15 minutes at each location. More than one 15-minute measurement can be undertaken at each location.

The following information should be recorded in accordance with *AS 1055.2—1997 Acoustics—Description and measurement of environmental noise*. The field sheet for noise monitoring should capture the following details:

- Date and time of measurement;
- Details of the measurement positions, instrumentation used and types of analyses made;
- Weather conditions at each monitoring location, recorded at 1.8 metres above ground level, during the measurements (wind direction, wind velocity, relative humidity, temperature, recent precipitation, cloud cover (oktas));
- Description of the noise being investigated as well as operating conditions of the sound source(s) under investigation;
- Noise due to other sources including normal and possibly unusual noises;
- Statistical noise metric results including L_{A1} , L_{A10} , L_{Aeq} and L_{A90} due to all noise sources during the measurement period;
- Estimated or calculated $L_{Aeq (15min)}$ attributable to Borg noise sources (in the absence of extraneous noise sources) during the measurement period;
- Associated observations (vibrations, amplitude or frequency modulation or similar).

Noise monitoring results will be recorded on a Noise Monitoring Record Form. An example Noise Monitoring Record form is provided as **Appendix B**.

Correction for Background Noise

Operational noise management levels are used to assess construction noise (refer **Section 5**). Borg propose to generally restrict site noise emission from both construction and specific operational tasks combined to comply with operational noise criteria.

Background noise such as traffic and other non-operational influences are not included in this total. Therefore, it is important to distinguish between operational noise and other noises. This can be done in several ways:

- i. Use the SLM display while monitoring to estimate the noise level from specific sources dominant at the time, e.g. when no traffic is present and construction/operational equipment is strongly dominant or where construction/operation is inaudible over the traffic.
- ii. Also, note the proportion of time that construction/operational noise is dominant, e.g. 10%, 50% etc, and under what conditions this occurs.
- iii. If practical, use the 'pause' and 'back erase' functions of the SLM to eliminate any extraneous noise such as dogs barking or lawn mowers.
- iv. Where possible, or in cooperation with operators, measure background noise with no construction activity, then again with construction underway. The construction noise can then be compared with the background noise. This could be for durations of just a few minutes or, with cooperation, two separate 15 minute recordings.

Correction for Impulsive Noise

Impulsive noise is noise having a high peak of short duration or a sequence of such peaks (EPA, 2000).

To assess whether noise is substantially impulsive, noisy activities should be measured with the SLM set on A-weighted **fast** response and **impulse** response. According to the INP, noise is considered impulsive if the difference between the two values is more than 2 dB(A). Apply difference in measured levels as the correction, up to a maximum of 5 dB.

Correction for Intermittent Noise

Intermittent noise is when the level of noise suddenly drops to that of the background noise several times during the assessment period, with a noticeable change in noise level of at least 5 dB (EPA, 2000).

In accordance with the INP, a correction of 5 dB(A) for intermittent noise should be made to the measured L_{Aeq} noise levels to account for the greater annoyance. Adjustment to be applied for night-time period only.

8 Training

Borg shall implement appropriate training and induction in the requirements of this CNMP. All employees and contractors working on site will undergo site induction training, which includes Environmental Awareness Training. The induction will address:

- This CNMP;
- The existence of noise legislation and what this means for the Project, i.e. Noise Management Levels;
- Delivery hours and locations;
- Reporting and recording environmental non-compliance related to noise;
- Noise minimisation measures; and
- The importance of regular plant maintenance.

Records will be kept of all personnel undertaking the site induction and training, including the contents of the training, date and name of trainer/s.

Key staff will undertake more comprehensive training relevant to their position and/or responsibility. This training may be provided as “toolbox” training or at a more advanced level by the Environment Officer.

Further details regarding the content of staff induction and training are outlined in the CEMP.

9 Community Consultation and Complaints Management

9.1 Community Consultation

Close community liaison will be maintained to ensure that local residents are aware of the times and durations when they may be affected by construction noise that exceeds the NML's in **Table 6** (such as rock/concrete breaking activities) and to provide an avenue for communication between the community and the Project team.

The CEMP details the methods and timing for community consultation on the Project throughout the construction period.

9.1.1 Community Consultative Committee

Borg has an established joint Community Consultative Committee (CCC) that meets nominally quarterly to discuss environmental and operational aspects of the Borg Panels site. This existing CCC will be utilised to discuss and address general construction impacts, including noise management and mitigation measures. The CCC meeting will also provide a forum to provide feedback to Borg in relation to the environmental management of the Project.

9.1.2 Community Consultation for Managing Noisy Works

Strategies developed with the community for managing noisy works are documented in **Table 7**; refer section on Construction Controls – Rock/Concrete Breaking.

Community consultation undertaken to develop these strategies for managing noisy works included:

- Presentation and Project update to the Oberon Business and Tourism Association at their meeting held on 12 April 2017. An outline of activities to occur during construction, including rock/concrete breaking activities was presented, and included contact details for the construction period of the Project.
- Written email correspondence on 12 April 2017 with the Oberon High School Principal to inform that noise generating activities will occur during construction of the Project. The email was an invitation to assist in development of strategies for managing the noisy works and sought feedback and suggestions.

Additionally, the Principal was advised further consultation will be undertaken prior to the activity occurring and where feasible and reasonable, Borg will plan works to limit rock/concrete breaking activities during important events, e.g. examination periods.

Furthermore, an invite was extended to the School Principal to attend the CCC meeting workshop for developing strategies for managing noisy works.

- A meeting was held on the 18 May 2017 to update Oberon Council on the progress of the development application. This meeting was also used to discuss the management of noisy works during Project construction. Council agreed that the communication channels proposed in the CEMP were suitable, and also suggested the use of the Council community newsletter as a conduit to the public. This newsletter is sent to all households on the 15th of each month.

A project update letter dated 22nd February 2019 was distributed to the community via Oberon Council. This letter advised that the project had progressed well since approval in May 2017 and that commissioning of the new particleboard line was underway.

A workshop focusing on managing noisy works was held at CCC meeting dated 12th April 2017, prior to the noisy works being undertaken. Proposed strategies for managing the noisy works were presented, discussed and further developed with the CCC members. Strategies previously developed have been included in **Table 7**.

9.2 Inquiry and Complaints Management

9.2.1 Opportunities for Information Exchange

Borg has in place the following avenues to register inquiries and complaints related to construction and operational activities:

- A 24-hour freecall community liaison line (1800 802 795);
- Postal address for written complaints (Borg Panels, Private Mail Bag 1, Oberon NSW 2787); and
- Email address for electronic complaints (oberon_site@borgs.com.au).

The telephone number, postal and email address will be clearly displayed on a sign near the entrance to the construction site, in a position that is clearly visible to the public. This information will also be widely disseminated in the community and included on public information, which may include the website, local area advertisements, letterbox notifications and Project specific fact sheets.

9.2.2 Inquiry and Complaints Handling Process

Borg's community and stakeholder management system includes procedures for recording, investigating, tracking and handling of all inquiries and complaints, as detailed in the CEMP.

Once Borg has received verbal or written inquiries and/or complaints via telephone, email or post, the Environment Officer or their nominated delegate will:

- Undertake an immediate investigation into the nature/cause of the inquiry and/or complaint;
- Make initial contact with the community or stakeholder representative within 48 hours to clarify the reason for the inquiry and/or complaint and to notify of the investigation process including an appropriate re-notification time;
- Record the inquiry and/or complaint on the Community Complaints register. This register includes the following details:

- Complaint date and time;
 - Site;
 - Title;
 - Category;
 - Description;
 - Caller details;
 - Action;
 - Status;
 - Follow-up;
 - Complaint validity; and
 - Attachments.
- Further investigate the inquiry and/or complaint and provide the community or stakeholder representative with an explanation of the cause and details of any actions taken to mitigate its effect.

It should be noted that if the inquiry and/or complaint is classified as an incident of significance under the site Emergency Response Plan (ERP), the Environment Officer must follow the incident reporting process in that document and ensure appropriate resolution and sign-off.

Records of complaints will be maintained in the complaints register database for at least four years after the complaint was made.

10 Reporting

10.1 Scheduled Reporting

Construction noise performance is reported externally as follows:

- Quarterly attended noise compliance monitoring reports. Attended noise monitoring reports will include a comparison of measured noise levels with operational noise criteria conditioned in Development Consent SSD 7016 and EPL 3035. All attended measurement result analysis should consider criteria applicability (for project specific criteria) with regard to wind speed and atmospheric stability class;
- Quarterly updates of monitoring results on the Borg website; and
- Annual Review. A copy of the Annual Review is sent to relevant stakeholders, including DPIE, EPA and Oberon Council and is available on the Borg website.

10.2 Exceedance Reporting

In the event it is determined that an exceedance of a noise criterion has occurred, at the earliest opportunity (as soon as practicable) Borg will notify DPIE in accordance with Development Consent SSD 7016 and EPA in accordance with EPL 3035.

In accordance with Condition C12 of Development Consent SSD 7016, Borg will within 7 days of the exceedance date, provide a detailed report on the exceedance to the DPIE and EPA.

11 CNMP Review

In accordance with Development Consent SSD 7016 Condition C10, this CNMP will be reviewed and if necessary revised within 3 months of an:

- Approval of a modification;
- Submission of an incident report under Condition C13;
- Approval of an Annual Review under Condition C11; or
- Completion of an audit under Condition C15.

Revisions to the CNMP will be submitted to the Secretary DPIE for approval.

12 References

Environment Protection Authority (January 2000). *NSW Industrial Noise Policy*. ISBN 0 7313 2715 2, EPA 00/1.

Environment Protection Authority (September 2015). *Draft Industrial Noise Guideline*. ISBN 978 1 74359 940 2, EPA 2015/0185.

Global Acoustics (May 2016). *Borg Panels Timber Panel Processing Facility Oberon NSW – Noise and Vibration Impact Assessment*. Prepared for Borg Manufacturing.

Appendices

Appendix A – Noise Monitoring Record Form

Noise Monitoring Record Form	
Monitoring Location	
Description of Location	
Test Conducted By	
Date of Monitoring	
Measurement Start Time (hh:mm)	
Measurement Time – Length (min)	
Noise Meter Model/ Calibration Date	
Calibrator Model/ Calibration Date	
Weather Conditions	
General Description	
Wind Speed (m/s)	
Wind Direction	
Temperature (deg C)	
Relative Humidity	
Recent Rainfall	
Cloud Cover (oktas)	
Measurement Results	
L _{Aeq} (15min) (dB(A))	
L _{A1} (dB(A))	
L _{A10} (dB(A))	
L _{Aeq} (dB(A))	
L _{A90} (dB(A))	
Major Construction Noise Source(s) During Monitoring	
Other Noise Source(s) During Monitoring	
Comments	

Appendix D – Construction Traffic Management Plan



Construction Traffic Management Plan

124 Lowes Mount Road, Oberon

Prepared for:
Borg Construction
4/06/2021

The Transport Planning Partnership
ACN: 607 079 005

Construction Traffic Management Plan

124 Lowes Mount Road, Oberon

Client: Borg Construction

Version: 2

Date: 4/06/2021

TTPP Reference: 16182

Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
Final	3/05/17	S.Botross, L.Nguyen	W.Johnson	W.Johnson	
Rev 2	4/06/2021		J Blomberg Borg Manufacturing Environmental Manger	V Bendeviski Borg Manufacturing Environment & Regulatory Compliance	

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Figure 8: Construction and Operational Staff Working Hours

APPENDICES

A. DRIVERS CODE OF CONDUCT

B. SITE INFRASTRUCTURE

C. INTERNAL ROAD NETWORK SITE PLAN

1 Introduction

1.1 Background

State Significant Development Application SSD 7016 was approved by the Minister for Planning on 29th May 2017 for the construction and operation of a particleboard facility and continuation of, and alterations and additions to, the existing medium density fibreboard facility at Borg Panels, 124 Lowes Mount Road, Oberon.

Since then, three modifications to SSD 7016 have been approved by the Minister. Modification 1 approved on 20th November 2018, modification 2 on 29th November 2019 and modification 3 on 22nd May 2020.

The Transport Planning Partnership (TPPP) prepared this Construction Traffic Management Plan (CTMP) on behalf of Borg Construction (Borg) to assess the traffic and transport implications of the development activities as part of the initial approval.

This CTMP was prepared to satisfy the relevant conditions of consent specified by the Minister for Planning. Table 1 lists the conditions of consent and the corresponding sections of the CTMP where they are addressed.

Table 1: Construction Staging and Duration

Traffic and Access Requirements	Addressed in
Condition B34.	
(c) detail the measures that would be implemented to ensure road safety and network efficiency during earthworks and construction;	Section 5
(d) detail heavy vehicle routes, access and parking arrangements;	Sections 3.3 and 3.4
(e) include a Driver Code of Conduct to: (i) minimise the impacts of construction on the local and regional road network; (ii) minimise conflicts with other road users; (iii) minimise road traffic noise; and (iv) ensure truck drivers use specified routes;	Appendix A
(f) include a program to monitor the effectiveness of these measures; and	Section 6
(g) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.	Section 4.7
Condition B35.	
The Applicant must provide sufficient parking facilities on-site, including for heavy vehicles and for site personnel, to ensure that traffic associated with the development does not utilise public or residential streets or public parking facilities.	Section 3.3

1.2 Purpose of this CTMP

This CTMP addresses the traffic and transport implications during construction phases of the development. The overall principles of traffic management during construction include:

- manage access to/from adjacent properties
- restrict construction vehicle movements to designated routes to/from the site
- manage and control construction vehicle activity in the vicinity of the site

- provide an appropriate and convenient environment for pedestrians and cyclists
- minimise the impact on pedestrian movements
- maintain appropriate capacity for pedestrians at all times on footpaths adjacent to the site
- maintain appropriate public transport access, and
- carry out construction activity in accordance with the approved work hours.

The report was initially prepared by engineers who hold the RMS Select/ Modify Traffic Control Plans (Red Card) and Design and Inspect Traffic Control Plans (Orange Card) certification which is now named *Prepare a Work Zone Traffic Management Plan*.

Subsequently, this CTMP has been reviewed and updated where necessary by appropriately experienced Borg personnel.

During the preparation of this CTMP, Roads and Maritime Services and Oberon City Council were consulted for any additional aspects which required further assessment. Both authorities returned no additional requirements.

This CTMP includes the following:

- Measures to ensure that the transport related conditions of consent are met,
- Drivers' Code of Conduct (Appendix A), and
- A program for monitoring the effectiveness of the CTMP and Drivers Code of Conduct.

1.3 Overview of Works

The approved project is for the expansion of the existing Borg Panels timber processing facility at 124 Lowes Mount Road, Oberon. The expansion under SSD 7016 approval date 29th May 2017 included the addition of a particle board manufacturing line, including chipping facility, to the existing medium density fibreboard (MDF) manufacturing line. The project also includes for minor additional site works and extension of the area covered by the consent.

The components of the expansion include:

- Construction of a dedicated Particle Board Manufacturing Line
- Additional infrastructure within existing buildings
- Expand Lot 1 and 2 DP 1085563 to accommodate a wood flake preparation area
- Construction of a new automated storage warehouse on Lot 24 1148073 and part on Lot 26 DP 1200697
- Construction of hardstand area on Lot 24 DP 1148073
- Expansion to Lot 1 DP 1076346 for hardstand, water quality ponds and emergency catchment

- Allow for an increase in production by up to 500,000m³, with a commensurate increase in staff.

The components of the three subsequent modifications are as follows:

- MOD 1 – extension of mouldings warehouse, reorientation of materials handling building, layout changes to particleboard chipper/debarker building, extension of northern noise bund, reconfiguration of elements of the surface water management system, reclamation of the Spring Dam;
- MOD 2 – installation of an electricity generation gas turbine and ancillary equipment; and
- MOD 3 – additional materials handling equipment, extension to northern warehouse, changes to the site surface water system and construction of further hardstand.

See Appendix B for plan showing the site infrastructure.

2 Existing Conditions

2.1 Site Description

The site is located on Lot 1 DP 1085563, Lot 2 DP 1085563, Lot 26 DP 1200697, Lot 24 DP 1148073 and Lot 1 DP 1076346 in the local government area of Oberon Council.

The site location and its surrounds are shown in Figure 1.

Figure 1: Site Location (Aerial)



Basemap source: Google Maps 2017

Borg Panels is located on the northern outskirts of Oberon town and along the eastern side of Lowes Mount Road. The primary industries within the vicinity include agriculture (farming and plantation timber growing), as well as industries associated with logging, sawmilling and timber dressing and the manufacture of wood products.

Access to the Borg Panels site are located along Lowes Mount Road and Endeavor Street. Gate 4 is located on Lowes Mount Road and permits access to employees, dispatch, visitors and heavy vehicle deliveries. Gate 6 is located around 400m north of Gate 4 and provides access for heavy vehicle deliveries and employees. Ancillary access is also provided via Horace Street.

Gate 5 is located on Endeavour Street and provides access for delivery trucks carrying raw material (ie. timber logs) and chemical to the Woodchem facility.

The location of the site accesses and the approximate separation of the sites are illustrated in Figure 2.

Figure2: Site Access



Base map source: Google Earth 2020

2.2 Road Network

The site is surrounded by a network of roads including Lowes Mount Road along the site frontage. A description of these roads is provided herein.

Lowes Mount Road

Lowes Mount Road is a two-way two-lane road with a north-south alignment. It has a posted speed limit of 60km/hr at the southern end of the road and 100km/hr north of the site. Informal parking is permitted within the wide grass verge along the eastern side of Lowes Mount Road.

Access to the site is provided off Lowes Mount Road via Gate 4 and Gate 6. It is noted that both Gate 4 and Gate 6 are indented approximately 75m and 150m from the property boundary line on Lowes Mount Road, allowing space for queuing of vehicles on the subject site. A dedicated right-turn lane that is 60m in length is located at the Gate 6 access.

Albion Street

Albion Street is a two-way road with one lane per direction. It has an east-west configuration with wide kerbside parking lanes on both sides of the roadway. The posted speed limit within the township is 60km/hr which increases to 70km/hr closer to the town outskirts.

Horace Street

Horace Street has an undivided carriageway with a north-south alignment. It has a cul-de-sac at its northern end which connects to the southern boundary of the subject site. Unrestricted kerbside parking is permitted on both sides of the roadway. There is no posted speed limit however, by default, the speed zone along Horace Street is 50km/hr.

Endeavour Street

Endeavour Street is aligned in a north-south direction and has an undivided carriageway. There is a cul-de-sac at the northern end of the road where there is an access to the subject site (Gate 5).

Endeavour Street has a posted speed limit of 50km/hr with kerbside parking permitted along both sides of the roadway.

O'Connell Road

O'Connell Road is a divided two-way two-lane road with a north-south alignment. The posted speed limit varies from 60km/hr from the southern end of the road to 100km/hr around 300m north of Albion Street. On-street parking is not formalised along O'Connell Road, however, is permitted within the unsealed road verge.

2.3 Surrounding Intersections

The key intersection surrounding the site is at Lowes Mount Road and Albion Street. This is a four-way roundabout intersection, providing connectivity between Duckmaloi Road (from Sydney) and O'Connell Road (from Bathurst) to the site. The local road network and key intersection are illustrated in Figure 3.

Figure 3: Locality Map



Basemap source: Google Maps 2017

2.4 Public Transport

Public transport facilities are not provided within the area surrounding the subject site.

2.5 Pedestrian and Cycle Infrastructure

A 1.5m-wide shared path is located along the site frontage on Lowes Mount Road. At the access driveways of Gate 4 and Gate 6, shared path signage is installed to inform drivers of the presence of pedestrians and cyclists using the pathway.

In the general vicinity of the site, a footpath and kerb ramps are provided along the eastern site of Lowes Mount Road and North Street. At the key nearby intersection of Lowes Mount Road and Albion Street, pedestrian refuges are provided on all approaches of the roundabout to assist pedestrians with crossing these roads.

3 Overview of Construction Activities

This section of the report outlines the construction methodology and details for the development at 124 Lowes Mount Road.

3.1 Description of Works

The expansion of the Borg Panels timber processing facility includes but is not limited to the addition of a particle board manufacturing line and chipping process to the current MDF manufacturing. The key construction activities include:

- Construction of new first flush and emergency basin to the east of the site
- Demolition of existing infrastructure
- Construction of new site access and hardstand

- Construction of new industrial buildings to the south-west and north-west of the site to accommodate new plant and equipment, as well as provide storage
- Installation of new plant and equipment in existing industrial buildings
- Reconfiguration of elements of the site surface water management system
- Extensions to existing and new build warehouses
- Layout changes to new builds
- Reclamation of the Spring Dam
- Installation of a new electricity generating gas turbine
- Installation of a new high-pressure gas pipe as an ancillary to the turbine and site, within the project area
- Construction of additional equipment to new builds

The new buildings are as follows:

- Debarker and chipping plants to be constructed to the south and east of the existing production building. The chippers are to be contained in concrete and acoustic panels enclosures
- A materials handling building to be constructed to the west of the proposed production hall. The building is enclosed with acoustic panelling to the north, south and west side with an opening on the eastern side to allow for material to be brought in using a front end loader for processing
- A flaker building to be constructed to the west of the proposed production hall. The building is to be fully enclosed with acoustic panelling
- Automated storage warehouse building located at the northern end of the site. The building will be fully enclosed using sheet metal

3.2 Duration and Staging of Works

Construction works commenced in June 2017 under approved SSD 7016 dated 29th May 2017, and essentially followed the stages outlined below:

- Stage 1 – site works, construction of detention basin and hardstand areas.
Construction of the detention basin and drainage swale will be undertaken first in order to ensure that the appropriate erosion and sediment control measures can be implemented for later stages
- Stage 2 – construction of particle board manufacturing facility and installation of related plant
- Stage 3 – alterations and addition to existing MDF site and construction of new automated storage warehouse
- Stage 4 – debarker and chipper building and chip preparation area

The activities described in the above four stages have been completed.

The description of works for MOD1, MOD 2 and MOD 3 as provided in section 1.3 Overview of Works of this Plan have commenced with works under MOD 1 essentially complete. MOD 2 works have been completed with commissioning to occur. This is scheduled for May/June 2021. Activities under MOD 3 are progressing.

3.3 Construction Details

3.3.1 Construction Vehicle Types

Vehicles likely to be generated by construction activities at the site are summarised in Table 2.

Table 2: Construction Vehicles

Works	Vehicle	Quantity
Earthworks	Excavator	1
	Loader	1
	Dozer	1
	Dump Truck	2
	Grader	1
	Roller	1
	Articulated truck	2
Installation	Mobile crane	2
	Concrete truck	1
	Delivery truck	2
	Bobcat	1
Rock Breaking	Rock breaker	1

3.3.2 Work hours

Construction activities shall be undertaken between 7:00am – 7:00pm Monday to Friday and 8:00am – 1:00 pm on Saturday. Construction works are not to be undertaken on Sunday and public holidays.

Regular site operation would continue as per normal, that is, across 24 hours per day for seven days.

Works outside of the aforementioned hours may be undertaken in accordance with consent condition B14, which specifies the following circumstances:

- Works that are inaudible at the nearest sensitive receivers;
- Works agreed to in writing by the Secretary
- For the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or
- Where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.

3.3.3 Works Zone

All activities associated with the construction phase of the project would be carried out wholly within the site premises. Therefore, no construction works or loading/ unloading of construction vehicles would take place outside of the site boundary.

As Borg will be manufacturing a significant amount of the physical infrastructure themselves at the site, the amount of deliveries from other locations will be minimal. It is expected that construction plant would be held offsite until they are required. Once at the site, plant will be stored onsite until project completion.

Any loading and unloading of construction vehicles will be accommodated on the site hardstand areas at the northern and eastern areas of site.. In special circumstances, the unloading of large construction plant would be undertaken at the location where it is required for use to eliminate double-handling.

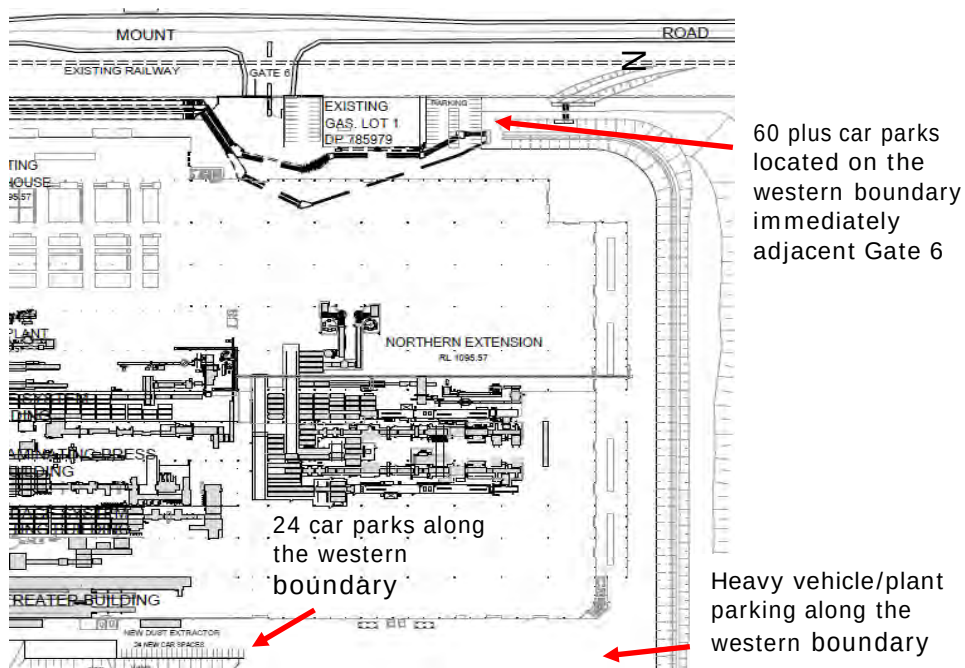
All construction materials and plant are expected to be wholly stored within the works site. It is not expected that any public road would be required for such purposes. As such, there would be no Works zone as part of these works.

However, if temporary use of any public road is required, prior consultation with Council shall be undertaken. All relevant permit approvals would also be acquired prior to the commencement of activities within the roadway.

3.3.4 Construction Staff Parking

Car parking for construction staff is provided on site as shown below in Figure 4. These parking areas are accessible via Gate 6.

Figure 4: Construction Staff Parking



3.4 Site Access and Internal Circulation

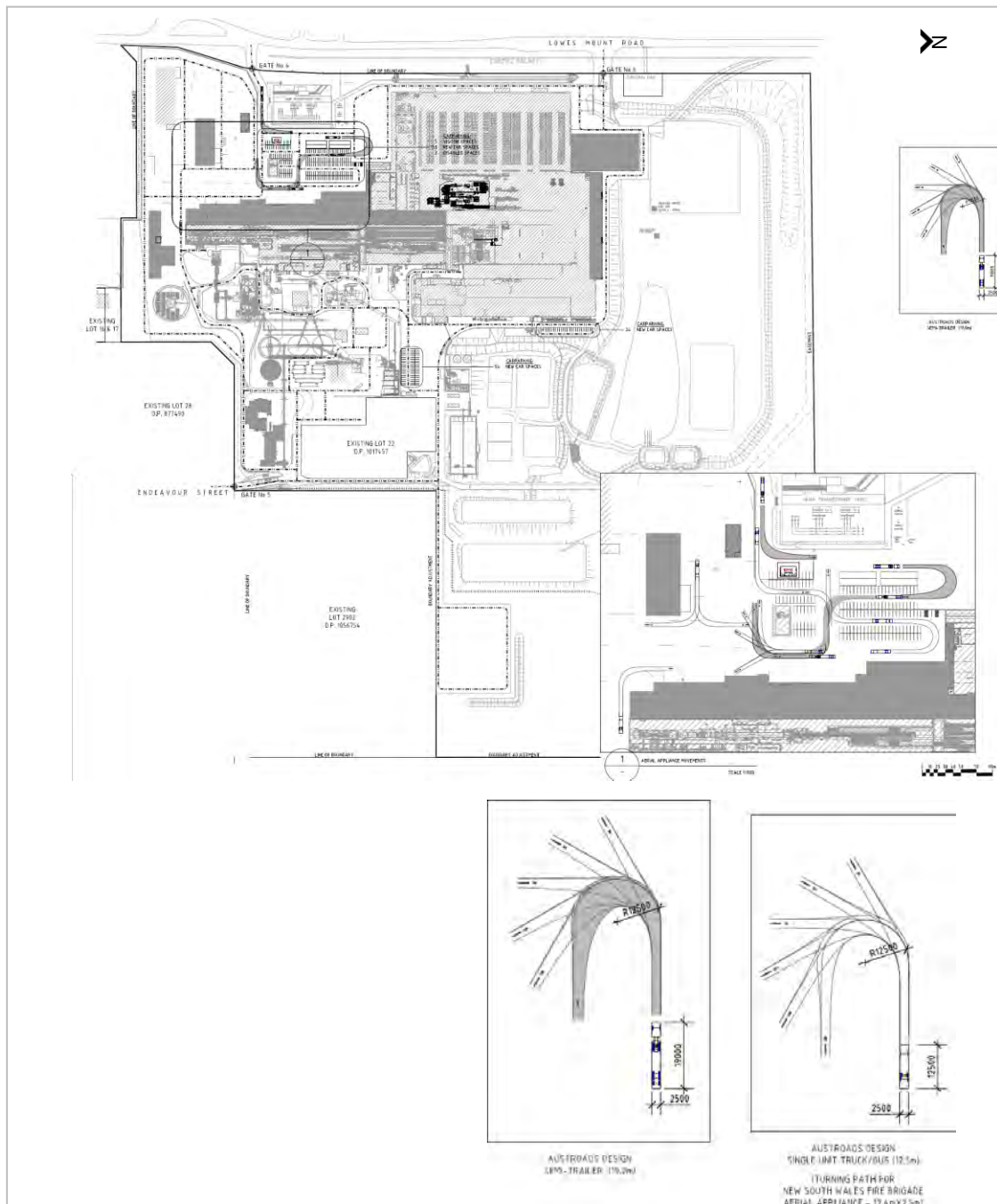
Ingress and egress of construction vehicles will generally be via Gate 6. Access for NSW Rural Fire Service, Fire and Rescue NSW or other emergency vehicles will be via Gate 4. An ancillary access remains at Horace Street for use if necessary.

Construction traffic generation is based on the construction works as described in Section 3, and the number of staff engaged during the construction phase. The delivery of materials that are to be used in the manufacture of the physical infrastructure will be undertaken using 19m semi-trailers and tipper trucks. Traffic due to staffing is expected to comprise only private cars.

The site has an established internal road network with giveaway/stop controls which can accommodate two-way vehicle flow across the full site. Of the vehicles associated with the construction phase, a 19m semi-trailer is anticipated to be largest vehicle to circulate throughout the site. The internal circulation route is already established to accommodate the turn paths of a heavy vehicle as large as a 25m B-double truck. The turning radius of 25m B-double is 15.0m and 19m semi-trailer is 12.5m. Therefore, a semi-trailer would be able to adequately circulate throughout the site without any implications. The layout of the internal road network is illustrated in Figure 5.

In relation to the rest of the site, the parking area located east of Gate 4 would be considered to have the greatest limitations for vehicle manoeuvrability. Although, this area can still adequately accommodate one-way flow by Rural Fire Service trucks which are typically heavy rigid vehicles that are 12.5m in length and have a turning radius of 12.5m. The swept path for this type of truck circulating through the parking area is illustrated in Figure5, while a full-scale plan is contained in Appendix C.

Figure 5: Internal Road Network



3.5 Construction Vehicle Haul Routes

Generally, construction vehicles would have origins and destinations in Bathurst and Sydney. Current designated heavy vehicle haul routes to the site would be utilised by construction vehicles travelling from Bathurst and Sydney. These routes include O'Connell Road-Albion Street (from Bathurst) and Duckmaloi Road-Albion Street (from Sydney). Beyond the context of Oberon, the route to/from Sydney includes travelling on Jenolan Caves Road and The Great Western Highway.

All heavy vehicle drivers will be advised of the designated truck routes to/from the site and would be required to adhere to the nominated routes.

The designated truck routes to/from the construction site are as follows:

- Approach routes:
 - o From Bathurst – from the north-west, travel on O’Connell Road, turn left onto Albion Street before turning left onto Lowes Mount Road or Endeavour Street.
 - o From Sydney – from the east, travel on Duckmaloi Road, turn right onto Albion Street before turning right onto Endeavour Street or Lowes Mount Road.
- Departure routes:
 - o To Bathurst – head south on Lowes Mount Road or Endeavour Street, turn right onto Albion Street before turning right onto O’Connell Road.
 - o To Sydney – head south on Lowes Mount Road or Endeavour Street, turn left onto Albion Street before turning left onto Duckmaloi Road.

The routes described above are presented in Figure 6 and Figure 7.

Figure 6: Haul Routes to the Site



Basemap source: Google Maps 2017

Figure 7: Haul Routes from the Site



Basemap source: Google Maps 2017

During the planning process, the Contractor will schedule all deliveries ahead of time. Therefore, the Contractor will be aware of the approximate arrival times of construction vehicles and would be able to accommodate them onsite upon arrival.

This operation would eliminate the potential for queuing or marshall/ parking on public streets. As a precaution, construction vehicles are to radio or call ahead to ensure access to the construction site is available.

4 Construction Traffic Assessment

4.1 Construction Traffic Generation

Traffic generation associated with the transportation of plant was undertaken during the establishment of the site and generally limited to off-peak periods. Once plant has been delivered to the site, it will remain onsite until the completion of the construction works.

Construction traffic generation is based on the construction works as described in Section 3, and the number of staff engaged during the construction phase. The delivery of materials that are to be used in the manufacture of the physical infrastructure will be undertaken using semi-trailers and tipper trucks. Traffic due to staffing is expected to comprise only private cars.

Construction traffic generation in the peak construction period is summarised in Table 3.

Table 3: Construction Phase Traffic Generation

Type of Vehicle	Hourly Two-way Movements	Daily Two-way Movements	Number of Staff
Light vehicles	Before shift start (6:00am - 7:00am): 100 inbound trips	240 trips	Maximum 100 per day
	After shift end (7:00pm - 8:00pm): 100 outbound trips		
Heavy vehicles	Up to 10 trips	Up to 60 trips	-

As indicated in Table 3, the maximum daily number of construction staff is 100. Staff will be engaged on a 12-hour shift between 7:00am-7:00pm. Therefore, it is expected that a maximum of 100 cars would be driving into the car park between 6:00am-7:00 am before the start of the shift and driving out between 7:00pm-8:00pm following completion of the shift. This equates to an average of two vehicles accessing or departing the site per minute during the stated hours.

Gate 4 and Gate 6 are indented from the property boundary line approximately 150m and 75m, respectively, from the roadway on Lowes Mount Road. Driveways leading to the gatehouses at the Gates could accommodate around 20 cars (Gate 4) and 10 cars (Gate 6). Furthermore, the right turn lane into Gate 6 on Lowes Mount Road is 60m in length and can store up to eight cars at any time. Thus, traffic generated due to the arrival of construction staff can be adequately accommodated onsite without causing impact on the function of Lowes Mount Road.

During peak construction operation, there are up to 60 two-way heavy vehicle trips expected on a daily basis. In any peak hour, it is anticipated that there will be no more than 10 two-way trips made by heavy vehicles (i.e. five heavy vehicles).

4.2 Cumulative Traffic Generation

Separately, it is noted that normal operation of the Borg and Woodchem sites would continue during the construction phase. Borg and Woodchem staff vehicle access is provided at Gate 4 and Gate 5, separated from construction staff access at Gate 6.

Traffic generation due to construction works, as summarised in Table 3, will occur outside of the AM and PM local road network peak periods, namely, 7:30am – 9:00am and 3:30pm – 5:00pm. Therefore, traffic generated due to the construction phase would not have a significant impact on the existing road network during these times.

The start and end of construction work times also occur outside of shift change-overs for employees at the Borg and Woodchem sites. The shift times for employees at the latter sites are as follows:

- Morning shift, 6:30am to 2:30pm
- Day shift, 2:30pm to 10:30pm
- Night shift, 10:30pm to 6:30am
- Full day shift, 6:00am to 6:00pm.

Hours of work for construction staff and regular Borg employees along with the surrounding road network peak periods are illustrated in Figure 8.

Figure 8: Construction and Operational Staff Working Hours

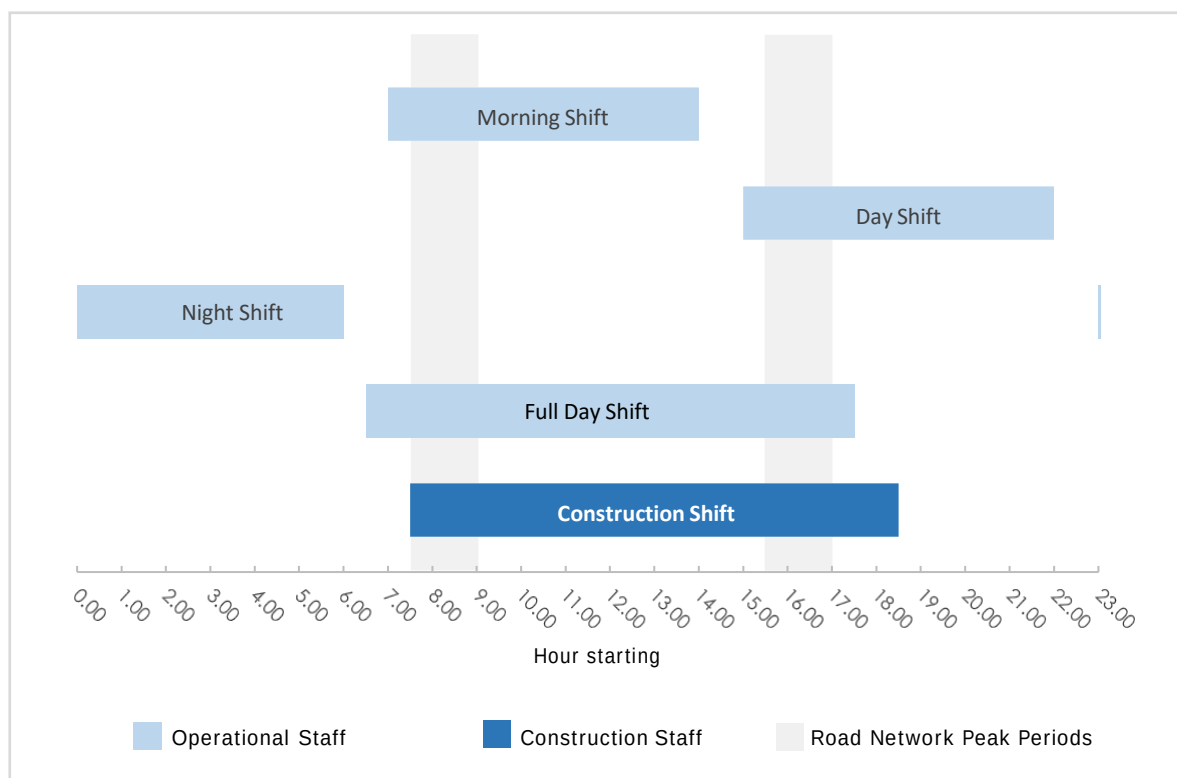


Figure 8 demonstrates that the start and end times of the construction shift fall outside of those times for regular Borg staff. The construction shift also falls outside of the local road network peak periods. Overall, the peak vehicle movements associated with construction traffic are separate to all other busy periods at the site. Therefore, the cumulative impact is considered to be low and is not expected to result in any adverse impact on the surrounding road network.

4.3 Pedestrian and Cycle Access

Pedestrian and cycle access at all site entrances will not be impacted by the construction works, and hence, would remain as existing.

4.4 Security Equipment

The existing site will be fully enclosed by large security gates around the site perimeter. During the early works, security instruments will be installed at the accessways on Horace Street and Lowes Mount Road to ensure site safety and security.

4.5 Public Transport

The proposed construction activities are unlikely to impact on the public transport in the vicinity.

4.6 Emergency Vehicles and Oversize Vehicles

No special provisions for emergency services vehicles are required as part of any of the construction works.

Oversize flat racks would be used during the construction phase. Over the duration of the construction phase, it is estimated that 82 oversize flat racks and 450 40-foot containers would be transported to the site.

Borg are to obtain special permits for oversize flat racks and other oversize transport as from the relevant authorities when required.

4.7 Community Information

Traffic movements and construction activities associated with the construction phase of the project are not expected to cause disruptions to the surrounding road network and public transport network. From a traffic and transport perspective, the impact on the local community during construction is anticipated to be negligible.

Where minor and temporary changes to the road network would be applied such as trucks turning left or right on Lowes Mount Road and Horace Street, acceptable measures have been implemented to ensure the safety of road users. This has been detailed in Section 5 of this CTMP.

Community information will be provided by the Borg Website, Community notice boards and signposting at the site entry points. Over the duration of the project, information pertaining to the site expansion would remain available to the public via Department of Planning, Industry and Environment's Major Projects website.

Based on the above, the proposed measures for informing the community of impacts due to the works are considered sufficient, and hence, no other measures are deemed to be required.

5 Construction Traffic Management Measures

Two site specific traffic control plans (TCP) were prepared and implemented during the initial construction works associated with SSD 7016 approval date 29th May 2017. Since then, site access Gates 4 and 6 have become fully operational and the activities under the initial approval are complete, making these TCPs obsolete.

If it is identified that advisory road signage is necessary, it shall be installed in accordance with AS1742.3 Manual of uniform traffic control devices – Traffic control devices for works on roads and the RMS Traffic Control at Worksites Manual. Signs shall be installed and maintained throughout the construction period.

5.1 Vehicle Access

All vehicles are to enter and exit the construction site in a forward direction. Vehicles must not be permitted to reverse into the site from the road unless prior approval is obtained. It is noted that vehicles will not be required to reverse into the site as there is sufficient space onsite for vehicles to circulate internally and exit in a forward direction.

Construction vehicles shall radio/ call the site office on approach to the site to ensure access to the site is available. All loading and unloading shall be undertaken onsite during the approved work hours. As noted previously, queuing or marshalling of construction vehicles shall not be permitted on public roads.

During the transportation of materials to/from the site, if there are any materials spilt onto the roadway, site personnel and equipment shall rectify the issue accordingly, subject to appropriate OH&S provision.

All truck drivers are required to read and sign the Drivers Code of Conduct, which informs drivers of the acceptable behaviour when operating a heavy vehicle. The Code provides instructions to truck drivers on where access to the site is permitted as well as the approved haul routes to the site.

The Drivers Code of Conduct is contained in Appendix A of this CTMP.

5.2 Truck Routes

Protocols must be in place to ensure:

- Site induction shall include procedures for accessing the site;
- Drivers shall adhere to the nominated truck routes, as shown in Figure 6 and Figure 7;
- Drivers shall be aware of pedestrians and cyclists in the vicinity of the site; and
- Driver shall be aware that posted speed limit on Albion Street, O'Connell Road, and Lowes Mount Road is 60km/hr while the appropriate speed limit on Horace Street is 50km/hr.

5.3 Site Inspections and Record Keeping

The construction operation shall be monitored to ensure that it proceeds as set out in the Contractor's Construction Management Plan. A daily inspection before the start of construction activity shall take place to ensure that conditions accord with those stipulated in the plan and that there are no potential hazards.

To assist the orderly resolution of issues and complaint the Construction Site Manager will keep a register itemising all report incidents and adverse traffic matters. The incident register is to include details such as date and time, location, driver and vehicle details contact details of the persons involved and a recount of the incident.

Incidents and complaints are to be managed in accordance with the procedures documented in the Construction Environmental Management Plan (CEMP).

5.4 Site Induction

All staff employed on the site by the Contractor shall be required to undergo a site induction.

The induction shall include permitted access routes to and from the construction site for site staff and delivery vehicles, as well as standard environmental, OH&S, driver protocols and emergency procedures.

Construction staff are to be informed of the appropriate access gate of which they are expected to arrive to carry out their induction.

Table 4 summarises a comprehensive list of the measures and controls currently enforced at the site by the Contractor.

Table 4: Borg Control Documents

Form/ Document	Description
Site Induction	- The form ensures that visitors or staff on the site are inducted about the site features, PPE requirements and procedures for reporting and emergency. - The form is to be signed by both site inductor and inductee.
Site WHS Management Plan	This document lists: - Responsibilities of all people working on site - Training and induction procedure - Risk management procedure - Plant and equipment requirements and controls - Electrical, hazardous chemical reporting and control measure - Fitness for work requirements - Managing hazards - Site safety rules - Legislation and references - Existing form and documents This document is to be signed by subcontractors and Person with WHS responsibilities
Driver Behaviour	- This document clarifies duty of care and responsibilities of all workers who drive a company vehicle - The document is to be signed by the drivers
Log Haulage Induction Manual	The document lists and assess if the driver understand and acknowledge the following: - Drivers' duties of care - Site entry requirements - PPE safety requirements - Traffic regulation on site, incident report, emergency procedures, - Responsibilities and consequence of breaching procedure Borg Assessor will pass or fail the driver according to his understanding of the above points. The manual is to be signed by both driver and Borg assessor

Standard Operating Procedure	Listing of required licenses, operational procedure for log haulage of log trucks and loaders

6 Monitoring Program

The following monitoring program shall be implemented to ensure that the CTMP and Drivers Code of Conduct performs effectively and achieves the objectives set out in this CTMP.

6.1 Implementation of CTMP and Drivers Code of Conduct

The CTMP and Drivers Code of Conduct shall be included with all new site inductions for heavy vehicle drivers regularly accessing the site. One-off truck delivery drivers must agree to abide by the Drivers Code of Conduct by having read and signed the Code.

Prior to commencement of construction works, all drivers shall be provided with a copy of Drivers Code of Conduct. It is intended that all truck drivers will have signed the Drivers Code of Conduct declaration and agreed to be bound by its behavioural requirements before entering the site.

A copy of the Code has been included in Appendix A of this report.

6.2 Complaints/ Compliments Register

A complaints and compliments register detailing matters such as truck driver behaviours and truck related noise issues shall be developed and maintained by Borg.

The register shall be reviewed every three months to determine if any systematic issues are arising from the implementation of the CTMP and Drivers Code of Conduct.

Positive and negative feedback shall be documented using a Customer, Community and Stakeholder Complaint/ Compliment Form. Borg shall gather as much information as possible which will allow them to take appropriate action. Appropriate action may include:

- Arranging a meeting to discuss and/ or resolve issues
- Calling the customer, member of community or stakeholder to acknowledge feedback
- Writing a letter responding to the feedback.

Drivers shall also be provided the opportunity to give feedback on the implementation of the Drivers Code of Conduct and other measures which could be considered for implementation into the Code.

6.3 Hazards and Incidents Register

A procedure for detailing hazards and incidents relating to safety, environment and process during the construction phase has been established by Borg in the HSEQ Management System. The system and associated documents have been prepared

as a requirement under the WHS Regulations 2011.

The HSEQ Management System details the responsibilities specific to all stakeholders involved in the construction phase, including:

- Borg Construction, as the principal contractor
- Borg Officers
- Construction Manager
- Site Supervisor
- Workers, contractors and visitors
- WHS Coordinator
- Group HR and WHS Manager.

6.3.1 Hazard Reporting

Hazards are to be either addressed by the worker who first observes it, or if that is not reasonably practicable and safe, then it must be reported to the Construction Manager or Supervisor to address. This shall apply to all workers including contractors.

6.3.2 Injury Reporting

All injuries are to be reported in the 'Register of Injury' book which shall be kept on site in the site office or where the primary first aid kit is kept. A copy of the page shall be forwarded to the WHS Team within 24 hours of the injury and where required it shall be accompanied by a completed Incident Report Form. Any injury requiring medical treatment must be reported to the Borg Return to Work Coordinator immediately.

If the injury is of a serious nature and is deemed a 'Notifiable Incident' under the criteria of the State or Territory Regulator then the Construction Manager or other person in control shall contact the Borg Group HR and WHS Manager who will in turn contact the relevant authority. For clarification of what injury is deemed as Notifiable refer to the WHSMS Procedure Incident Management and Investigation available on SharePoint.

6.3.3 Near Miss/ Damage and Environmental Incident Reporting

As soon as is reasonably practicable an Incident Report Form shall be submitted to the WHS Team for any near miss, damage or environmental incident. In circumstances where the incident involves the potential escape of substances from the site this must be conveyed to Borg Officers as soon as possible should authorities need to be notified.

Where the incident is deemed a 'Dangerous Incident' such as; an electric shock, a collapsed trench, excavation or structure, the fall or release of an object from height, or collapse or overturn of plant, the Group HR and WHS Manager shall be informed as soon as possible in order for them to contact the Regulator.

7 Conclusion

This CTMP has been prepared to document the construction activities and associated construction traffic management measures necessary to facilitate the expansion of the existing timber panel manufacturing facility at 124 Lowes Mount Road, Oberon.

Based on the findings contained in this CTMP, it is concluded that:

- The construction of the proposed development is expected to generate, in the busiest hour, 100 vehicle trips by staff either entering or departing the site. The busiest periods for vehicles entering and exiting the site are anticipated to be between 6:00am – 7:00am (before commencement of shift) and 7:00pm – 8:00pm (following completion of shift), respectively.
- On average, the arrival rate for construction staff at the site would be around two vehicles per minute. This is not expected to cause any noticeable impacts on the adjacent roadway (Lowes Mount Road) as any queued vehicles would be accommodated within the site's driveways at Gate 4 and Gate 6.
- In the busiest hours, there would be up to 10 two-way heavy vehicle trips to the site which would be accommodated onsite upon arrival.
- The start and end times of the construction shift occur outside of those times for regular Borg staff and the local road network peak periods. Therefore, the cumulative impact is considered to be low and is not expected to cause any adverse impacts on the surrounding road network and regular site operation.
- Special permits for oversize vehicles are to be obtained from relevant authorities when required.
- No pedestrian or cyclist facilities would be impacted as a result of the construction activities
- It is proposed for all loading and unloading of trucks to occur onsite, and without any interruption on surrounding streets
- To ensure safety of motorists, pedestrian and cyclists around the site, driver protocols shall be enforced and monitored during the construction phase as outlined within this CTMP and the Drivers Code of Conduct.
- Truck drivers are to be instructed to use the designated truck routes to/from the site.

Appendix A

Drivers Code of Conduct



Borg Construction Drivers Code of Conduct

This document sets out the requirements for all employees and contractors to Borg Construction.

DECLARATION

I, the undersigned, hereby agree to abide by Borg Construction's Driver Code of Conduct for the transportation of construction materials to/ from the site in Oberon in a safe manner.

I have read and understand the requirements outlined in the Code and will, to the best of my ability, comply and assist with their implementation, requirements and ongoing administration.

Truck Driver

Full Name: _____

Organisation: _____

Signature: _____

Date: _____

General Requirements

The Drivers Code of Conduct would be distributed to all sub-contractors with fleet accessing the site prior to the commencement of works. The Code would be provided to each driver to read and sign to confirm they have understood and pledge to follow the haulage instructions. Once completed, a copy of the signed Code would be supplied by the sub-contractor to Borg for record keeping.

Heavy vehicle drivers hauling to and from the subject site must:

- Have read and signed the Drivers Code of Conduct (this document) prior to entry to the site;
- Hold a valid driver's license for the class of vehicle that it being operated;
- Operate the vehicle in a safe manner while on site and public road network;
- Comply with the direction of authorised site personnel when onsite;
- All drivers are to use seat belts when driving; and
- All drivers are to drive to the sign posted speed limit, both on public roads and within the site.

Site Access

All access to the construction site is to be via Gate 6 or Gate 4 on Lowes Mount Road, Gate 5 off Endeavour Street or, if pre-approved, the ancillary access off Horace Street.

Heavy Vehicle Haul Routes

All heavy vehicle drivers must adhere to the designated truck routes to/from the site as follows:

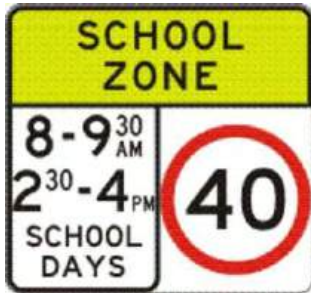
- Approach routes:
 - o From Bathurst – from the north-west, travel on O'Connell Road, turn left onto Albion Street before turning left onto Lowes Mount Road or Endeavour Street.
 - o From Sydney – from the east, travel on Duckmaloi Road, turn right onto Albion Street before turning right onto Endeavour Street or Lowes Mount Road.
- Departure routes:
 - o To Bathurst – head south on Lowes Mount Road or Endeavour Street, turn right onto Albion Street before turning right onto O'Connell Road.
 - o To Sydney – head south on Lowes Mount Road or Endeavour Street, turn left onto Albion Street before turning left onto Duckmaloi Road.

Heavy Vehicle Speed

Truck drivers must comply with the Australian Road Rules with travelling along public roads. Drivers are to observe the posted speed limits and adjust speed appropriately to suit the road and weather conditions at the time.

Speed limits on route to the site from Bathurst and Sydney vary between 40km/hr (school zones) up to 100km/hr. The maximum speed that a vehicle must travel is the signposted speed. Warning signs indicating a reduction in speed ahead must also be obeyed. These signs are shown below.

NSW Road Speed Limit Signs



Speed Reduction Ahead Warning Sign



The speed limit within the site is 15km/hr (unless sign posted otherwise in an area) which is to be strictly maintained.

Heavy Vehicles Driver Fatigue

The heavy vehicle driver fatigue law commenced in NSW in 2008 and applies to trucks and truck combinations over 12 tonnes GVM (however, Ministerial Exemption Notices may apply).

Under the law, industry has the choice of operating under three fatigue management schemes, namely:

1. Standard Hours of Operation
2. Basic Fatigue Management (BFM)
3. Advanced Fatigue management (AFM).

All heavy vehicle drivers associated with the construction works at the subject site must be aware of their adopted fatigue management scheme and operate within its requirements.

Heavy Vehicle Compression Braking

Compression braking is not permitted within the vicinity of the Oberon township, that includes, internal to and surrounding the subject site. Compression braking through rural areas of the haul route should only be used when required and for safety reasons.

Heavy Vehicle Noise

Permitted times of construction works at the site are as follows:

- Monday to Friday - 7:00am – 7:00pm
- Saturday - 8:00am – 1:00 pm.
- Sunday and public holidays – no construction works permitted.

Load Covering

All loaded trucks arriving at and departing from the construction site are required to have an effective cover over their load for the duration of the journey. The load cover may be removed only upon arrival at the destination (i.e. at the site).

Care must be taken to ensure that all loose debris from vehicles and wheels is removed prior to exiting the site.

Site management is to monitor loose material on the side of the haul route and take appropriate action regularly.

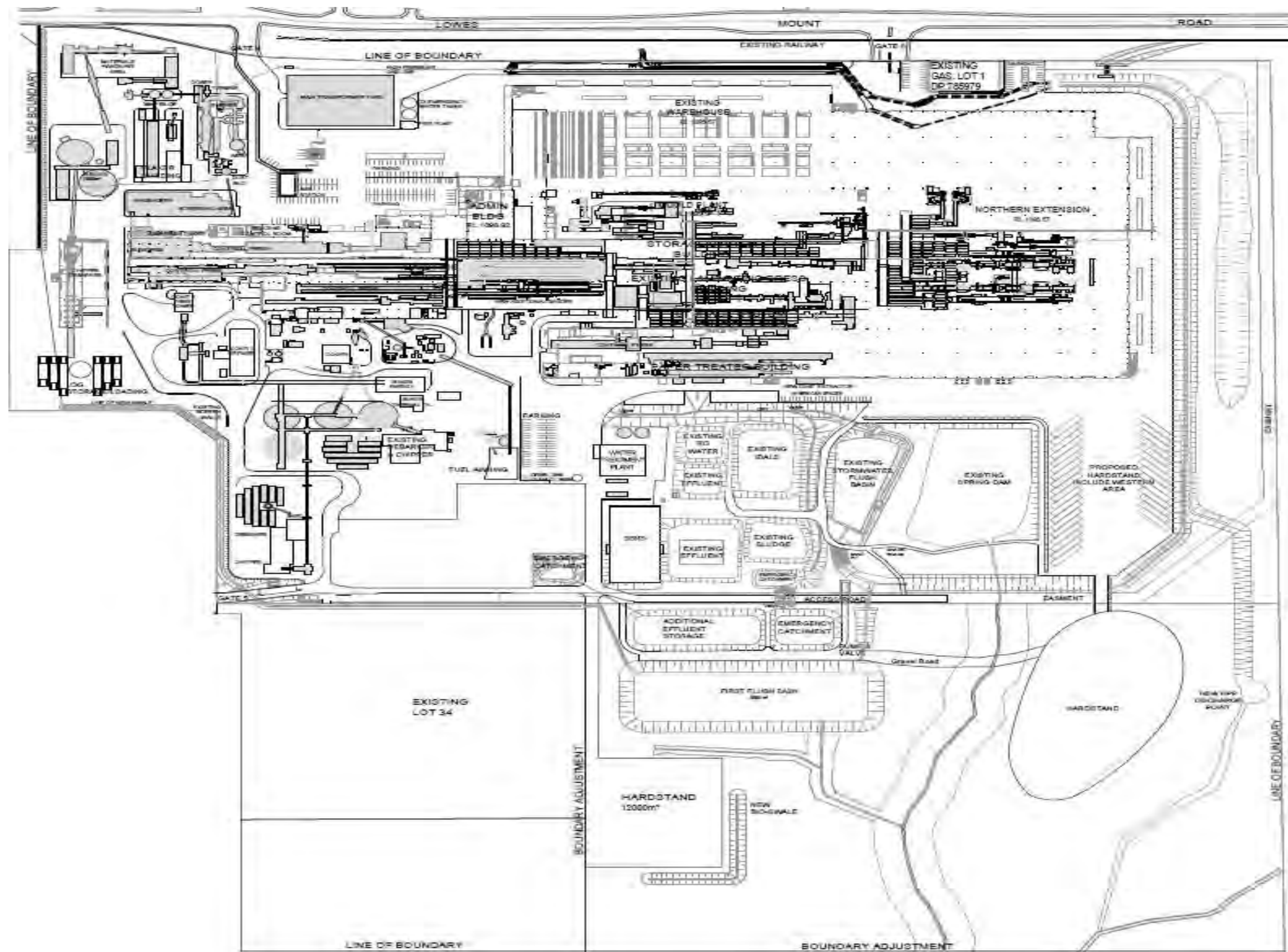
Other Safety Considerations Along the Haul Route

Heavy vehicle drivers should be aware of the following:

- Concealed driveways – drivers are to drive with caution around any signed concealed driveways
- Wet weather safety – drivers should adjust their driving speed to suit weather condition at the time.
- Wild life on country roads – drivers should stay alert to kangaroos, wombats and stray stock on haul routes from Bathurst and Sydney.

Appendix B

Site Infrastructure



Appendix C

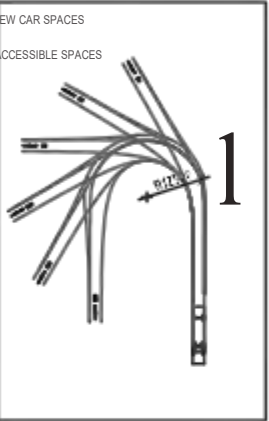
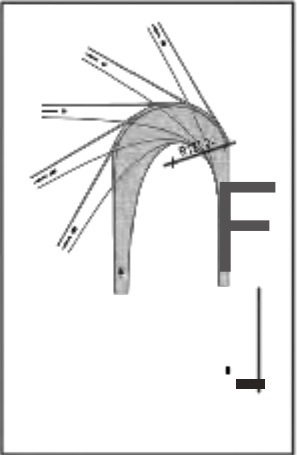
Internal Road Network Site Plan

NOTE
LOT BOUNDARIES FOR CONSOLIDATION ARE NOT SHOWN ON THIS
PLAN (FOR CLARITY) - REFER DRAWING DA-04 FOR DETAIL

LEGEND

D

EXISTING BUILDINGS
PROPOSED NEW BUILDINGS
ROAD NETWORK
CARPARKING SUMMARY
NEW CAR SPACES



NEW SOUTH WALES FIRE BRIGADE
AERIAL APPLIANCE - 12.4mX2.5m

CONSTRUCTION CERTIFICATE 28/04/14 AM

ceERG

CONSTRUCTION

OFFICE:
2WELLS WAY SOMERBY, N.S.W. 2250 AUSTRALIA
Tel: 0243405809 Fax: 0243408293

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Project
PROPOSED PARTICLE BOARD MANUFACTURING
PLANT & ADDITIONAL WORKS
Location
124 LOWES MOUNT ROAD, OBERON
NEW SOUTH WALES

Drawing
**INTERNAL ROAD NETWORK AND
PARKING FACILITIES**

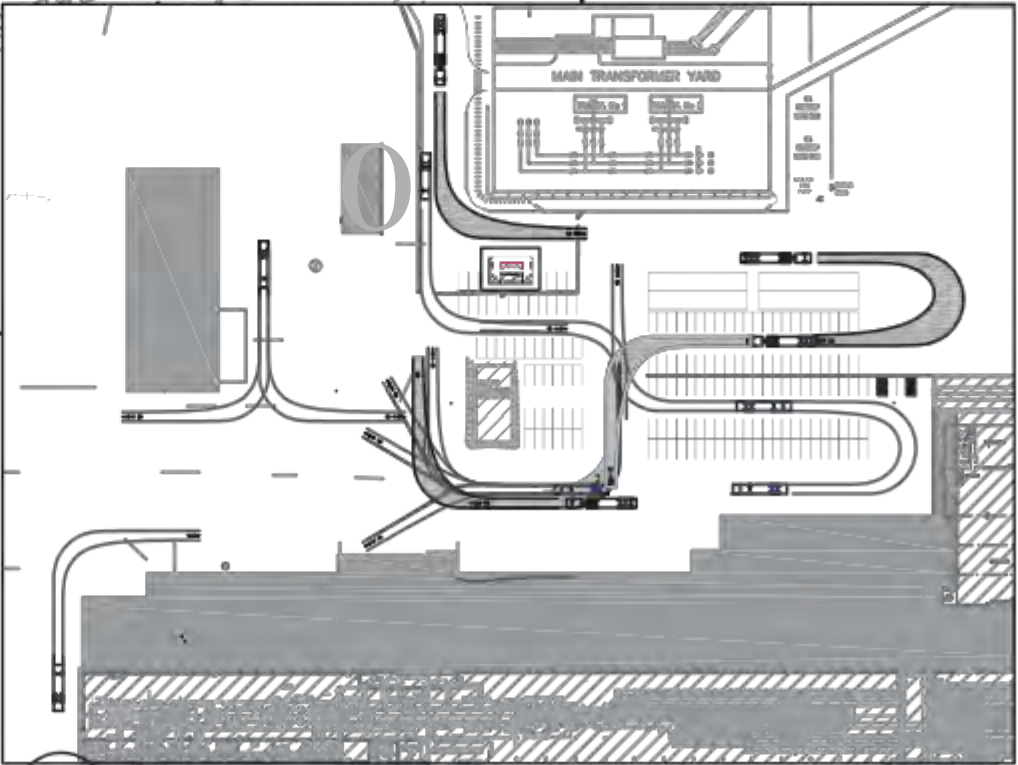
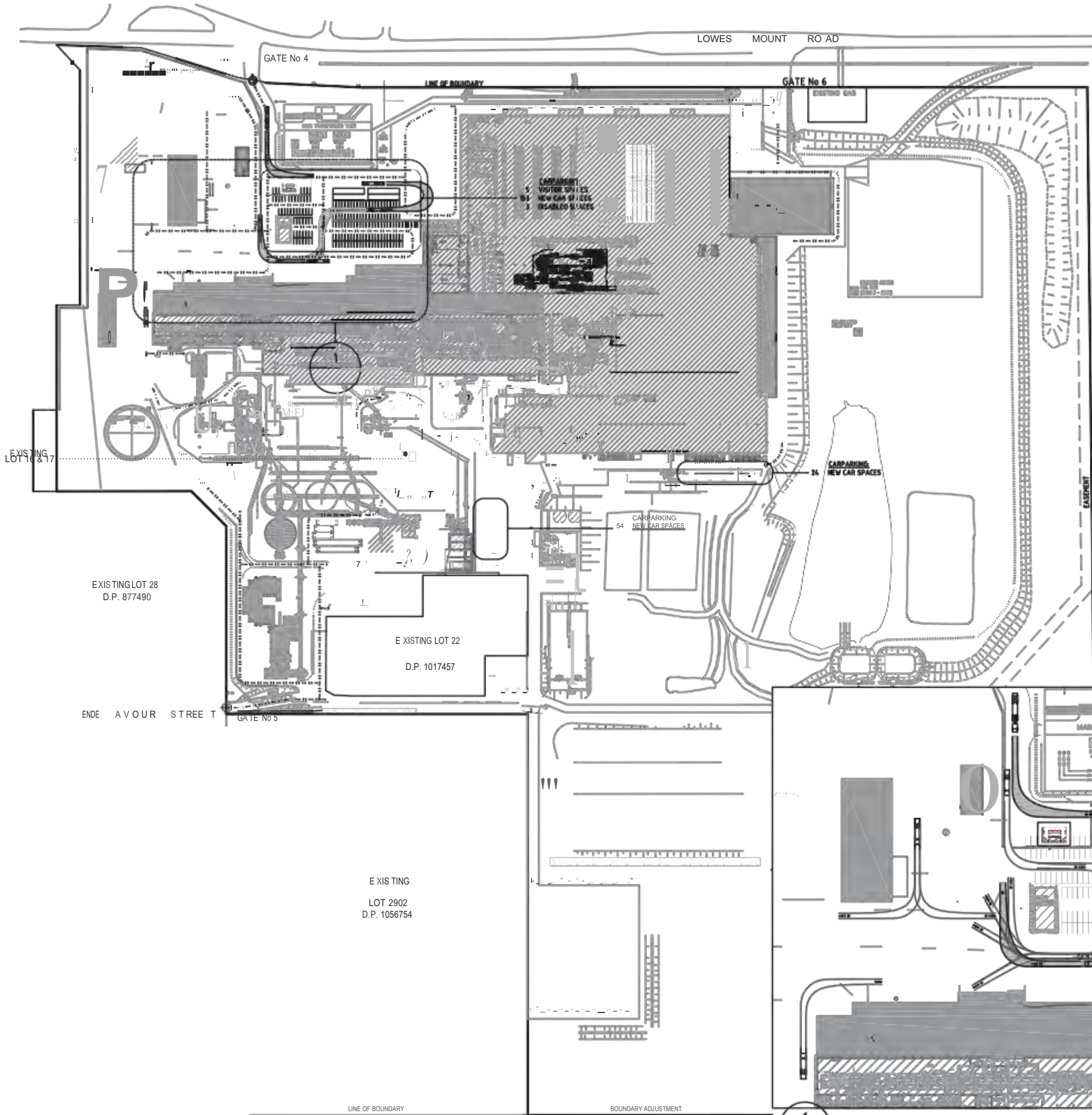
Scale
1:1750 (@A1)

Project Number
19

Drawing Number
CC 08

Stage
CC

Issue
A



SCALE 1:1000



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Summer Hill NSW 2130

02 8437 7800

info@tpp.net.au

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Appendix E – Unexpected Contaminated Land Finds Protocol

Unexpected Finds Protocol – Contaminated Land

Discovery of potentially contaminated soil / material. STOP WORK IMMEDIATELY in affected area.
Immediately contact Project Manager for assistance. Project Manager to liaise with Environment Officer and Safety Officer.
Undertake a contamination assessment by a suitably qualified and experienced contaminated land expert. The report is to determine whether the land is suitable (for the intended land use) or can be made suitable through remediation.
Where the investigations identify that the site is suitable for the intended operations and that there is no need for a specific remediation strategy, measures to identify, handle and manage potential contaminated soils, materials and groundwater shall be identified and incorporated into the Construction Environmental Management Plan.
Where the investigations identify that the site is suitable for the intended operations and that a remediation strategy is required, the contamination assessment shall include a remediation strategy for addressing the site contamination, and how the environmental and human health risks will be managed during the disturbance, remediation and/or removal of contaminated soil or groundwater, and be incorporated into the Construction Environmental Management Plan.
Where remediation is required, a Site Validation Report shall be prepared verifying that the site has been remediated to a standard consistent with the intended land use.

Appendix F – Mobile Wood Chipper Operation Management Plan

EMS0029

Mobile Wood Chipper Operation

Management Plan

Borg Panels

124 Lowes Mount Road, Oberon NSW

Borg Construction Pty Ltd

8 July 2020

This document should be read in conjunction with EMS0060 Construction Environment Management Plan, EMS0001 Operational Environmental Management Plan, EMS0061 Construction Noise Management Plan and EMS0005 Operational Noise Management Plan

Revision History

Rev No.	Revision Date	Author / Position	Details	Authorised	
				Name / Position	Signature
0	28/03/17	Carly McCormack Planning and Environmental Officer	Draft for Site Consultation	Victor Bendevski Environmental and Regulatory Compliance	
1	27/04/17	Carly McCormack Planning and Environmental Officer	Final Draft	Victor Bendevski Environmental and Regulatory Compliance	
2	01/06/17	Carly McCormack Planning and Environmental Officer	Final	Victor Bendevski Environmental and Regulatory Compliance	
3	02/11/18	Jacqui Blomberg Environmental Manager	Review as per SSD7016 C10	Victor Bendevski Environmental and Regulatory Compliance	
4	8/07/2020	J Blomberg Environmental Manager	Review as per SSD7016 C10 No changes	V Bendevski Environmental and Regulatory Compliance	

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1 Introduction

The purpose of this Mobile Wood Chipper Operation Management Plan is to minimise noise impacts on nearby noise sensitive receivers resulting from operation of Mobile Wood Chippers at Borg Panels Oberon.

Mobile chipping plant are the highest noise emitters on site by a significant margin. Operation of mobile chippers does not form part of 'normal' operations. They are typically only used during breakdown of electric plant.

The Noise Impact Assessment (Global Acoustics, May 2016) predicted minor to moderate exceedances for noise sensitive receivers south of site for the day period when mobile chipping plant is operational during prevailing (enhancing) meteorological conditions.

This Mobile Wood Chipper Operation Management Plan documents mitigation and management measures to assist Borg in meeting noise limits. Exceedances can be avoided through monitoring weather and restricting use of mobile chipping plant during periods of meteorological enhancement.

Routine noise compliance monitoring is undertaken to measure compliance with noise limits.

2 Compliance Requirements

2.1 Development Consent

The Development Consent SSD 7016 conditions relevant to mobile chipper operation that have been considered in this Plan are detailed in **Table 1**.

Table 1 – Development Consent Conditions

No.	Requirement	Document Reference
	Mobile Wood Chippers	
B22	During construction, the Applicant must ensure that mobile wood chippers are not operating simultaneously with rock/concrete breaking activities.	Section 4.4
B23	The use of mobile wood chippers on site is restricted to the day time period only and to periods of breakdown or maintenance of the permanent wood debarkers and electric chippers, and must not operate under the following conditions: a) in the open when winds are from the north-west through to the north-east (315°, through 0°, to 45°); and b) when winds are from the west through to the east (270°, through 0°, to 90°), two or more mobile wood chippers are not to operate simultaneously.	Section 4.2 Section 4.3 Section 4.1 Section 4.1
B24	Within 6 months of the date of this consent or the commencement of construction of the Project, whichever occurs first, the Applicant must prepare a Mobile Wood Chipper Operation Management Plan for the Development. The plan must outline how the requirements under Conditions B22 and B23 will be achieved and must include any reasonable and feasible mitigation measures to limit operation to periods of breakdown or maintenance of the permanent debarkers and electric chippers.	This Plan Section 4.3

Development Consent SSD 7016 also stipulates noise limits, which are not to be exceeded, for noise generated by the Development as shown in Table 2.

Table 2 Noise Limits dB(A)

Location	Day LAeq (15 minute)	Evening LAeq (15 minute)	Night LAeq (15 minute)
All sensitive receivers	55	50	45

2.2 Environment Protection Licence

The Environment Protection Licence 3035 (EPL 3035) conditions relevant to mobile chipper operation that have been considered in this Plan are detailed in **Table 2**.

Table 3– Environment Protection Licence Conditions

No.	Requirement	Document Reference
L5	Hours of Operation	
L5.1	The Hours of Operation for any mobile log chipper used on the premises are limited to 7:00am to 6:00pm Mondays to Saturdays and 8:00am to 6:00pm Sundays and Public Holidays.	Section 4.2

EPL 3035 also stipulates noise limits, which are not to be exceeded, for noise generated by the Development. These limits mirror those noted in Table 2 above.

3 Meteorological Monitoring

Borg operates a meteorological monitoring station located on-site to the east of the Spring Dam. This is a real-time weather station that monitors wind speed, wind direction, air temperature, rainfall, barometric pressure, relative humidity, dew point, evaporation, peak wind gust and solar radiation.

Wind directional data clearly signifying when one or two mobile chippers may be operated, or when they are not to be operated, is to be displayed as a live feed from the meteorological station in full view of the Log Yard Supervisor. The Supervisor will review data and advise operators when wind direction prevents operation and to shut down equipment.

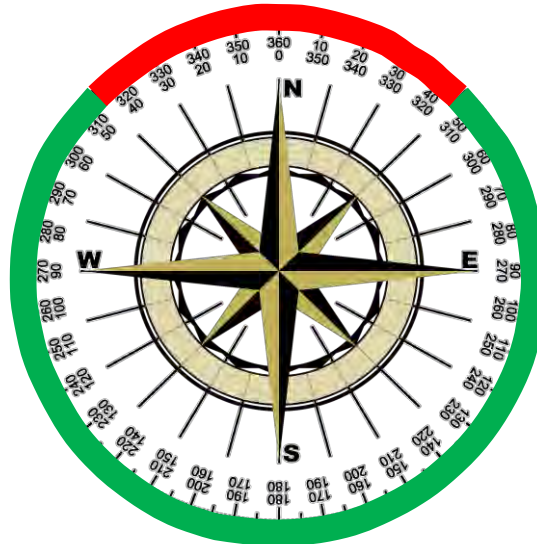
Note: If wind speed falls below 5 km/hr (1.4 m/s) the wind direction sensor (wind vane) becomes inaccurate.

4 Operating Conditions

4.1 Wind Direction

One Mobile Chipper

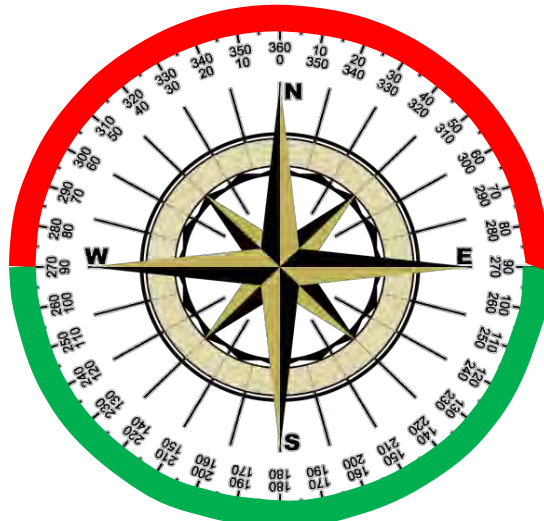
One mobile chipper **MAY** be operated when wind direction is from north-east through to north west (45°, through 180°, to 315°), as shown in green on the compass below.



One mobile chipper must **NOT** operate when wind direction is from the north-west through to the north-east (315°, through 0°, to 45°), as shown in red on the compass above.

Two Mobile Chippers

Two mobile chippers **MAY** be operated simultaneously when wind direction is from east through to west (90°, through 180°, to 270°), as shown in green on the compass below.



Two mobile chippers must **NOT** operate simultaneously when wind direction is from the west through to the east (270°, through 0°, to 90°), as shown in red on the compass above.

4.2 Timing

Mobile wood chippers are **ONLY** to be operated during the daytime period, defined as:

- 7:00am to 6:00pm Monday to Saturday
- 8:00am to 6:00pm Sundays and Public Holidays

4.3 Electric Chippers

The use of mobile wood chippers on site is restricted to periods of breakdown or maintenance of the permanent wood debarkers and electric chippers.

4.4 Rock/Concrete Breaking Permit to Work

Mobile wood chippers are not to operate simultaneously with rock/concrete breaking activities.

Construction activities involving rock/ concrete breaking require a completed Permit to Work to be submitted to both the Construction Project Manager and Log Yard Supervisor. Approval of both parties is required prior to commencement of rock/concrete breaking activities.

5 Responsibilities

Table 4 Roles & Responsibilities

Position	Responsibility
Area Manager	Ensure that the requirements of this Plan are met.
Log Yard Supervisor	Inform, instruct and train operators regarding the requirements of this Plan. Monitor and review meteorological station data and advise when mobile wood chipper operation to cease Enforce and discipline staff for non-conformance of this plan, where necessary.
Mobile Chipper Operators	Operate mobile wood chippers in accordance with this Plan.
Environmental Coordinator/Manager	Review, and if necessary revise, this plan following a modification to either Development Consent SSD 7016 or EPL 3035, or submission of an incident report to either Department of Planning and Environment or Environment Protection Authority.

6 References

Global Acoustics (May 2016). *Borg Panels Timber Panel Processing Facility Oberon NSW – Noise and Vibration Impact Assessment*. Prepared for Borg Manufacturing.

Appendix G – Spring Fed Dam Reclamation Plan

EMS0099

Spring Fed Dam Reclamation Plan

Borg Panels

124 Lowes Mount Road, Oberon NSW

Borg Panels Pty Ltd

28 May 2019

This document should be read in conjunction with EMS0060 Construction Environment Management Plan, EMS0006 Surface Water Management Plan and EMS0008 Erosion & Sediment Control Plan.

Revision History

Rev No.	Revision Date	Author / Position	Comments	Details	Authorised	
					Name / Position	Signature
0	29/03/2019	Jacqui Blomberg Environment Manager		Draft	Victor Bendevski Environmental and Regulatory Compliance	
0.1	28/05/2019	Jacqui Blomberg Environment Manager	Following DILW/NRAR review	Draft	Victor Bendevski Environmental and Regulatory Compliance	
1	28/05/2019	Jacqui Blomberg Environment Manager	For issue		Victor Bendevski Environmental and Regulatory Compliance	

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Appendix A Consultation Correspondence -DPI and DILW

Appendix B Edge Geotechnical *Borg Panels Timber Processing Facility Modification 1 (SSD 7016 MOD 1) Comments on Reclamation of Spring Fed Dam*

Appendix C Sustainability Workshop *Proposed S96 Mod for an increase building footprint at Oberon – surface water quality and quantity considerations*

Appendix D Envirowest Consulting – *Partial filling of Spring Dam, 124 Lowes Mount Road, Oberon NSW.*

1 INTRODUCTION

1.1 Background

Borg Panels operates a Medium Density Fibreboard (MDF) manufacturing facility in Oberon, NSW. This facility produces a range of Customwood MDF products including:

- Standard MDF;
- Moisture Resistant MDF;
- E0 (Low Formaldehyde Emitting) MDF;
- Ultraprime MDF Mouldings;
- Decorative Laminated MDF and Particle Board; and
- Treated paper for the lamination of MDF and Particle Board.

On 29 May 2017 Development Consent SSD 7016 was granted by the Minister for Planning to construct a particleboard manufacturing facility, modify the existing MDF manufacturing facility and undertake general site works at the existing Borg Panels site located on 124 Lowes Mount Road, Oberon.

On 20 November 2018 modification of Development Consent SSD 7016 MOD 1 was approved by the Director, Industry Assessments as a delegate of the Minister for Planning under section 4.55(1A) of the *Environmental Planning and Assessment Act 1979*. This modification included a proposal to extend the footprint of the warehouse at the north west portion of the site, which will encroach on the spring fed dam located at the north of the site. This extension will require reclamation of a portion of the man made dam to provide suitable structural footing for the new building, driveway and to allow sufficient space for the changes to the surface water management system. **Figure 1** shows the existing spring dam location.

1.2 Purpose and Objectives

The purpose of this Plan is to:

- Address the relevant conditions of Development Consent SSD 7016 including modifications and to manage the reclamation of a portion of the spring fed dam at the Borg Panels facility.

The objectives of the Plan are to:

- Identify potential impacts to the water resulting from construction activities, specifically the reclamation works;
- Implement appropriate mitigation and management measures as required, ensuring they meet relevant legislative requirements;
- Address comments concerning the reclamation works received in response to the approved Section 1A modification for an increase building footprint; and
- Define a protocol for reporting environmental incidents.

1.3 Structure of this Plan

This Spring Fed Dam Reclamation Plan (the Plan) has been developed to manage potential impacts to the dam during reclamation works and to satisfy the requirements as set out in Conditions C1 and C9 of Development Consent SSD 7016 and Condition B33A of MOD 1.

This is a sub plan to EMS0060 Construction Environmental Management Plan (CEMP) and includes information on the following:

- Section 2 – Legislative and Regulatory Compliance
- Section 3 – Overview
- Section 4 – Environmental Impact Assessment
- Section 5 – Mitigation & Management Measures
- Section 6 – Fill Design
- Section 7 – Inspections & Reporting
- Section 8 – Plan Review

1.4 Consultation

The Final Draft of this Plan was sent to DILW for review and consultation. The Final Plan will be submitted to the Secretary of the Department of Planning and Environment (DP&E) for approval. Correspondence regarding consultation is included in **Appendix A**.

1.5 Responsibilities

Name	Title	Responsibility
David Read	Construction Manager (CM)	• Instruct employees/contractors on how to comply with environmental procedures including this Plan and requirements relevant to their respective work activities • Ensure SS is aware of and complies with the environmental obligations as detailed in this Plan • Tracking and compliance against the Conditions of Consent for the scope of works detailed in this Plan • Evaluate effectiveness of environmental controls associated with the works detailed in this Plan • Implement and support remedial measures as recommended by the EO • Engage with EO, EM and environmental consultants where required to provide support in implementing this Plan • Investigate any environmental incidents or complaints with EO and EM where required, and ensure corrective action is implemented
Levi Yates	Site Supervisor (SS)	• Manage employees / contractors and construction activities on a daily basis to ensure the appropriate environmental controls are implemented and maintained • Undertake daily site inspections of environmental controls • Implement actions identified as a result of site inspections or reported environmental issues • Report any environmental management concerns or incidents immediately to the Construction Manager
Ian Makins	Environment Officer (EO)	• Train employees/contractors on how to comply with environmental procedures including this Plan

		• Undertake regular site inspections, documented at least monthly to ensure environmental issues are identified and managed and controls are adequate • General environmental compliance observations and recommend actions where necessary • Investigate any environmental incidents or complaints with CM and EM where required, and ensure corrective action is implemented
Jacqueline Blomberg	Environmental Manager (EM)	• Assist EO in training employees/contractors to ensure compliance with environmental procedures including this Plan • Investigate serious incidents, complaints or non-conformances and ensure necessary corrective action is implemented • Assist CM with tracking and compliance against the Conditions of Consent for the scope of works detailed in this Plan • Provide and other necessary support to EO and CM • Conduct review as per section 8 of this Plan

2 Legislative, Regulatory & Licence Compliance

2.1 Relevant Legislation

Key environmental legislation for the Existing Development includes:

- *Protection of the Environment Operations Act 1997; and*
- *Environmental Planning and Assessment Act 1979.*

Other relevant legislative framework associated with the spring dam reclamation works is the *Water Management Act 2000*. The NSW Aquifer Interference Policy is the governing policy for the licensing and assessment of aquifer interference activities under this Act and therefore is considered for this activity.

2.2 Conditions of Consent

The existing development operations are subject to the conditions contained in Development Consent SSD 7016 dated 29 May 2017 and SSD 7016 MOD 1 approved 20 November 2018.

The specific requirement for a Spring Dam Reclamation Management Plan (the Plan) can be found in Schedule 2, Condition B33A:

Spring Dam Reclamation Management Plan

The Applicant must prepare a Spring Fed Dam Reclamation Management Plan for the Project. The plan must form part of the CEMP as required by Condition C1 and be prepared in accordance with Condition C9 and must:

- *Be prepared in consultation with DILW;*
- *Be submitted to the Secretary for approval prior to commencement of the spring fed dam reclamation works;*
- *Include details of the reclamation materials and reclamation methodology for the spring fed dam reclamation works;*
- *Detail the management measures to mitigate water quality impacts during the spring fed dam reclamation works; and*
- *Incorporate the recommendations outlined in Appendix A of Borg Construction Pty Ltd's Letter to Department of Industry, dated 2 August 2018 as described in Modification Assessments.*

2.3 Water Access Supply Licence

The existing development has approval from Department of Primary Industries (DPI) for water supply works under approval 80WA715797 allocating 28 units per financial year to be extracted from the aquifer (spring dam). The Statement of Approval issued under the *Water Management Act 2000* must be referred to during the reclamation works to ensure the conditions of approval are met, including nil exceedance of extraction limits.

If it is determined during design (or similar investigations) that the current water allocation is not sufficient, an application to DPI will be submitted requesting a temporary increase to the approved allocation units for the duration of the reclamation works.

3 OVERVIEW

3.1 Site Environment

The site is currently developed for the purposes of a manufacturing facility for Medium Density Fibreboard (MDF) and particleboard. This includes:

- A number of large scale industrial buildings which contain various processes involved with the manufacture of MDF and MDF products
- Concrete hard stand areas between the buildings
- A two-story administration/amenities building with associated staff car parking
- Various necessary items of infrastructure including venting, dust collection and wood particle conveyors. Other facilities/buildings associated with the use of the land (including maintenance areas, security entry/exit gates and weigh bridges)
- Fencing, landscaping, surface water drainage and other site facilities

The expansion works that have been undertaken allowed for the construction of a dedicated particleboard manufacturing line, whilst providing additional infrastructure including within existing buildings, to value add existing products.

The further proposed extension of the warehouse at the north west of the site will encroach on the spring fed dam. Part of the dam area will require reclamation to provide suitable structural footing for the new building and driveway, and allow sufficient space for the changes to the surface water management system.

3.2 Identification of Issues

Additional works as approved under as per SSD 7016 MOD 1, namely extension of the northern warehouse facility, will affect the spring fed dam.

Potential issues associated with the reclamation works include pollution of waterways if dam dewatering is required, or use of unsuitable fill material, which may result in localised groundwater mounding which may have a negative effect on water quality.

Advice on the reclamation works provided by Edge Geotechnical *Borg Panels Timber Processing Facility Modification 1 (SSD 7016 MOD 1) Comments on Reclamation of Spring Fed Dam (Appendix B)* concluded that groundwater flow paths could be maintained whilst achieving the required fill compaction/stability for the warehouse extension. Edge Geotechnical recommended further investigation be undertaken into reclamation materials and the preparation of a reclamation methodology.

Acting on the recommendations of Edge, reclamation of the spring dam has been assessed by Sustainability Workshop '*Proposed S96 Mod for an increase building footprint at Oberon – surface water quality and quantity considerations*' (**Appendix C**) which concludes that the activity should not impact on long-term viability of the groundwater source if the advice provided by Sustainability Workshop is followed. Impacts and mitigation measures are further discussed in sections 4 and 5 of this Plan.

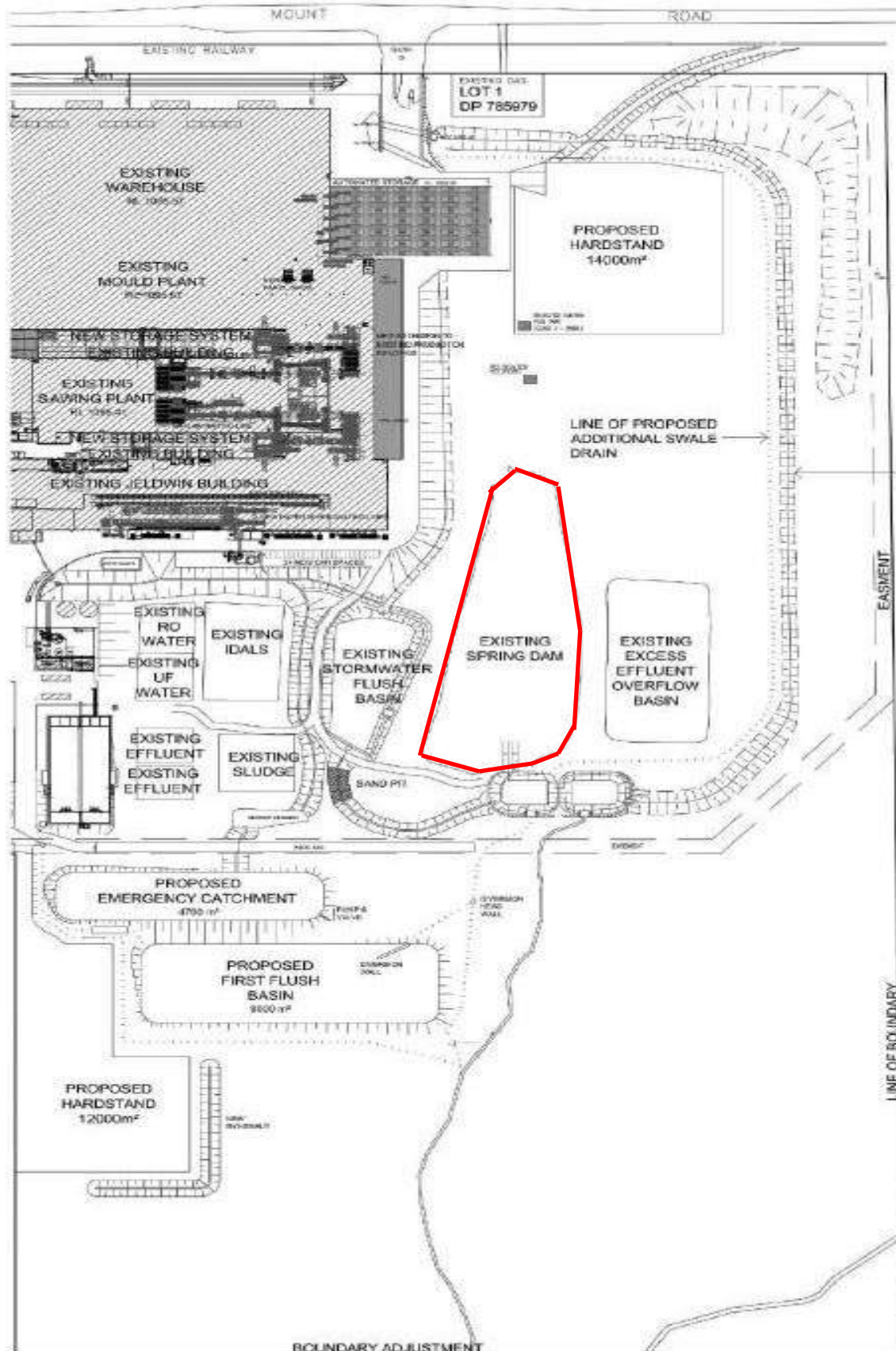


Figure 1 Existing spring dam location

4 ENVIRONMENTAL IMPACT ASSESSMENT

4.1 Existing Environment

The spring dam is a groundwater dependent dam that does not store surface waters. This dam was created by previous owners of the facility when they had extracted clean fill for construction purposes. This location has a shallow groundwater table and as a result, a permanent waterbody was inadvertently created. The dam has no notable upstream catchment and is simply a hole in the ground, filled with groundwater.

The permeability of the fill placed in the dam will need to be maintained during construction and operation of the facility to prevent sealing of the spring and influencing the groundwater table.

4.2 Potential Impacts

Potential impacts from the activity could occur during both construction and operation of the facility.

4.2.1 Construction

During construction, impacts on water quality causing pollution to Kings Stockyard Creek has been identified as a key risk if dewatering of the dam to reduce the water level were to occur. This water may be more turbid than normal given the construction activities and hence, affect water quality.

Envirowest Consulting has provided a construction design plan (see **Appendix D**) which satisfies the requirements recommended by Edge Geotechnical and The Sustainability Workshop. This plan is outlined below in Section 6 Fill Design & Methodology.

Use of unsuitable fill material has also been identified. If use of a fill material that has a lower permeability that currently exists localised groundwater mounding may result. Groundwater mounding occurs where infiltrating water intersects a groundwater table and the rate of water entering the subsurface is greater than the rate at which water is conveyed away from the infiltration system. Mounding may result in groundwater impacts on site or on adjacent land, and has the potential to damage building structures, as it is an unsuitable construction material.

4.2.2 Operation

Provided that a porous fill material is chosen to reclaim the dam i.e. allows groundwater to flow through it at a rate equal to or greater than the site clays and is also low in dispersible materials (less than 10% dispersibility), it is unlikely that there will be any short term or long-term groundwater implications. Further, a reduction in evaporation from the surface of the dam may be realised as the surface area will be reduced.

5 MITIGATION & MANAGEMENT MEASURES

Provided the advice contained within Sustainability Workshop '*Proposed S96 Mod for an increase building footprint at Oberon – surface water quality and quantity considerations*' and fill design provided by Envirowest Consulting, the proposed reclamation works will not impact on long term viability of the groundwater source whilst providing a suitable foundation for the building works to proceed. The below mitigation and management measures are applicable for both construction and operation phases of the facility. Measures are as follows:

- Implement the Spring Fed Dam Reclamation Management Plan (this Plan) for the site
- Implement erosion and sediment control measures over the development site whilst construction works are underway as part of CEMP
- Fill imported to site to be suitably certified
- Engage a geotechnical engineer to review subsurface conditions during construction stages and to confirm that subsurface conditions are consistent with design assumptions (see section 6. Fill Design), and provide advice on fill placement methodology
- Ensure flow path for emerging groundwater is maintained
- Daily monitoring to ensure no discharge of dam water off site, pump into the existing stormwater flush basin to be used as site process water
- Follow the fill design (including reclamation materials) provided by Envirowest Consulting and outlined in this Plan in Section 6. Fill Design & Methodology
- Undertake daily site inspection to maintain and ensure ERS&D controls are working effectively
- Undertake (at least monthly) environmental inspections using checklist to record site condition, monitor environmental performance of the construction works, and capture required actions to address identified adverse environmental impacts

Provided that a 'closed site' approach is adopted during construction to ensure no dam water leaves the site, the risk of causing pollution under the POEO Act will be minimised.

6 FILL DESIGN & METHODOLOGY

It is anticipated that approximately half of the spring dam will be filled to facilitate the warehouse extension works. **Figure 2** illustrates the area of the spring dam to be reclaimed, and **Figure 3** the extension and associated works details. During construction the permeability of the dam void will be maintained in the filling process. The expected depth of the dam is 6 meters. The fill for the reclamation works will comprise boulders, ballast, recovered aggregates, general fill and stabilised fill (**Table 1**). Geotextile, geogrid and geotube will assist the stabilisation process.

Boulders will be placed in the base of the dam to provide a stable layer for compaction. The fill material in the dam void will be crushed coarse cobbles or ballast comprising gravel, concrete and ceramic tile. The aggregate will be placed from the base of the dam to the water level. The aggregate will be placed on the edge of the dam and pushed into the dam filling approximately half of the dam. Voids between the cobbles will enable movement of water and ensure the permeability and that the spring remains able to maintain flows into the remaining area of the dam. The blast/cobbles will have a 1:2 batter and may be stabilised with a permeable grout mat and a concrete filled geotube. The geotube will be anchored to the base of the dam with rock and will secure the edge batter of the filled area.

At the water level, a layer of geotextile matting will be placed above the cobbles. Subsequent layers will consist of a sandy clay fill material with gravel and will contain two layers of geogrid geotextile and geotextile matting, which will bridge the aggregate above the dam. Advice may be sought from geotextile suppliers for the optimum product for the bank and pad area.

The final fill level will be approximately 6 meters above the dam water level and the geotextile. The upper 300mm of fill will comprise DGB 20mm gravel stabilised with 5% cement. The final wearing surface layer is steel reinforced concrete and the thickness shall be governed by the expected loads. **Figure 4** provides a schematic of the filled dam area including fill layers and materials.

The level of stabilised layer will be verified for no deformation by proof rolling with a minimum 10t truck or similar prior to construction activities. Compaction testing may be undertaken at each lift above the water level to check for compaction density.

Table 1: Fill Layers in the Spring Dam

Layer	Description	Comments
Surface layer	Concrete	-
Base and subbase (300mm)	Stabilised DGB gravel	Compacted
General fill (5m)	Sandy clay with gravel with two layers of geogrid separated by 2m	Compacted
Water level	Geotextile	-
Dam void (5m)	Ballast/cobbles (>75mm dia)	Washed with no fines
Base of dam	Boulders (>200mm dia)	Base of dam in sediment

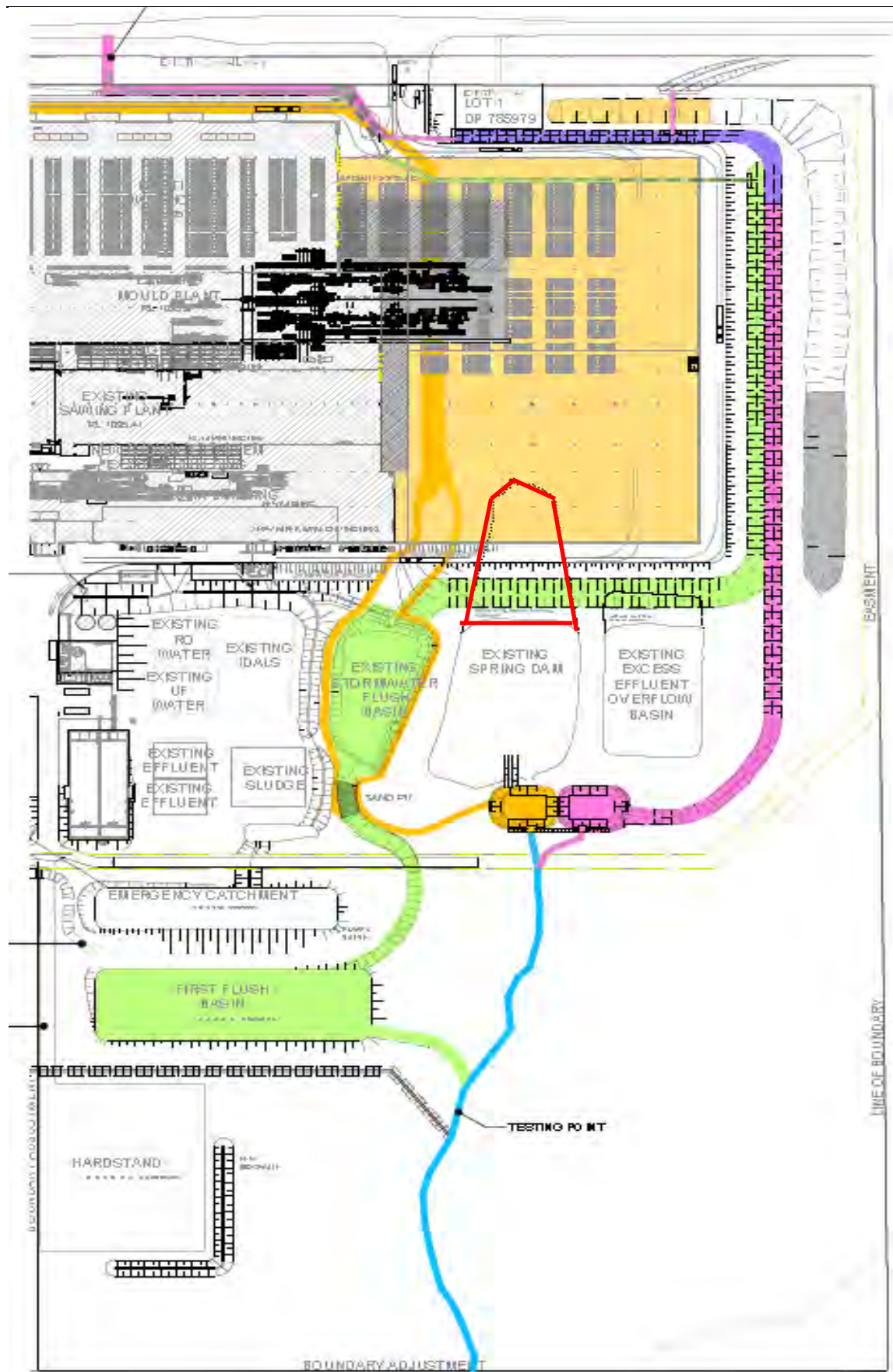


Figure 2 Spring dam reclamation area

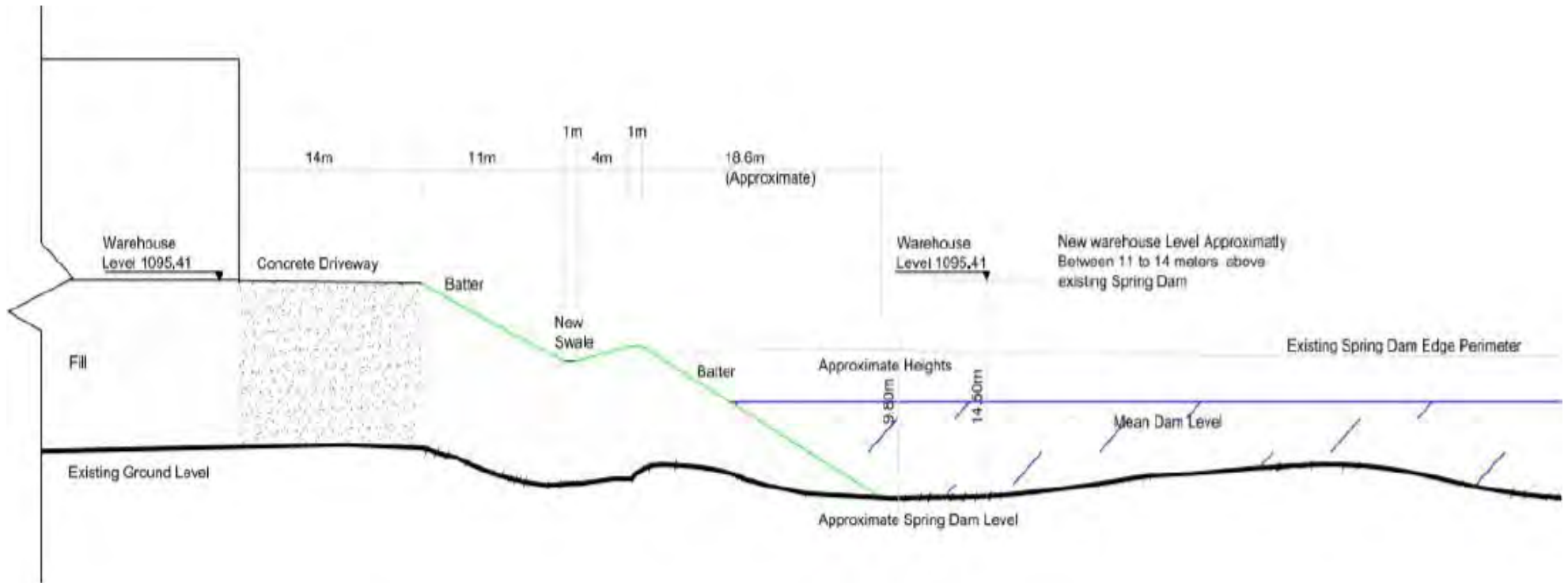


Figure 3 Construction plan for reclamation works

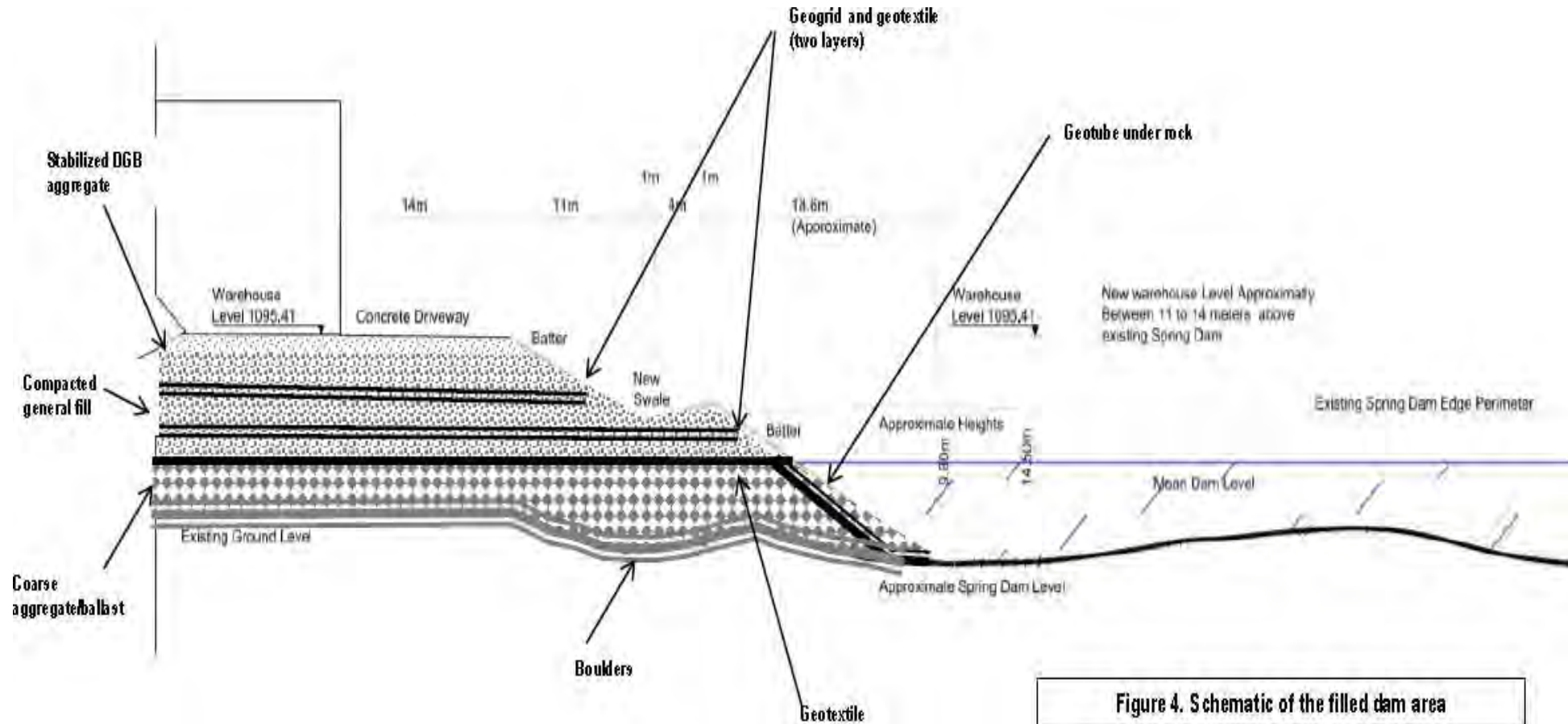


Figure 4 Schematic of filled dam area

Figure 4. Schematic of the filled dam area

7 INSPECTIONS & REPORTING

Borg Panels will manage all internal and external reporting requirements in accordance with EMS0060 Construction Environment Management Plan (CEMP). Any environmental concerns regarding the reclamation works will be immediately reported to the Construction Manager and/or the Environment Officer.

7.1 Inspections

Either the Environment Officer or Site Supervisor will perform daily inspections of the construction area. Any environmental issues identified such as ineffective erosion or sediment controls will be addressed immediately. A monthly site inspection will be conducted and recorded by the Environment Officer. Checklists will be used to report on activities for compliance with this Plan and to identify issues specific to the reclamation works that require attention.

Pre-rainfall and post-rainfall inspections will also be undertaken and recorded by the Environment Officer to ensure erosion and sediment control devices are adequate, working effectively and replaced if necessary.

All workers will be responsible for reporting identified environmental issues immediately to the Site Supervisor, and implementing the requirements of this Plan as they conduct their works.

7.2 Unlicensed discharge

In the event of an unlicensed discharge during the reclamation works, Borg Panels will notify the EPA immediately and undertake an investigation of the discharge event. In the unlikely event that a discharge poses a threat to health of surrounding property owners and occupiers, Borg Panels will implement the Pollution Incident Response Management Plan (PIRMP), which includes notification with those likely to be affected. A list containing surrounding property owner's and occupier's contact details is held by Borg Panels.

The notification procedure is to be initiated by the Environment Officer for Borg Panels. In the absence of the Environment Officer, the notification procedure is to be initiated by the person designated as fulfilling the responsibilities of the Environment Officer.

An investigation report on the unlicensed discharge will be prepared and provided to the EPA or other relevant agency, including the DP&E.

7.3 Annual Review

In accordance with Development Consent SSD 7016 an Annual Review report is prepared and submitted to the Secretary Department of Planning and Environment on an annual basis. The review will be prepared in accordance with Condition C11.

8 PLAN REVIEW

In accordance with Development Consent SSD 7016 Condition C10, this Plan will be reviewed and if necessary revised within 3 months of an:

- Approval of a modification;
- Submission of an incident report under Condition C13;
- Approval of an Annual Review under Condition C11; or
- Completion of an audit under Condition C15.

The Plan will also be updated as required to reflect any change to on-site management or monitoring programs referred to in this document, or any changes to Development Consent SSD 7016 or EPL 3035.

Revisions to the Plan will be submitted to the Secretary DP&E for approval.

Appendix A

Consultation Correspondence -DPI and DILW

Appendix B
Edge Geotechnical *Borg Panels Timber Processing Facility*
Modification 1 (SSD 7016 MOD 1) Comments on
Reclamation of Spring Fed Dam

Appendix C
Sustainability Workshop *Proposed S96 Mod for an increase*
building footprint at Oberon – surface water quality and
quantity considerations'

Appendix D
Envirowest Consulting –*Partial filling of Spring Dam, 124*
Lowes mount road, Oberon NSW.

Appendix H – Site Inspection Checklists

Construction Site Inspection Checklist

Note: This form is designed for general use and may not be exhaustive. Modifications and additions may be necessary as the project progresses to address specific environmental issues and associated mitigation measures.

Project – Install particle board plant and additions to MDF plant

Site Location – Borg Panels 124 Lowes Mount Road, Oberon

Inspection Date –

Inspection Time –

Weather Condition –

Inspected By –

Signature –

Inspection Item	Implemented? Y/N or n/a	Remarks & Action (specific location, good practice or problem observed)
1. Site Security and Access		
Is the perimeter fence undamaged?		
Are internal footpath areas clear of sediment, sand and mud?		
Are public roadways clear of dirt/mud?		
Are site entry/exit hardstand areas clean?		
Is the street sweeper being used on site and public roadways?		
Others (please specify)		
2. Soil and Water Management		
Are erosion and sediment controls installed prior to earthworks commencing?		
Are controls installed at access/egress areas to managing tracking of mud?		
Are sediment fences installed correctly (fabric buried and standing upslope of stakes)?		
Do any erosion/sediment controls need repairing or replacing?		

Inspection Item	Implemented? Y/N or n/a	Remarks & Action (specific location, good practice or problem observed)
Have swales been grassed/stabilised?		
Is the site adequately prepared for potential storms? i.e. adequate stock of erosion and sediment controls materials (hay bales, silt fence etc.), no loose materials		
Others (please specify)		
3. Spring Dam		
Are daily observations undertaken for conditions of environmental control?		
4. Noise Management		
Are works being undertaken within the approved construction hours? <i>Monday to Friday 7am to 7pm</i> <i>Saturdays 8am to 1pm</i> <i>Sundays and Public Holidays</i> NO WORKS		
Are all workers aware of the approved construction hours?		
Is plant and equipment maintained to ensure running efficiently?		
Is plant and equipment turned off when not in use? i.e. not left idling		
Others (please specify)		
5. Air Quality (Dust) Management		
Are material stockpiles stable and not generating dust?		
Are site activities generating offsite dust emissions?		
Is dust suppression being used?		
Do trucks entering and exiting the site have their loads covered?		

Inspection Item	Implemented? Y/N or n/a	Remarks & Action (specific location, good practice or problem observed)
Others (please specify)		
6. Hazardous/Chemical Materials		
Are chemicals or fuels used on site correctly bunded? (and bund is to be covered to not collect and store rainwater)		
Are spill kits present and appropriately stocked?		
Is the site free of fuel or chemical spills? i.e. no visible spills		
7. Construction & Demolition Waste Management		
Is the construction site clear of litter and loose rubbish?		
Do waste bins have capacity to receive rubbish? i.e. not full or overflowing?		
Is liquid waste stored in appropriate containers in a bunded area?		
Are waste streams separated into skips where applicable? i.e. steel, concrete		
Are records being kept of all waste removed from site?		
Is the Waste Tracking Register up to date?		
Others (please specify)		
8. Traffic and Pedestrian Management		
Is the Traffic Control Plan up to date?		
Is there adequate plant/people separation?		
Others (please specify)		
9. Contamination Management		
Are excavations free of visual and odorous contamination?		

Inspection Item	Implemented? Y/N or n/a	Remarks & Action (specific location, good practice or problem observed)
Are records being kept for all imported fill material? i.e. VENM, ENM		
Is the Unexpected Finds (UF) Protocol displayed on site notice board?		
Have workers been trained in the UF Protocol?		
Is contaminated soil stockpiled separately for classification?		
Others (please specify)		
10. Vegetation		
Has vegetation to be retained been protected?		
Does this need to be repaired/replaced?		
Others (please specify)		
11. Other Items		

Daily Inspection Checklist for Site Supervisor

Note:

On a daily basis, site supervisory staff will inspect the site and any issues arising will be noted in the daily diaries and communicated to the Project Manager.

The inspections will be conducted visually prior to commencement of each day's work and where appropriate during the working day.

A final daily inspection will also be undertaken at the end of the workday to ensure that systems and structures are in place.

Visual inspection of the site for:

- excessive dust generation
- weather conditions and activities being carried out
- condition of stabilised site work access controls
- truck load covers
- no tracking of dirt onto public roads
- public roads are clean
- excessive exhaust emission from plant and equipment
- no odour present
- visual inspection of excavations to detect presence of contamination