Stockton Quarry Dry Sand Extraction Project

SSD-52984213

ENVIRONMENTAL MANAGEMENT STRATEGY

March 2026

Source: ***Stockton Quarry Dry Sand Extraction Project (Boral, 2024)***

Document Name	Stockton Quarry Environmental Management Strategy

Rev No.	Date	Prepared By	Approved By	Comments
1.0	19 March 2025	Chris Jones (IEMA) Kristen McMahon (IEMA)	Rod Johnson (Boral)	Initial Document
1.1	26 February 2026	Chris Jones (IEMA) Kristen McMahon (IEMA)	Rod Johnson (Boral)	Initial Document
1.2	17 March 2026	Chris Jones (IEMA) Kristen McMahon (IEMA)	Rod Johnson (Boral)	Initial Document

Table of Contents

1 INTRODUCTION

1.1 BACKGROUND

Boral Resources (NSW) Pty Ltd owns and operates Stockton Sand Quarry, located on Coxs Lane, Fullerton Cove, a long-standing operation that extracts and transports sand for use in building, landscaping and construction markets. The project site (the site) has an area of approximately 246 hectares (ha) and used for the purposes of mining (sand quarrying) since the 1970s. At present, there is an existing quarry located on the windblown (transgressive) sand dunes of Stockton Bight, which transports up to 500,000 tonnes per annum (tpa) of product (the existing windblown project).

The site relevant to this management plan is in the central portion of the quarry and covers an area of approximately 38 ha. The project site contains the proposed clearance area, which comprises all areas to be disturbed by vegetation clearing and sand extraction operations as well as new entry/exit roads, a two-way haul road, a laydown area, and a pad for a wash plant, and water recycling and filter press. The regional site context is shown in **Figure 1** below.

The site is accessed via Coxs Lane over an adjacent Crown Reserve (Lot 7300 DP1130730) under Licence agreement with Crown Lands. Land use surrounding the site is a mix of rural, residential, public recreation and environmental conservation areas. The local site context is shown in **Figure 2**.

1.2 PROJECT OVERVIEW

The site involves the extraction of sand above the water table from approximately 26.5 m Australian height datum (AHD) (in Stage 1) to 3.7 m AHD (maintaining a minimum 0.7 m buffer above the water table), using dozer, excavator, haul trucks and front-end loader.

The sand would be extracted from five stages, starting in Stage 1. Due to the quality of sand anticipated to be found in Stage 1, this material would be dry screened before being dispatched. Sand extracted from Stages 2-5 (inclusive) would be processed through a wash plant, water recycling and filter press due to the higher volume of organics likely to be found. There are an estimated 3.1 million tonnes (Mt) of dry sand resource above the water table, within the site.

Consistent with the originally proposed and exhibited dredge application, the project seeks a site-wide extraction and dispatch limit (i.e. the existing windblown project and the site combined) of no more than 750,000 tpa. Key infrastructure and operational hours approved via the consent for the site are outlined in **Table 1** and **Table 2** below.

Table 1 Hours of Operation

Activity	Hours of permissible Operation (as per Condition A12 of SSD-52984213)
Construction Work	7 am to 6 pm Monday to Friday 8 am to 1 pm Saturday At no time on Sundays or public holidays
Quarrying operations including loading and dispatch of laden trucks	6:15 am to 6 pm Monday to Friday 6:15 am to 3 pm Saturday At no time on Sundays or public holidays
Maintenance, security, office work, cleaning, etc	May be conducted at any time, provided that these activities are not audible at any residence on privately-owned land

Table 2 Project Summary (EIS, 2023)

Project Element	Project Description
Location	Inland Dunes
Staff	Up to six full time and up to two casual
Total resource	3.1 million tonnes
Consent period	Quarrying operations may be carried out on the site, within the approved disturbance area, until 31 December 2034.
Production and transport limits	Up to 750,000 tpa (inclusive of the windblown sand operations) until either the current dredge application is approved and commenced or the windblown sand development consent lapses in 2028, after which production/transportation would reduce to up to 500,000 tpa
Extraction method and stages	Stages 1-5 dry extraction using front end loaders and excavators
Processing	Stage 1 - as needed dry screen prior to dispatch (dependent on quality) Stages 2-5 - dry extraction (sand of lower quality would be processed through a wash plant and water recycling and filter press prior to being stockpiled)
Vegetation clearing, offsets and rehabilitation	Clearing of 38.14 ha of vegetation with staged offsets to reflect extraction Stages Preliminary clearing/offset stage to allow for a site wide drilling program to commence prior to extraction Standalone rehabilitation strategy comprising progressive stabilisation and rehabilitation of disturbed areas with species endemic to coastal woodland
Site infrastructure and plant	Retain all existing improvements and augment/upgrade to include: • new prefabricated office building • relocation of onsite materials storage (currently in the footprint of proposed Stage 1) • replacement of roofing for the workshop • new water storage tank, originally 20,000L although site has opted to be able to accommodate 40,000 litres. 20,000 litres for firefighting water and 20,000 litres for dust suppression water • new laydown area • new wash plant and water recycling and filter press

1.3 PURPOSE AND SCOPE

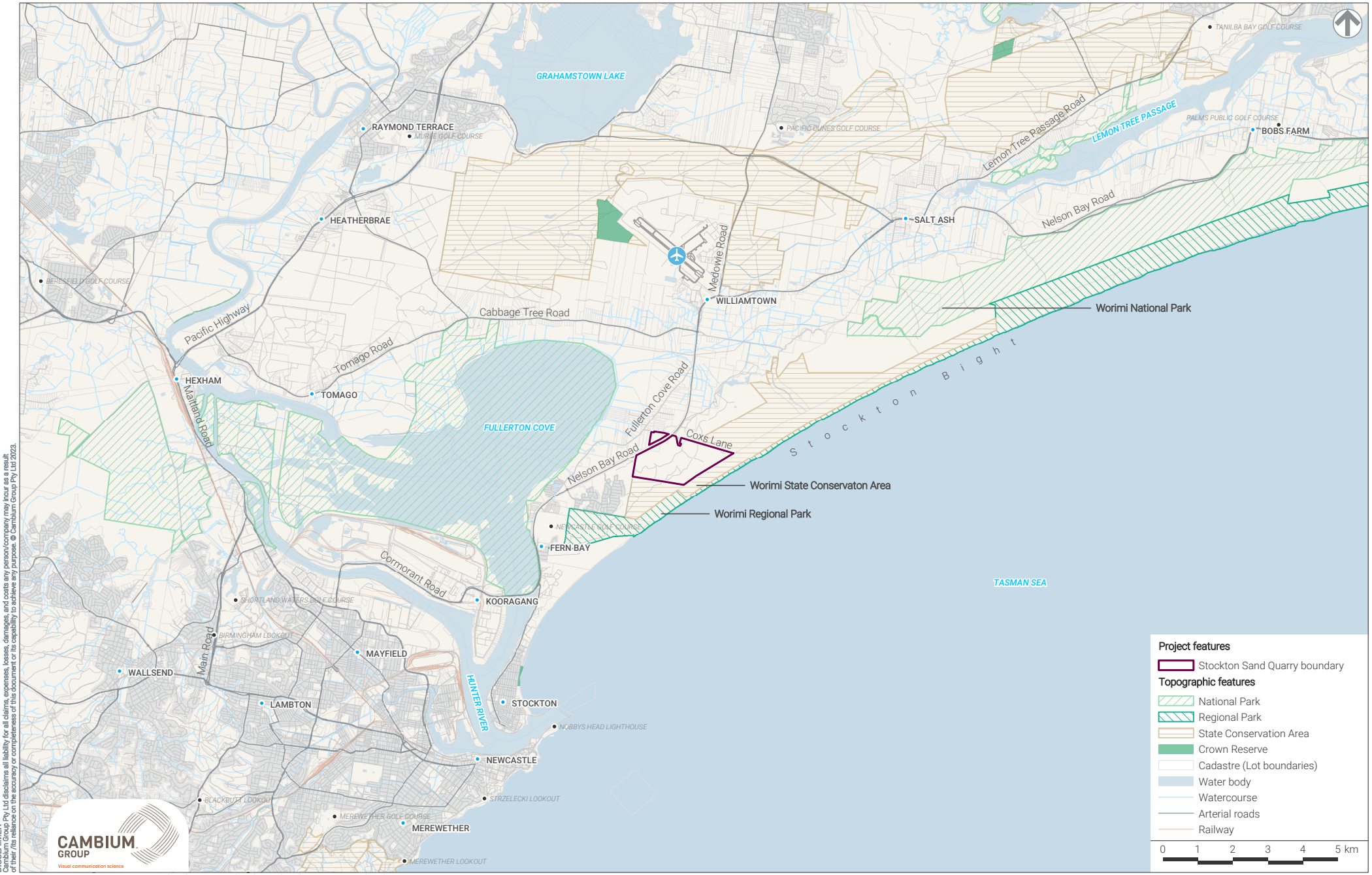
This Environmental Management Strategy (EMS) is developed to provide an overview of environmental management activities undertaken at the site. Prepared in accordance with Condition C1 of SSD-52984213 and guides the environmental management and monitoring at the site for the duration of construction and operations phases. The objectives of the EMS is to align this strategy with broader environmental policies, including regulatory regulations and stakeholder expectations of the environmental performance of the site. The EMS requirements are outlined in **Table 2**.

1.3.1 Submission for Approval

As per Condition C1 (a) of SSD-52984213 the Environmental Management Strategy will be submitted for approval to the Planning Secretary prior to commencing quarrying operations within the approved disturbance area. Boral will also incorporate the Conditions SSD-52984213 which requires:

> ***C2.*** *Construction or quarrying operations within the approved disturbance area must not commence until the environmental management strategy is approved by the Planning Secretary.*
>
> ***C3.*** *The environmental management strategy, as approved by the Planning Secretary, must be implemented prior to the commencement of construction or quarrying operations within the approved disturbance area.*

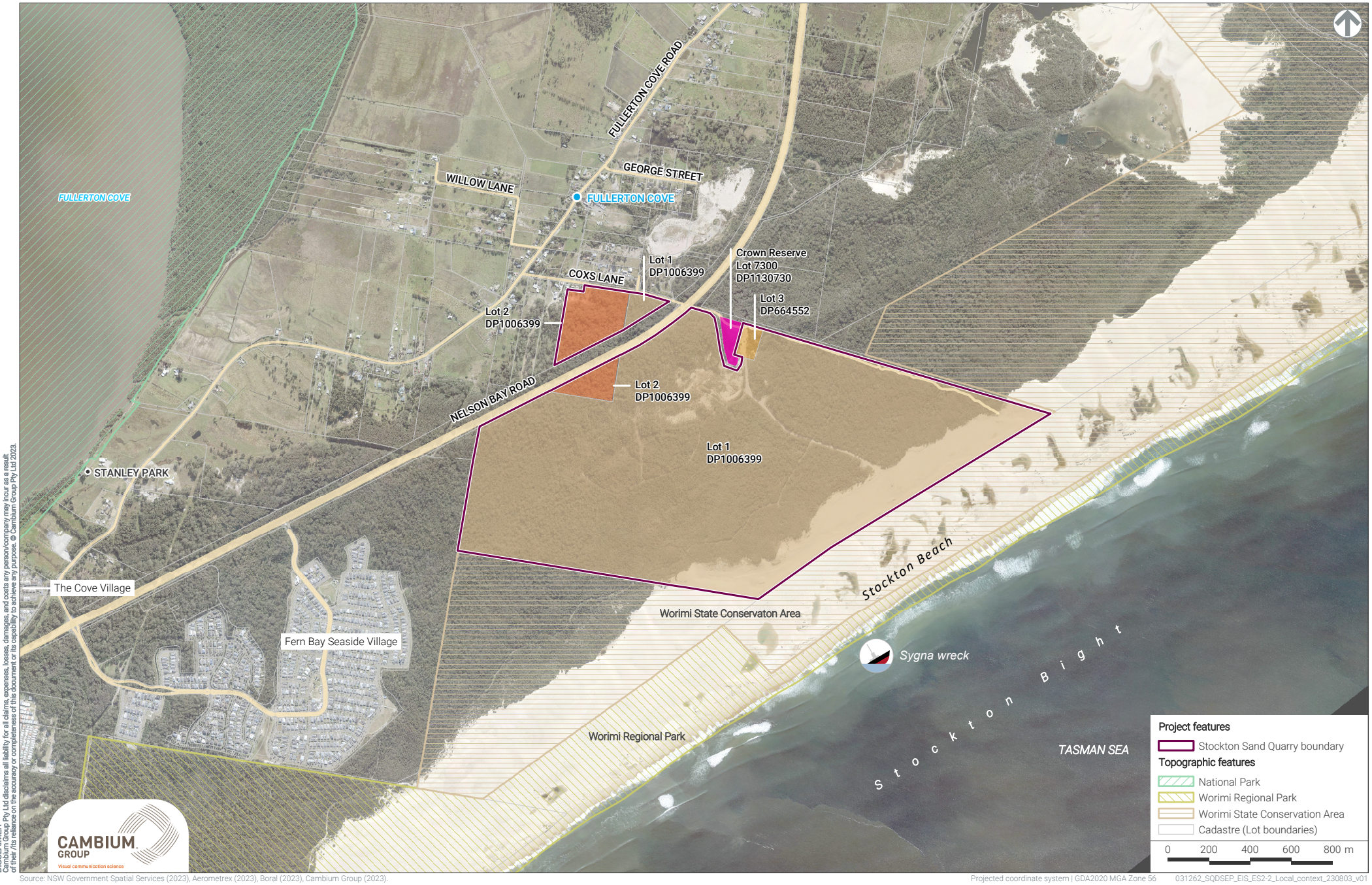
Figure ES2.1
Regional context



Source: NSW Government Spatial Services (2023), Aerometrex (2023), Boral (2023), Cambium Group (2023).

Projected coordinate system | GDA2020 MGA Zone 56

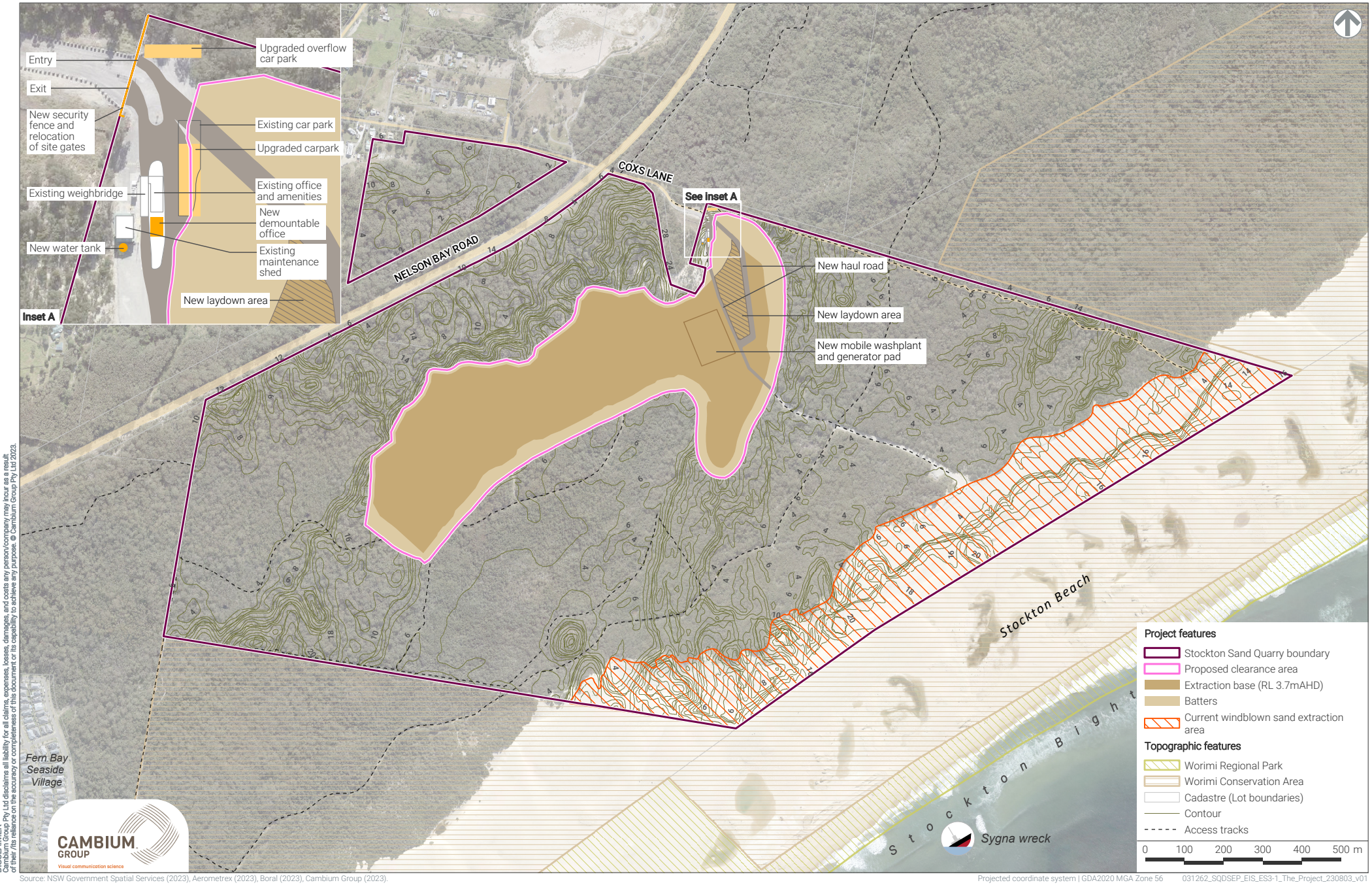
Figure ES2.2
Local context



Source: NSW Government Spatial Services (2023), Aerometrex (2023), Boral (2023), Cambium Group (2023).

Projected coordinate system | GDA2020 MGA Zone 56

Figure ES3.1
The Project



Source: NSW Government Spatial Services (2023), Aerometrex (2023), Boral (2023), Cambium Group (2023).

Projected coordinate system | GDA2020 MGA Zone 56

1.4 BORAL COMMITMENT TO ENVIRONMENTAL MANAGEMENT

The Quarry operates under a Boral integrated Health, Safety, Environment and Quality Management System (HSEQMS). The HSEQMS has commitments to support the Boral Environmental Policy through established standards and procedures which require internal compliance to high levels of environmental performance with continual improvement objectives.

Section 8 of the HSEQMS details the environmental elements applicable to the site and describes the processes for managing the environmental aspects and impacts of all site operations. The process includes the identification of management measures and review processes for the identified environmental risks to reduce their potential impact.

2 LEGISLATIVE AND OTHER REQUIREMENTS

2.1 DEVELOPMENT CONSENT (SSD-52984213)

SSD-52984213 outlines the required environmental management criteria that the construction and operational activities at the site must comply with and sets out the core requirements of this EMS. Relevant conditions associated with this approval (including Statement of Commitments) and where they are addressed in this document, are outlined in **Table 3** below.

Table 3 SSD-52984213 Consent Conditions Summary

Condition	Condition of Development Consent	Referenced in EMS
A1	**OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT** In addition to meeting the specific performance measures and criteria established under this consent, all reasonable and feasible measures must be implemented to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from preconstruction works or the construction and operation of the development, and any rehabilitation required under this consent.	**Section 3**
A18	**STAGING, COMBINING AND UPDATING STRATEGIES, PLANS OR PROGRAMS** With the approval of the Planning Secretary, any strategy, plan or program required by this consent may be: (a) prepared and submitted on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan, or program); (b) combined (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and (c) updated (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development).	**This Document**
A19	If the Planning Secretary agrees, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent.	
A20	If the Planning Secretary agrees, a strategy, plan or program may be staged without addressing particular requirements of the relevant condition of this consent if those requirements are not applicable to the particular stage	
C1	**Environmental Management Strategy** An environmental management strategy must be prepared for the development. The strategy must: (a) be submitted for approval to the Planning Secretary prior to commencing quarrying operations within the approved disturbance area;	**Section 1.3.1**
	(b) provide the strategic framework for environmental management of the development;	**Section 4**
	(c) provide clear plans of the development area and all monitoring to be carried out for the development;	**Appendices**
	(d) identify the statutory approvals that apply to the development;	**Section 2**
	(e) set out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	**Section 9**
	(f) include an environmental risk assessment and a description of the measures that will be implemented to:	**Section 3**

Condition	Condition of Development Consent	Referenced in EMS
	(i) comply with statutory requirements, limits, or performance measures and criteria; (ii) manage the predicted impacts identified in the documents listed in condition A2(c); and (iii) manage any other environmental risk or impact which has been subsequently identified after the documents in condition A2(c) were submitted;	
	(g) include a monitoring and evaluation protocol for the measures identified in the environmental risk assessment that supports the analysis and evaluation of the measures effectiveness with results and records that are reliable, reproducible and traceable;	**Section 4 & 5**
	(h) a process to review the environmental risk assessment to: (i) implement the evaluation results; and (ii) identify any additional unexpected environmental risks and the measures that will be implemented to manage them;	**Section 3.1**
	(i) set out the procedures (including timeframes) to be implemented to: (i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;	**Section 8.3**
	(ii) receive record, handle and respond to complaints;	**Section 6.5**
	(iii) resolve any disputes that may arise during the course of the development;	**Section 6.6**
	(iv) respond to any non-compliance and any incident; and	**Section 6.1 & 6.3**
	(v) respond to emergencies.	**Section 6.4**
C2	Construction or quarrying operations within the approved disturbance area must not commence until the environmental management strategy is approved by the Planning Secretary.	**Section 1.3.1**
C3	The environmental management strategy, as approved by the Planning Secretary, must be implemented prior to the commencement of construction or quarrying operations within the approved disturbance area.	**Section 1.3.1**
C4	**MANAGEMENT PLAN REQUIREMENTS** Management plans required under this consent must be prepared in accordance with relevant guidelines, and include: (a) a summary of relevant background or baseline data;	**Section 4.1 & Table 6**
	(b) details of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); (ii) any relevant limits or performance measures and 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 & Table 5**
	(c) any relevant commitments or recommendations identified in the document/s listed in condition A2(c);	**Section 5.1**
	(d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;	
	(e) a program to monitor and report on the: (i) impacts and environmental performance of the development; and (ii) effectiveness of the management measures set out pursuant to condition C4(c)C5(c);	**Section 5 & 6**

Condition	Condition of Development Consent	Referenced in EMS
	(f) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;	**Section 5.3**
	(g) a program to investigate and implement ways to improve the environmental performance of the development over time;	**This Document**
	(h) a protocol for managing and reporting any: (i) incident, non-compliance or exceedance of the impact assessment criteria or performance criteria; (ii) complaint; or (iii) failure to comply with statutory requirements;	**Section 6**
	(i) public sources of information and data to assist stakeholders in understanding environmental impacts of the development; and	**Section 8.2**
	(j) a protocol for periodic review of the plan	**Section 11**
C5	**REVISION OF STRATEGIES, PLANS AND PROGRAMS** Within three months of: (a) the submission of an incident report under condition C7 or a non-compliance under condition C9; (b) the submission of an Annual Review under condition C10; (c) the submission of an Independent Environmental Audit under condition C11; (d) the approval of any modification of the conditions of this consent (unless the conditions require otherwise); or (e) notification of a change in development phase under condition A14; the suitability of existing strategies, plans and programs required under this consent must be reviewed.	**Section 11**
C6	If necessary, to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary and submitted to the Planning Secretary for approval within six weeks of the review. **Note**: This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development	**Section 2.4 & 11**

2.2 EPL REQUIREMENTS (EPL 10132)

The Protection of Environment Operations (POEO) Act 1997 is administered by the NSW Environment Protection Authority (EPA). The objectives of the POEO Act are to protect, restore and enhance the quality of the environment. Under the POEO Act, an Environment Protection Licence (EPL) is required for premises at which a 'scheduled activity' is conducted.

The project involves extractive activities, being the extraction of sand as a naturally occurring construction material, and crushing, grinding or separating activities associated with sand processing. These activities are listed as scheduled activities under Schedule 1 of the POEO Act. Boral holds EPL 10132 for the extraction of sand at the site. Relevant conditions of EPL 10132 applicable to this Environmental Management Strategy are addressed in this plan and summarised in **Table 4**.

Extractive activities involving the extraction, processing or storage of more than 30,000 tonnes per annum, and crushing, grinding or separating activities with a capacity to process more than 150 tonnes per day or 30,000 tonnes per annum, are scheduled activities under the POEO Act and are applicable to the project. A variation to EPL 10132 will be required to increase the permitted extraction limit to a maximum of 750,000

tonnes per annum. These activities correspond to the existing licensed activities at the Stockton Quarry, which has operated as an extractive operation since the 1970's.

Table 4 EPL Conditions and Criteria

Condition	Condition of EPL	Requirement of EPL 10132	Section Addressed
M1	Monitoring Records	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained.	Section 5.1
M2	Pollution Complaints	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	Section 6.5 & 8.2
M3	Telephone Complaints Line	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	Table 10
O3.1	Air Quality	The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	Table 6
M1.3	Water Quality	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: the date(s) on which the sample was taken; the time(s) at which the sample was collected; the point at which the sample was taken; and the name of the person who collected the sample.	
L3.1	Noise	Noise emissions from the premises must not exceed an Leq(15 minute) noise emission criterion of 35 dB(A) at the nearest residential receiver.	
L2.1	Waste Management	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.	
O5.1 - O5.3	Rehabilitation	Suitable barriers must be installed to restrict vehicular access to areas awaiting or being rehabilitated. Stabilisation of regeneration areas must be carried out as soon as practicable to minimise wind-blown dust generated from the premises. Rehabilitation must be carried out as quickly as practicable, in such a manner as to minimise dust generated and to prevent pollution.	

2.3 OTHER APPROVALS, LICENCES AND PERMITS

A summary of other licences and approvals relevant to Stockton Quarry are provided in **Table 5** below.

Table 5 Summary of Other Licences and Approvals

Licence/Approval	Reference	Comments
Crown Land Licence	LI 196915	Licence agreement for Crown land title (Lot 7300 DP1130730)
Water Access Licence	20AL213136	WAL No. 37223; aquifer extraction; no nominated works; 0 share/volume allocated
	20AL220991	WAL No. 43827; aquifer extraction; nominated works 20WA221084; 100 share/volume allocate
	20AL221243	WAL No. 44499; aquifer extraction; no nominated works; 320 share/volume allocated
	20AL221416	Aquifer extraction; no nominated works; 104 share/volume allocated
Bore Licence	20BL171772	Ten monitoring bore licences issued on 4 March 2008 in perpetuity
Environment Protection Licence 10132 (EPL)	EPL 10132	The EPL permits the mining, storage and processing of 100,000 to 500,000 tpa

2.4 ENVIRONMENTAL MANAGEMENT PLANS

SSD-52984213 requires the preparation of a series of management plans to specifically address and manage environmental matters relevant to the construction and operation phases of the site and should be read in conjunction with this plan. The environmental management plans required by the consent include:

- Environmental Management Strategy (this document) in compliance with Condition C1 of SSD-52984213.
- Biodiversity Management Plan in compliance with Condition B13 of SSD-52984213.
- Maximum Extraction Depth Management Plan in compliance with Condition B26 of SSD-52984213.
- Water Management Plan in compliance with Condition B35 of SSD-52984213.
- Rehabilitation Management Plan in compliance with Condition B47 of SSD-52984213.

Several internal management plans will also be developed for the site to assist in environmental management and to comply with relevant conditions within SSD-52984213 and the EIS for site. These include:

- Heritage Management Plan in compliance with Conditions B1 - B4 of SSD-52984213.
- Air Quality Management Plan in compliance with Conditions B5 - B6 and B16 of SSD-52984213.
- Bushfire Management Plan in compliance with Condition B20 of SSD-52984213.
- Contaminated Land Management Plan in compliance with the EIS for Site.
- Traffic Management Plan in compliance with Conditions B39 - B45 of SSD-52984213.
- Waste Management Plan in compliance with Conditions B54 - B56 of SSD-52984213.

3 ENVIRONMENTAL RISK ASSESSMENT

Boral are required by the Development Consent Condition C1 (f) to include an environmental risk assessment and a description of the measures that will be implemented to:

- *comply with statutory requirements, limits, or performance measures and criteria;*
- *manage the predicted impacts identified in the documents listed in condition A2(c); and*
- *manage any other environmental risk or impact which has been subsequently identified after the documents in condition A2(c) were submitted;*

Boral has completed an impact and assets register, provided in **Appendix A** highlighting risk activities that require management under the consent. The primary risk activities include the following:

- Sand extraction beyond permitted limits leading to overextraction and potential impacts on groundwater, and exceedance of approved extraction depths. The Maximum Extraction Depth Management Plan provides mitigation measures for this.
- Interaction with groundwater due to extraction below the 0.7m buffer classified as a risk activity due to the potential contamination of water resources, the Water Management Plan provides mitigation measures for groundwater interaction, additionally in accordance with the Environmental Impact Statement Response to Submissions (Umwelt, 2023) recommendations, a groundwater risk assessment was conducted (Umwelt, 2023) provided in **Appendix B**
- The discovery of unexpected Aboriginal objects during extraction risks necessitating compliance with heritage protection protocols within the Heritage Management Plan.
- Additionally, fuel and lubricant handling pose a risk of land and water pollution, emphasising the need for proper bunding, storage, and spill response measures covered in the Waste Management Plan.
- Truck movements and vehicle operations also present high risks related to noise pollution, dust emissions, and potential sediment runoff, mitigation measures outlined in the Traffic Management Plan.

These activities require comprehensive mitigation measures, including environmental awareness training, adherence to approved extraction and transport routes, and rigorous monitoring to ensure compliance with regulatory frameworks, covered in their respective management plan and covered further in **Section 2.4** above. An environmental risk assessment identifies the primary risks and will be reviewed regularly by Boral, including the environmental management framework, the management measures and the monitoring program with the evaluation and improvement process outlined in **Section 11**.

This will assist Boral to implement all reasonable and feasible measures to prevent and minimise any material harm to the environment that may result from preconstruction works or the construction and operation of the development.

3.1 GROUNDWATER RISK ASSESSMENT REVIEW

Boral are required by the Development Consent Condition C1(h)

> *a process to review the environmental risk assessment to implement the evaluation results; and identify any additional unexpected environmental risks and the measures that will be implemented to manage them*

Boral will periodically review the groundwater impact risk assessment with the results of the groundwater monitoring throughout construction and operational activities, with revisions of the risk register completed every three years to implement the evaluation results and identify any additional unexpected environmental risks, with measures that will be implemented to manage them.

4 ENVIRONMENTAL MANAGEMENT FRAMEWORK

This EMS establishes the environmental management framework for all processing activities undertaken at site. It outlines the management of environmental management plans, procedures, reporting and review requirements.

The framework for environmental aspects management, potential issues and mitigation of the site are documented, regulated, controlled and measured through this document (EMS), various environmental management plans which form sub-plans to this EMS, and the Annual Review reporting requirements.

In accordance with Condition C1(f)(iii) managing environmental risk or impact the EMS and sub-plans will be developed in consultation with relevant government agencies, are reviewed regularly and updated as required. Until such time as a new version of a management plan is approved from the Secretary or those in relation to Condition C5, Boral will continue to apply existing management plans, strategies and monitoring programs.

4.1 ENVIRONMENTAL MANAGEMENT MEASURES

The key environmental and community aspects associated with the site are as follows:

- Aboriginal Heritage
- Air quality
- Bushfire
- Biodiversity
- Greenhouse Gas
- Noise
- Soil and Water
- Transport
- Waste
- Rehabilitation
- Ecology
- Community

Table 6 below lists the management measures implemented to manage environmental aspects. More detailed information is available in the individual management plans listed in **Section 2.5.**

Table 6 Environmental Management Measures

Environmental Aspect	Management Measures Implemented
Air Quality & GHG	- Implementation of Air Quality Management Plan, with monitoring locations provided in **the Air Quality Protocol.** Premises maintained to prevent dust emissions, cease activities where dust cannot be maintained - Speed limits enforced - Cover truck loads when entering or leaving premises, except during loading/unloading - Assess activities during adverse weather and make necessary adjustments, monitor weather regularly - Turn off on-site vehicle and plant engines when not in use - Fitted vehicles and plant with pollution reduction devices - Maintain and service vehicles - Conduct visual monitoring of dust generating activities - Cover or dampen exposed areas and stockpiles with water - Carry out rehabilitation earthworks when stockpiles were moist and wind speed was below 10 m/s - Reduced drop heights - Dampen material during handling (when excessively dusty) - Water haul roads with water carts - Regularly inspect and maintain haul road surfaces - Sweep and clean driveways and hardstand areas regularly - Investigating ways to reduce energy consumption throughout the life of the Project and reviewing energy efficient alternatives - Regular maintenance of equipment and plant - Ensure plant and equipment are fitted with appropriate controls - Ensure plant and equipment are switched off when not in use - Monitoring the consumption of fuel and regularly maintaining diesel powered equipment to ensure operational efficiency - Monitoring the total site electricity and investigating avenues to minimise consumption - Source consumable materials from environmentally sustainable sources
Biodiversity	- Implementation of Biodiversity Management Plan - Implementation of Landscape and Rehabilitation Management Plan - Use of fencing or visible ropes/tape to mark vegetation clearing boundaries - Use of signposts to inform project personnel and visitors about conservation areas and restricted entry - Provide education to employees and contractors - Follow vegetation clearing protocol - Implementation of pest and weed management plan

Environmental Aspect	Management Measures Implemented
	- Manage weeds and pathogens - Control of pest animals Imposed speed limits
Bushfire	- Implementation of Bushfire Management Plan - Maintain a 24m asset protection zone (APZ) around buildings - Installation metal roof sheeting - Ensured new haul roads comply with Section 7 of PBP 2019 - Ensured water, electricity, and gas systems comply with Section 7 of PBP 2019 - Provided a 20,000-litre static water supply with firefighting fittings Manage and maintain landscaping at the site depot as per Appendix 4 of PBP 2019
Cultural Heritage	- Implementation of Heritage Management Plan - Aboriginal heritage management procedures included in quarry personnel training and induction processes - All works associated with the project are within the study area - Clear delineation of the boundary of the approved impact zone - Documented toolbox talks - Implementation of an Unexpected Finds Protocol - Implementation of a procedure for handling human remains
Contaminated Land	- Implementation of Contaminated Land Management Plan - Plant and equipment maintained to minimise the potential for leakages - Spill response kits maintained, clearly identified and readily accessible for use Soil contaminated by spills excavated, classified in accordance with Waste Classification Guidelines, and disposed of at a licensed waste management facility, or remediated on site in accordance with a contaminated land management action plan
Extraction Depth	- Implementation of Maximum Extraction Depth Management Plan - A 0.7 metre buffer maintained above the 99th percentile groundwater level - Extractive materials not extracted below 3.7 m AHD - Implementation of a maximum extraction depth program - Routine pit inspections Undertake routine surveys of current extraction areas to confirm within limits
Noise	- Implementation of Noise Management Plan (both construction and operations) with monitoring locations provided in the plan. - Noise emissions from the premises must not exceed an Leq(15 minute) noise emission criterion of 35 dB(A) at the nearest residential receiver. - Noise from the premises is to be measured at the worst affected point or within the residential boundary, or the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary, to determine compliance with the noise limit in this licence. - Haulage only occurs in vacinity of extraction area

Environmental Aspect	Management Measures Implemented
	- Equipment only operates during permitted operating hours - Plant maintained in proper and efficient manner
Rehabilitation	- Implementation of Rehabilitation Management Plan - Installation of suitable barriers to restrict vehicular access to area awaiting or being rehabilitated. Stabilisation of regeneration areas carried out as soon as practicable to minimise wind-blown dust generated from the premises and to prevent pollution
Traffic	- Implementation of Traffic Management Plan - Implementation of Drivers Code of Conduct - Ensure trucks carrying dust-generating materials have loads covered when entering or leaving the site, except during loading/unloading - Display appropriate signage on all trucks transporting quarry products - Prohibit engine or compression braking systems on trucks slowing on the Nelson Bay Road off ramp to the intersection with Cox's Lane - Restrict trucks from using Cox's Lane between Nelson Bay Road and Fullerton Cove Road Record traffic-related complaints in the complaints register
Waste	- Implementation of Waste Management Plan - Wastes are quantified and classified; - Disposal/reuse strategies for each type of material implemented - Details of how waste shall be stored and treated on site available - Identification of measures and initiatives to reduce, reuse and recycle Implementation of procedures and disposal arrangements for potentially hazardous material.
Water	- Implementation of Water Management Plan, with monitoring locations provided in the plan. - Minimise the use of clean potable water on the site - Maximise water recycling, reuse opportunities - Implementation of water management systems Groundwater triggers and reporting - Refueling, hydrocarbon and chemical spills management - Control of sediment and erosion - Surface Water Flooding measures Waste water treatment
Training and Awareness	- Induction program that includes details regarding environmental management - Regular toolbox talks
Pollution	- A Pollution Incident Response Management Plan (PIRMP) has been prepared for the Project located on the Boral website: available: https://www.boral.com.au/locations/boral-quarries-stockton-fullerton-cove

5 ENVIRONMENTAL MONITORING PROGRAM

5.1 MONITORING RECORDS

Each plan details the corresponding monitoring requirements, including those required by SSD 52984213 and relevant approvals. A summary of the key environmental monitoring undertaken is provided in **Table 7**, with further details provided in the relevant sub-plans. The site will also manage monitoring records in accordance with the following EPL 10132 conditions:

M1.1 *The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.*

M1.2 *All records required to be kept by this licence must be:*

a) in a legible form, or in a form that can readily be reduced to a legible form;

b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 *The following records must be kept in respect of any samples required to be collected for the purposes of this licence:*

a) the date(s) on which the sample was taken;

b) the time(s) at which the sample was collected;

c) the point at which the sample was taken; and d) the name of the person who collected the sample.

5.2 EVALUATION PROTOCOL

Each performance indicator and associated results and records are critical for evaluating environmental measures effectiveness, to align with industry benchmarks. In accordance with Consent Condition C1 (g) Boral will include a monitoring and evaluation protocol for the measures identified in the environmental risk assessment that supports the analysis and evaluation of the measures effectiveness with results and records that are reliable, reproducible and traceable, outlined in **Section 11**.

5.3 CONTINGENCY PLAN

Contingency measures will be outlined in the relevant management plans and a summary is outlined in **Table 8**. A comprehensive contingency plan within an EMS outlines proactive measures, response actions, and recovery strategies to address potential environmental risks and incidents that could compromise compliance, sustainable practices, or safety. The plan ensures rapid response, effective mitigation, and minimal impact on the environment and community.

Table 7 Key Environmental Monitoring Criteria and Performance Indicators

Environmental Aspect	Monitoring Type/Parameters	Frequency	Performance Indicator
Biodiversity	- Pre-clearing inspections by suitably qualified ecologist.	Prior to clearing of vegetation and habitat. No more than 48 hours prior to clearing of vegetation.	Boral's rehabilitation monitoring program ensures consistent year-on-year assessments for comparability and improvement tracking
	- Vegetation integrity monitoring	Monthly visual inspection	Vegetation cover success
	- Threatened flora monitoring		Success rate of revegetation campaigns as per RLMP
	- Pests, noxious weeds, environmental weeds		Survival rates and pest levels within RLMP benchmarks
Extraction Depth	- Groundwater level	Hourly (via loggers)	Predicted groundwater heads remain below the excavation floor level and consistent with baseline levels and rainfall trends
	- Floor elevation survey report	Annually	Excavation floor remains at least 0.7 m above the maximum groundwater level
	- GPS survey	Monthly	
Greenhouse Gas Emissions	- Consumption of fuel	Annually	Ongoing analysis and trends in diesel consumption
	- Total site electricity	Annually	Ongoing analysis and trends in reliance on electricity consumption
Meteorological	- All available data from Williamtown RAAF Station (IDN60801)	Prior to the commencement of construction and continuously for the life of the development	Rain over 100mm will require an inspection of the site and review of groundwater data
Noise	- LAeq (15 min)	As need basis on the submission of a complaint	Noise generated by the development must not exceed 35 dB(A) LAeq (15minute) at the complainant receiver
Water	- Groundwater quality sampling for the MWX Series bores.	Quarterly	Within trigger values mentioned in the WMP
	- Review of groundwater monitoring results	Annually	
Traffic	- Truck movements to and from the site (including site check-in time and dispatch).	Record of each truck movement on site via the weighbridge	Maximum of 750,000 tonnes per annum, post 2028 reduces to 500,000 tonnes without dredge approval
Heritage	- Annual monitoring consists of an inspection of the overall site and surrounds including consideration of site	Annually	Monitoring results show no impacts to Aboriginal sites

Environmental Aspect	Monitoring Type/Parameters	Frequency	Performance Indicator
	condition, weed control, fence condition, and any evidence of impacts.		
Rehabilitation	- Monitoring to commence from the establishment of revegetation and continue for a minimum of three years.	Monthly via visual inspection	Success of progressive rehabilitation in accordance with independent inspection and rehabilitation benchmarks outline in the RLMP.
	- Progressive rehabilitation	Monthly via visual inspection	Ensure that disturbed land is rehabilitation phases are effectively and sustainably implemented with the sites long-term environmental objectives, aligned with the RLMP
	- Independent inspection of the rehabilitation process from Stage 1 conducted by a suitably experienced ecologist or environmental restoration consultant.	On stage completion, rehabilitation is conducted progressively after each stage of quarrying is completed, with temporary measures applied when adjacent operational areas prevent immediate rehabilitation	
General	- Inspections	Monthly	No adverse environmental impacts

Note: the Quarry Manager is the responsible person/s for the key environmental monitoring or an appropriate delegate by the Quarry Manager

Table 8 Contingency Plan for Environmental Aspects

Environmental Aspect	Potential Risk	Trigger Event	Contingency Action
Air Quality	- Excessive dust generation, PM10/PM2.5 exceedances, and silica exposure.	Visible dust leaving site boundaries. Substantial community complaints.	- Immediate cessation of dust-generating activities. - Deploy additional water carts and dust suppressants. - Reassess dust control measures and update management strategies. - Notify regulatory authorities if exceedances persist. - Monitoring after excessive community complaints.
Groundwater	- Groundwater contamination, level exceedances, or acid sulfate soil interactions.	Groundwater level drops below the 0.7 m separation buffer. Detection of contaminants (e.g., PFAS, metals) exceeding trigger levels.	- Suspend excavation in affected areas. - Conduct immediate resampling and analysis. - Implement remediation measures (e.g., treatment systems). - Engage hydrogeological experts to reassess groundwater models. - Notify stakeholders and regulators within required timeframes.
Surface Water	- Sedimentation, erosion, or contamination of surface water bodies.	Failure of erosion and sediment control structures during rainfall events. Detection of hydrocarbons or other contaminants in water.	- Deploy emergency spill containment measures. - Repair and reinforce any required sediment control structures. - Conduct water quality testing and implement treatment as required. - Review and enhance stormwater management systems.
Biodiversity	- Loss of biodiversity, failed rehabilitation, or pest outbreaks.	Revegetation failure below acceptable thresholds. Detection of invasive species or pest outbreaks.	- Conduct replanting with alternative species. - Implement pest control programs. - Adjust soil preparation techniques to improve growth success. - Engage ecological experts for habitat restoration strategies.
Waste	- Improper waste disposal, hazardous material spills, or recycling failures.	Non-compliance with waste classification or disposal procedures. Spills of hazardous waste materials.	- Activate spill response procedures (e.g., spill kits, containment). - Secure waste storage areas and engage licensed waste contractors. - Conduct emergency staff training on hazardous waste management. - Audit waste streams and implement corrective disposal practices.
Noise	- Exceedance of permissible noise levels or community disturbance.	Noise complaints from the community. Monitoring results exceeding threshold levels.	- Modify operational schedules to limit noise during sensitive periods. - Employ noise-reducing equipment and barriers. - Conduct noise reassessments and update management plans accordingly.
Traffic	Traffic congestion, accidents, or road damage.	Traffic incidents involving site vehicles. Exceedance of approved truck movement limits.	- Suspend non-essential truck movements. - Engage traffic management specialists to reassess haul routes. - Conduct driver retraining sessions on safety protocols. - Coordinate with local authorities for traffic impact

			assessments.
Emissions	Excessive GHG emissions due to diesel or electricity use.	Exceedance of emission reduction targets. Energy consumption higher than predicted.	- Conduct energy audits to identify inefficiencies. - Switch to alternative low-emission fuels or renewable energy sources. - Implement operational changes to optimise equipment use.
Emergency	Fire, chemical spills, natural disasters, or major accidents.	Fire incidents on-site. Large-scale chemical or fuel spills.	- Activate emergency evacuation plans. - Utilise firefighting equipment and spill containment systems. - Notify emergency services and regulatory bodies immediately. - Conduct root cause analysis post-incident and update EMS accordingly.
Community	Loss of stakeholder trust, reputational damage, or unresolved complaints.	Multiple community complaints regarding environmental performance. Negative media attention related to site activities.	- Implement enhanced community consultation processes. - Provide transparent reporting and real-time incident updates. - Engage independent auditors to assess site performance.

5.4 CONTINUOUS IMPROVEMENT

Boral will investigate and implement ways to improve the environmental performance of the development over time. Continuous improvement is a key component, ensuring environmental performance aligns with best practice, regulatory and stakeholder expectations.

The process involves adaptive management, where environmental monitoring outcomes, audit results, and stakeholder feedback informs updates to management plans and operational procedures. Regular performance reviews, such as those detailed in the Annual Review enable the identification of improvement opportunities across key areas including air and water quality management, biodiversity restoration, waste reduction, and greenhouse gas (GHG) emissions. Additionally, review of processes after any reported noncompliance, major modifications or recommendations of independent environmental audits will be prepared.

Corrective actions, technological upgrades and initiatives will be incorporated to address non-compliance and environmental outcomes. Staff training programs, stakeholder engagement, and benchmarking against industry standards to provide improvement opportunities. This approach supports compliance and reduces environmental risks, ensuring that operations at site contribute positively to long-term environmental sustainability and community well-being. Review will be undertaken consistent with **Section 11**.

6 INCIDENT AND COMPLAINTS MANAGEMENT

Any environmental incident or noncompliance will be managed in accordance with the consent.

6.1 INCIDENT MANAGEMENT

6.1.1 Incident Definition

SSD-52984213 defines an incident as:

An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance.

6.1.2 Incident Notification

Initial incident notification and reporting will be conducted in accordance with Condition C7, whereby:

"The Department and any other relevant agencies must be notified within 24 hours of an incident occurring. The notification must be made using the Department's Major Projects website and address details of the incident including:

(a) date, time and location of the incident;
(b) a brief description of what occurred and why it has been classified as an incident;
(c) a description of what immediate steps were taken in relation to the incident; and
(d) identifying a contact person for further communication regarding the incident."

6.1.3 Incident Reporting

The Department will be provided with a subsequent incident report in accordance with Appendix 6 of the Consent which states:

1. All incident notifications and reports must be submitted via the Department's Major Projects website.
2. The Applicant must provide notification as required under these requirements, even if the Applicant fails it to give the notification required under condition C7 or, having given such notification, subsequently forms the view that an incident has not occurred.
3. Within 7 days (or as otherwise agreed by the Planning Secretary) of the Applicant making the immediate incident notification (in accordance with condition C9), the Applicant is required to submit a subsequent incident report that:

(a) identifies how the incident was detected; identifies when the Applicant became aware of the incident;

(b) identifies any actual or potential non-compliance with conditions of consent;

(c) identifies further action(s) that will be taken in relation to the incident; and

(d) a summary of the incident;

(e) outcomes of an incident investigation, including identification of the cause of the incident;

(f) details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and

(g) details of any communication with other stakeholders regarding the incident.

6.2 POLLUTION INCIDENT RESPONSE

The Pollution Incident Response Management Plan (PIRMP) and Bushfire Management Plan form part of the site's environmental risk management framework and will be implemented in accordance with SSD-52984213. In accordance with Condition C12, current approved versions of these plans will be made publicly available on the Boral website within one month of commencement of development and kept up to date as documents are approved or revised. In accordance with Condition C7, the Department and relevant agencies will be notified within 24 hours of an incident occurring, with a subsequent incident report provided within 7 days in accordance with Condition C8 (unless otherwise agreed). For the purpose of this plan, a pollution incident is defined by the NSW Environmental Protection Authority (EPA) as:

> *'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*.'

A copy of the PIRMP is provided on Boral's website. The PIRMP will be tested and reviewed at least annually and updated within one month of any pollution incident in accordance with the POEO Act. Other required plan will be uploaded to the website within once month of commencement.

6.3 NON-COMPLIANCE INCIDENT RESPONSE

6.3.1 Non-Compliance Definition

SSD 52984213 defines a non-compliance as:

An occurrence, set of circumstances or development that is a breach of this consent

6.3.2 Non-Compliance Notification

Non-compliance notification and reporting will be conducted in accordance with Condition C9 within 7 days of becoming aware, whereby Boral will:

"Within seven days of becoming aware of a non-compliance occurring, the Department must be notified. The notification must:

> *(a) be in writing and submitted via the Department's Major Projects Website;*
>
> *(b) identify the development (including the development application number and name);*
>
> *(c) set out the condition of this consent that the development is non-compliant with, why it does not comply, the reasons for the non-compliance (if known); and*
>
> *(d) set out what actions have been, or will be, undertaken to address the non-compliance.*

Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

6.4 EMERGENCY RESPONSE

Emergency contact details for environmental and safety incidents are managed in accordance with Borals Incident and Emergency Reporting procedures. Contact details for relevant emergency response and notification agencies are provided in the PIRMP and Emergency Reporting procedure and replicated in **Table 9** below.

As per the PIRMP external pollution incident reporting, the initial notification should include as much of the following information (if known) as possible:

i. *location and time of the pollution incident*

ii. *type of the incident (spill, fire, unlicensed harmful discharge, etc)*

iii. *assessed level of incident gravity: "it seems to be…" (e.g. "a relatively minor spill"; "major fire", "explosion limited to one building", etc.)*

iv. *whether the Emergency Services have been required to attend.*

Table 9 Contact Details for Emergency Response

Incident Type	Contact	Telephone
All Incidents (including environmental pollution incidents)	Site employees to contact Quarry Manager, Quarry Manager to contact relevant authorities as determined by the relevant consent.	(02) 4920 1406
Government Authority – If relevant	EPA Environmental Line	131 555
	Fire and Rescue NSW (FRNSW)	1300 729 579
	Port Stephens Council	BH / AH: 4988 0255
	Public Health Unit – Newcastle Office	BH: 1300 066 055 AH: 4924 6477 Ask for Public Health Officer on call
	WorkCover Authority of NSW	131 050 Company ABN asked: 51 000 756 507
Other Agencies- If relevant	Police & Ambulance	000
	Roads and Maritime Services (road spills)	132 701
	Bush Fire Control Officer	1800 049 933
	Poisons Information Centre	131 126
	Hunter Water	General Enquiries: 1300 657 657 Emergencies: 1300 657 000
	Ausgrid (powerline emergencies)	13 13 88

6.5 COMPLAINTS HANDLING

In accordance with Conditions C1(i)(ii) and C4(h)(ii), the EMS must include procedures (including timeframes) to receive, record and respond to complaints and maintain a complaints register. Boral will provide a complaints hotline, whereby all community or regulator complaints will be logged in complaints register and will be published monthly. Any complaints will be investigated and actioned immediately, outlined in the complaint's procedure below. Escalation process is outlined below, and resolved on a case by case basis. Complaints can also be made to the Company via phone or email. These details are presented in **Table 10**.

Table 10 Complaints Management

Communication Method	Details
Email	info@boral.com.au
Website	https://www.boral.com.au/locations/boral-quarries-stockton-fullerton-cove
Phone	1300 267 253

Following a received complaint, Boral will implement the following procedure:

1. The complaint will be reviewed and acknowledged by the Quarry Manager to determine the nature, date and time of the complaint immediately.

2. Acknowledgement and response to the complaint immediately with follow up actions. The Quarry Manager will contact the complainant to discuss and attempt to resolve the complaint. If unresolved an escalated investigation will commence within 5 working days and response will be provided in this timeline. Any further measures to be undertaken, if required, will be in consultation with the complainant. In the event that the procedure resolves the issues raised, no further action is required and the complaint will be reported accordingly as per Section 6.5. In the event that the complaint is not resolved, following investigation, supplementary measures will be undertaken within one month of the conclusion of Step 2

3. Should the complaint indicate that an exceedance of the criteria identified in the conditions of the Development Consent, environmental harm as defined by the consent or any high risk activity outside the approved activities by the Quarry, the Quarry Manager will notify the relevant government agencies. In addition, the Quarry Manager will continue to consult with the complainant / authorities in relation to the complaint.

4. In the event that multiple complaints are received from the same individual(s) and Boral can demonstrate:

    - compliance with the criteria

    - documented evidence of a genuine attempt by Boral to discuss the issue and seek a resolution with the complainant,

    - Boral will, in consultation with the relevant government agencies, limit responses to further complaints to Steps 1 and 2 above.

6.5.1 Recording of Pollution Complaints

The site will keep a legible record of all complaints in compliance with the following conditions from EPL 10132:

> ***M2.1*** *The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.*
>
> ***M2.2*** *The record must include details of the following:*
>
> *a) the date and time of the complaint;*
>
> *b) the method by which the complaint was made;*
>
> *c) any personal details of the complainant which were provided by the complainant or, if no*

such details were provided, a note to that effect;

d) the nature of the complaint;

e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and

f) if no action was taken by the licensee, the reasons why no action was taken.

***M2.3** The record of a complaint must be kept for at least 4 years after the complaint was made.*

***M2.4** The record must be produced to any authorised officer of the EPA who asks to see them.*

6.6 DISPUTE RESOLUTION PROCEDURE

Boral strive to maintain professional relationships with all external stakeholder groups through effective communication. It is Boral's desire to avoid disputes arising through consultation with relevant external stakeholders through addressing any concerns in a timely manner. Should any disputes arise that cannot be resolved through direct consultation, the dispute resolution processes discussed below will be implemented.

This Dispute Resolution Procedure forms part of the Environmental Management Strategy (EMS). It sets out the processes and timeframes for addressing disputes that may arise during the development and operation of the quarry in accordance with Condition C (i) (iii). This procedure aims to ensure effective communication, transparency, and timely resolution of complaints and disputes. Disputes arising from complaints, community concerns, or regulatory matters will be addressed through:

1. Initial Resolution

Boral will attempt to resolve disputes directly with the complainant through open communication and negotiation within 10 days. If the dispute is resolved, an agreement will be documented, and relevant actions will be implemented.

2. Escalation Process

If a dispute remains unresolved, steps 3 to 5 will be enacted.

3. Internal Review

The matter will be referred to the Quarry Manager for further investigation and resolution within 14 days.

4. Mediation:

If unresolved, an independent mediator may be engaged to facilitate discussions within 21 days.

5. Regulatory Involvement:

If mediation does not resolve the issue, the matter will be referred to the relevant regulatory authority (e.g., NSW Department of Planning, Housing and Infrastructure (DPHI) or the Environment Protection Authority (EPA)).

This dispute resolution procedure will be reviewed as required to ensure effectiveness. Feedback from community consultations, regulatory agencies, and incident reviews will be incorporated into ongoing improvements.

7 REPORTING

7.1 ANNUAL REPORTING

7.1.1 Annual Review

The Quarry Manager is responsible for managing the environmental reporting program and arranging specialist consultants to prepare reports, as required. The activities and performance outcomes of the site will be presented in the Annual Review (AR).

This will include detailed assessment of monitoring results collected over the course of the year, an evaluation of any trends occurring across the site, a summary of any incidents or non-conformances with licences/criteria and recommendations for management actions.

In accordance with the requirements of Condition C10, By the end of March in each year after the commencement of development, or other timeframe agreed by the Planning Secretary, a report must be submitted to the Department, to Council and any other interested period upon request reviewing the environmental performance of the development.

As per Condition C10, this review must:

(b) *describe the development (including any rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;*

(c) *include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, including a comparison of these results against the:*
   (i) *relevant statutory requirements, limits or performance measures/criteria;*
   (ii) *requirements of any plan or program required under this consent;*
   (iii) *monitoring results of previous years; and*
   (iv) *relevant predictions in the document/s listed in condition A2(c);*

(d) *identify any non-compliance or incident which occurred in the previous calendar year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;*

(e) *evaluate and report on:*
   (i) *the effectiveness of the noise and air quality management systems; and*
   (ii) *compliance with the performance measures, criteria and operating conditions of this consent;*

(f) *identify any trends in the monitoring data over the life of the development;*

(g) *identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and*

(h) *describe what measures will be implemented over the next calendar year to improve the environmental performance of the development.*

As per Condition B35 (d) (iii), an annual review will be prepared to detail the actual water use on-site compared to the projected water balance with a summary of water sources used during the year, including volumes extracted from the Stockton Groundwater Source (SGS).

Detailed records of water used for sand processing, dust suppression, and other operational activities will be provided with water storage levels and data on water storage capacity and any fluctuations throughout the year. Compliance review and assessment of the level of compliance with water use conditions and any

adjustments made to water management practices to improve efficiency or address issues.

7.1.2 EPL 10132 Reporting

Boral must also submit an Annual Return in accordance with condition R1.1 of EPL 10132 which states:

R1.1 The licensee must complete and supply to *the EPA an Annual Return in the approved form comprising*:

1. *a Statement of Compliance,*
2. *a Monitoring and Complaints Summary,*
3. *a Statement of Compliance – Licence Conditions,*
4. *a Statement of Compliance -Load based Fee,*
5. *a Statement of Compliance -Requirement to Prepare Pollution Incident Response Management Plan,*
6. *a Statement of Compliance – Requirements to Publish Pollution Monitoring Data; and*
7. *a Statement of Compliance – Environmental Management Systems and Practices.*

At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

7.1.3 Management Plan Reporting Summary

Overall management plan reporting requirements are summarised in **Table 11** below, further details regarding reporting requirements are provided in the corresponding management plans outlined below.

Table 11 Management Plan Reporting Summary

Management Plan	Reporting Requirement
Water Management Plan	As per Condition B35 (d) (iii), an annual review will be prepared to detail the actual water use on-site compared to the projected water balance with a summary of water sources used during the year, including volumes extracted from the SGS.
Biodiversity Management Plan	A compliance report is to be maintained to ensure that the vegetation clearing has not exceeded that specified in the BDAR (ie. approximately 0.5 ha), and that the boreholes and access tracks are decommissioned in a manner that is safe and free of rubbish. Weed monitoring compliance summarised in the annual review.
Maximum Extraction Depth Management Plan	Annual height survey report by qualified surveyor. When extraction occurs during operation, routine monthly GPS surveys to maintain MEL, this will be internally reported. Rehabilitation areas are generally higher than MEL requiring sufficient surveying to demonstrate the required level. A drone survey in conjunction with software such as propellor will be completed annually to demonstrate maintaining extraction depth and provide floor height data.
Rehabilitation Management Plan	• Review of extraction activities for each year in the Annual Review • Results of annual ecological assessments performed by qualified specialists
Noise Management Plan	• Annual monitoring results for operational noise levels compared against consent conditions • Documentation of noise complaints and responses
Air Quality and Greenhouse Gas Management Plan	• Community complaints and controls enacted • Analysis of air quality results reported in the AR compared to the NSW EPA criteria, and exceedance reporting as required • Overall GHG emissions estimations and improvement measures
Heritage Management Plan	• Report any discoveries immediately to Heritage NSW and registered stakeholders as required during operations
Traffic Management Plan	• Monthly internal compliance review • Summary of compliance in Annual Review • Document **haulage levies** paid to Port Stephens Council for local road maintenance • Log in incidents

Management Plan	Reporting Requirement
Waste and Contaminated Land Management Plan	• Groundwater quality, external PFAS contamination, hydrocarbon spills and soil contamination as required • Volumes and types of waste generated and disposed of • Summary of hazardous material handling incidents, including spill response and prevention measures
Bushfire Management Plan	• Bushfire hazard assessments including maintaining 24m APZ around site buildings annually internally logged by maintaining the vegetation and undergrowth on the boundary of the crown land • Report the site maintaining a minimum 40,000L. (20,000 litres for firefighting water and 20,000 litres for dust suppression water)
Pollution Incident Response Management Plan	• Annual review of the management plan • Record of refresher training scheduled annually or after any significant pollution incident

7.2 INDEPENDENT ENVIRONMENTAL AUDIT

An independent environmental audit must be undertaken for the development.

As per Condition C11 of Development Consent, the audit must:

a) be conducted within one year of commencement of development under this consent, and every three years after, unless the Planning Secretary directs otherwise;
b) be conducted and carried out in accordance with the Independent Audit Post Approval Requirements (NSW Government, 2020) or its latest version; and
c) reported and submitted to the Department in accordance with the Independent Audit Post Approval Requirements (NSW Government, 2020) or its latest version

This management plan will be reviewed for its effectiveness of the management measures set out pursuant to the submission of each Independent Environmental Audit (IEA).

8 ACCESS TO INFORMATION

Boral will ensure information is made public on its website, in accordance with the '*Requirements for Publishing Pollution Monitoring Data'* (EPA, 2013) and Conditions C4 (i) and C12 (a) which state:

C4. *Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:*

> *(i) public sources of information and data to assist stakeholders in understanding environmental impacts of the development;*

C12. *Within one month of the commencement of development under this consent until the completion of all rehabilitation required under this consent, the following information and documents must be:*

> *(a) publicly available on the development website as they are obtained, approved or as otherwise stipulated within the conditions of this consent:*
>
> > *(i) the documents listed in condition A2(c) of this consent;*
> > *(ii) all current statutory approvals for the development;*
> > *(iii) all approved strategies, plans and programs required under the conditions of this consent;*
> > *(iv) the proposed staging plans for the development if the construction, operation or decommissioning of the development is to be staged;*
> > *(v) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent;*
> > *(vi) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;*
> > *(vii) a summary of the current phase and progress of the development;*
> > *(viii) contact details to enquire about the development or to make a complaint;*
> > *(ix) a complaints register, updated monthly;*
> > *(x) the Annual Reviews of the development;*
> > *(xi) audit reports prepared as part of any Independent Environmental Audit of the development and the Applicant's response to the recommendations in any audit report;*
> > *(xii) any other matter required by the Planning Secretary; and*
>
> *(b) kept such information up to date, to the satisfaction of the Planning Secretary*

The Boral website https://www.boral.com.au will contain the required information above and be regularly updated with the documents outlined in **Section 8.2**, regular environmental monitoring will be published within one month of the commencement of the development and maintained.

8.1 INTERNAL COMMUNICATION

Effective communication between Stockton Quarry management, employees and contractors, as well as with external stakeholders, is critical to the successful implementation of the Stockton Quarry EMS.

Boral is committed to maintaining transparent, timely and effective communication with employees, contractors, government agencies, stakeholders and the local community for the life of the project, in accordance with the development consent for SSD-52984213 and relevant statutory obligations. Boral will ensure that all employees and contractors are aware of their environmental responsibilities through:

- Site inductions outlining environmental obligations and relevant consent conditions
- Toolbox talks and pre-start meetings addressing environmental risks and controls
- Distribution of environmental alerts, procedures and updates
- Incident notification protocols
- Regular management meetings and reporting
- All staff and contractors must comply with the requirements of the EMS and associated management plans.

8.2 PUBLICLY ACCESSIBLE INFORMATION

In accordance with Condition C12, the following information must be made publicly available on the project website:

- Documents listed in condition A2(c) of the consent.
- All approved strategies, plans and programs.
- All statutory approvals, staging plans and programs.
- Regular environmental performance reporting.
- Monitoring summaries.
- Contact details for enquiries and complaints.
- Complaints register.
- Annual Reviews.
- Independent audit reports.

Documentation will be provided on the public website located at www.boral.com.au

All information required for the development in accordance with Part C Condition 12 of the Consent and any monitoring requirements of the EPL will be provided on the website as required. Published within one month of the commencement of the development and maintained.

8.3 COMMUNITY & AGENCY COMMUNICATION

Boral will keep the local community and relevant agencies informed about the operation and environmental performance of the development as required by Condition C1(i)(i). **Section 8.2** outlines the publicly available information that will be provided, below outlines the timeframes for which community and agencies, where applicable, will be updated.

Boral will follow the following timelines as per the Development Consent SSD-52984213:

- Approved plans published within 1 month of commencement (Condition C12).
- Complaints reporting updated monthly on the website.
- Incident notification within 24 hours to relevant agencies.
- Incident report within 7 days to relevant agencies.
- Non-compliance notification within 7 days to relevant agencies.
- Independent Environmental Audits and any action reports associated.
- Annual Review submitted by end of March each year as per Condition 10 of the Consent and provided on the website.

9 ROLES AND RESPONSIBILITIES

Environmental management is the responsibility of all employees and contractors, with the Quarry Manager having overall responsibility. Environmental roles and responsibilities for project personnel are outlined below (**Table 12**).

Table 12 Roles and Responsibilities

Position	Position Description
Quarry Manager	The Quarry Manager is the person who manages the Quarry and is responsible for the day to day activities on the site, inclusive of environmental activities and compliance requirements under all approvals of the project.
On site personnel	Onsite personnel, all employees and contractors working on the site to comply with EMS and sub plans of the consent, immediately report any incidences and implement environmental controls.
Environment Business Partner	Provide assistance to the Quarry Manager in managing the environmental aspects of the site.
Suitably Qualified Person	Where the Quarry Manager sub-contracts environmental tasks the project requirements including reviewing monitoring results, provide advice on compliance, exceedances, incidents and specialist reporting, the quarry manager is to confirm the suitability of the contractor for an environmental task. A suitably qualified contractor will be able to demonstrate the following for the required: • Relevant qualifications or training • Relevant experience

10 TRAINING AND AWARENESS

Boral provides training to all personnel and contractors to ensure all persons working on the site are aware of their environmental obligations, site environmental issues and control measures, as well as roles and responsibilities with regards to the environment on site.

All personnel shall undergo environmental management awareness training through the induction and re-induction process. Environmental management shall be a component of the competency-based site induction program. The following areas will be covered in the induction.

- Awareness of environmental monitoring locations
- Procurement of equipment to ensure environmental limits are complied with
- Awareness of the importance of timely reporting

The Quarry Manager shall be responsible for ensuring the appropriate environmental management training and is to be included in the induction.

11 REVIEW AND IMPROVEMENT

As per Condition C5 of the Development Consent, this strategy will be reviewed within three months of:

(a) the submission of an incident report under condition C7 or a non-compliance under condition C9;
(b) the submission of an Annual Review under condition C10;
(c) the submission of an Independent Environmental Audit under condition C11;
(d) the approval of any modification of the conditions of this consent (unless the conditions require otherwise); or
(e) notification of a change in development phase under condition A14.

Additionally, in line with Condition C6 of the Development Consent, if necessary, to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent will be reviewed and if required, to the satisfaction of the Planning Secretary and submitted to the Planning Secretary for approval within six weeks of the review, along with review in response to regulatory changes, new technologies, or performance review outcomes.

12 REFERENCES

Boral, 2023. *Stockton Quarry Dry Sand Extraction Project Environmental Impact Statement*. Boral.

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Umwelt, 2023. *Groundwater Impact Risk Assessment.* Internal Report, Umwelt Environmental & Social Consultants.

Appendix A

Assets and Impact Register (Boral, 2024)

ENVIRONMENTAL ASPECTS & IMPACTS REGISTER

Site:	Stockton Quarry	Authorised By:	Stockton Quarry Manager & Enviro SP
Date:	Dec-2024	Name:	Rod Johnson & Glenn Cook
Compiled By:	Rod Johnson	Revision Date:	Dec-2027

	ASPECT IDENTIFICATION						ASSESSMENT OF RISK									
							Inherent Risk				Residual Risk					
	Process Area	Activity	Mode of Operation	Aspect	Impact	Environmental Management Element	Consequence	Probability	Risk Rating	Control (Engineering/Behavioural/Procedural)	Consequence	Probability	Risk Rating	Relevant Legislation/Policy/Standard	Environmental Requirement	Evaluation of Compliance	Comments
1	Quarry Pit and Preliminary Clearance works	Vegetation stripping	Normal	Potential removal of native flora and fauna habitat	Reduction in habitat, loss of biodiversity	Flora & Fauna	1	2	M	(P) Vegetation Clearing permit required before removal of vegetation (E) Extraction area clearly marked (P) Environmental Awareness Training with onsite Employees (P) Biodiversity Credits Secured prior to vegetation clearance commencing	1	1	L	Vegetation - Native Vegetation Act 2003, EPBC Act 1999 Development Consent	* Compliance with Development Consent Conditions in relation to clearing * Two stage clearing process	* Pre-clearing/Clearing inspection report available from Ecologist / Fauna Spotter	
2	Quarry Pit	Vegetation stripping	Normal	Erosion of soil	Pollution of waterways, siltation of vegetated areas with sediment	Water	1	2	M	(E) Pit is located in dune system, all water filtrates into surface of sand, minimal runoff. (E) Development of Erosion and Sediment Control Plan and maintenance of infrastructure/controls	1	1	L	Water Pollution: Section 120 POEO Act 1997 Environmental Protection License Development Consent ANZECC Guidelines	* Compliance with Development Consent * Erosion and sediment controls measures in place an maintained	* Erosion and sediment control measures in place and maintained	
3	Quarry Pit	Sand Extraction	Abnormal	Extraction of sand outside permitted extraction area	Over extraction of sand	Land	1	1	H	(E) Extraction area surveyed and clearly marked (P) Induction for Quarry Operations personnel (P) Environmental Awareness Training for employees. (P) Routine Pit Inspections. (E) Undertake routine surveys of current extraction areas to confirm within limits	1	1	L				
3	Quarry Pit	Sand Extraction	Abnormal	Extraction below 1.7m AHD Limit	Extraction of sand below permitted depth	Land	1	1	H	(P) Maximum Depth Extraction Management Plan (E) Set working floor level to include a 0.7 m working buffer zone (E) Install depth extraction markers (E) Undertake surveys of extraction levels (P) Implement MEE TARP (E) Areas found to be below 1.7m AHD to be backfilled	1	1	L				
3	Quarry Pit	Sand Extraction	Abnormal	Extraction below 0.7m Groundwater buffer Limit	Interaction with Ground Water	Water	1	1	H	(P) Maximum Depth Extraction Management Plan (E) Regular monitoring of Ground Water levels in GW Bores (E) Install depth extraction markers (E) Undertake surveys of extraction levels (P) Implement MEE TARP	1	2	M	Water Pollution: Section 120 POEO Act 1997Environmental Protection LicenceDevelopment ConsentANZECC Guidelines			
4	Quarry Pit	Sand Extraction	Abnormal	Discovery of Unexpected Finds	Potential impact to Aboriginal object	Land	1	1	H	(P) Unexpected Finds Protocol (E) Only operate within approved extraction area (P) Employees to undertake Environmental Awareness Training (E) Install depth extraction markers (E) Undertake surveys of extraction levels (P) Implement MEE TARP	1	2	M				
4	Quarry Pit	Loading of sand into trucks	Abnormal	Discharge of hydraulic oil to land due to hose breakage	Pollution of land	Land	1	2	M	(P) Plant maintained in proper and efficient manner. (P) Procedures and spill kit available to clean up spills. (P) Pre-start checks on plant and equipment	1	1	L	Land Pollution - Section 142A POEO Act 1997 Environmental Protection License Development Consent	the emission of dust from the premises	* All site operations to occur during approved hours (Enviros & sign in register). * Register of all Community Complaints regarding noise.	* Where required attended noise monitoring can be conducted as per NSW INP to measure noise
5	Quarry Pit	Raw feed haulage	Normal	Emission of dust from unsealed roads	Pollution of air (particulates)	Air	2	3	M	(E) Use of water cart to wet roads (P) Reduce vehicle speeds.	2	3	M	Air Pollution - Section 126 POEO Act 1997 Environmental Protection License Development Consent	* All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises	* Register of all Community Complaints regarding dust * No evidence of excessive dust leaving site	
5	Quarry Pit	Raw feed haulage	Normal	Generation of noise from vehicles	Discomfort or inconvenience to local residents	Noise	2	3	M	(P) Haulage only occurs in vacinity of extraction area (P) Equipment only operates during permitted operating hours (E) Site is located a extensive distance from community (P) Plant maintained in proper and efficient manner.	2	2	L	Noise Pollution - Section 139, 140 POEO Act 1997 Environmental Protection License Development Consent NSW Industrial Noise Policy (INP)	* Plant and equipment to be maintained and operated in a proper and efficient manner to minimise noise	* All site operations to occur during approved hours (Enviros & sign in register). * Register of all Community Complaints regarding noise.	* Where required attended noise monitoring can be conducted as per NSW INP to measure noise

Appendix B

Groundwater Risk Impact Assessment (Umwelt, 2023)

Appendix B Groundwater Impact Risk Assessment

LIKELIHOOD	CONSEQUENCE				
	Insignificant (F)	**Minor (I)**	**Moderate (D)**	**Major (J)**	**Catastrophic / Significant (S)**
Remote (R)	Negligible (N)	Negligible (N)	Very Low (L)	Low (W)	Medium (M)
Unlikely (U)	Negligible (N)	Very Low (L)	Low (W)	Medium (M)	High (H)
Possible (P)	Very Low (L)	Low (W)	Medium (M)	High (H)	Very High (V)
Likely (L)	Low (W)	Medium (M)	High (H)	Very High (V)	Extreme (E)
Almost Certain (C)	Medium (M)	High (H)	Very High (V)	Extreme (E)	Extreme (E)

Phase	Potential Area of Impact	Effects Without the application of mitigation or management measures	Risk Rating			Mitigation/Management Measures	Residual (Mitigated) Risk Rating		
			Likelihood	Consequence	Risk Rating		Likelihood	Consequence	Risk Rating
Operation	Groundwater Quality	Fuel or chemical spills, fire management systems or inappropriate material storage, leads to contamination of groundwater and/or nearby waterways, resulting in environmental degradation and fines under the EP Act.	P	I	W	• Industry best practice Environmental Management Plan (EMP) to be implemented that includes a Waste Management Plan that addresses the storage and stockpiling of raw materials, transport of materials to site, and disposal of materials. • Location of site sheds/storage areas and vehicle parking to be identified in EMP away from sensitive areas. • Spill Management Protocol to be implemented if any spills occur at the site.	U	I	L
Operation	Groundwater Quality	Spills of wash water leads to contamination of groundwater and/or nearby waterways, resulting in environmental degradation and fines under the EP Act.	P	I	W	• Industry best practice EMP to be implemented that includes a Waste Management Plan that addresses the and disposal of materials. • Wash water to be recycled.	U	I	L
Operation	Groundwater Quality	Intersection of Acid Sulfate Soils with potential localised impacts to water quality.	P	I	W	• Site within the area mapped as mostly having a low probability of ASS. • The ASS assessment conducted indicates a single localised occurrence of moderate risk potential ASS. An ASS Management Plan was recommended as part of the report.	U	I	L
Operation	Groundwater Level	No lowering of the groundwater table will occur as part of the sand excavation. Groundwater table will be lowered as part of the licensed groundwater extraction (sand washing and dust suppression on haul roads).	P	I	W	• Installation of monitoring bores around the planned excavation area to be equipped with level loggers. Continued monitoring of existing bores with loggers (MW X and GW series) that are away from the extraction area. • Supply bores to be located and designed by suitably qualified hydrogeologist. • Installation of flowmeters on the headworks of the groundwater supply bores. • Regular reporting of groundwater levels and extraction volumes	U	I	L
Operation	GDEs	No lowering of the groundwater table will occur as part of the sand excavation. Groundwater table will be potentially be lowered in localised areas as part of the licensed groundwater extraction, which is understood to have been previously approved.	P	I	W	• Consideration of the location of the approved extraction to minimise potential drawdown to key receptors and installation of flowmeters on the headworks of the groundwater supply bores.	U	I	L
Operation	Other Bore Users	No lowering of the groundwater table will occur as part of the sand excavation. Groundwater table could be lowered in localised areas as part of the licensed groundwater extraction, which is understood to have been previously approved.	P	I	W	• Installation of monitoring bores around the planned excavation area to be equipped with level loggers. Continued monitoring of existing bores. • Consideration of the location of the approved extraction to minimise potential drawdown to key receptors and installation of flowmeters on the headworks of the groundwater supply bores. • Regular reporting of groundwater levels and extraction volumes	U	I	L