Boral Chinderah Concrete Batching Plant

Annual Review

2020-2021

Document Control			
Version	Prepared by	Date	Distribution
1	Matthew Allan Environmental Business Partner Boral Australia	20/08/2021	NSW Department of Planning and Environment

Table 1. Annual Review

Name of Operations:	Boral Concrete Tweed (Chinderah) Batching Plant
Name of Operator:	Boral Resources (QLD) Pty Ltd
Development Number:	DA 76-02-2003-i
Name of Holder of Development Number:	Boral Resources (QLD) Pty Ltd
Annual Review start date:	01 July 2020
Annual Review end date:	30 June 2021
I, **Matthew Leon**, certify that this audit report is a true and accurate record of the compliance status of **the Boral Concrete Tweed (Chinderah) Batching Plant** for the period of **1st of July 2020** to the **30th June 2021** and that I am authorised to make this statement on behalf of **Boral Resources (QLD) Pty Ltd.**	
Name of authorised reporting officer	Matthew Leon
Title of authorised reporting officer	Operation Manager – Concrete Metro
Signature of authorised officer	
Date	20/08/2021

Contents

1. Statement of compliance

This section of the annual report incorporates a statement of compliance in relation to conditions prescribed in the DA 76-02-2003-i.

Table 2. Statement of Compliance

Were all conditions of the relevant approval(s) complied with?	
DA 76-02-2003	Yes

Compliance status key for table 3.

Risk level	**Colour code**	**Description**
High	**Non-compliant**	Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence.
Medium	**Non-compliant**	Non-compliance with: • Potential for serious environmental consequences, but is unlikely to occur; or • Potential for moderate environmental consequences, but is unlikely to occur.
Low	**Non-compliant**	Non-compliance with: • Potential moderate environmental consequences, but is unlikely to occur; or • Potential for low environmental consequences, but is unlikely to occur.
Administrative non-compliance	**Non-compliant**	Only to be applied where the non-compliance does not results in any risk of environmental harm.

2. Introduction

Boral Resources (Qld) Pty Ltd (**Boral**) operate a concrete batching plant at Lot 16 on DP249122 located on Ozone Street, Chinderah, New South Wales (**refer to Figure 1 – Site Location Plan**). The site operates under the Development No. 76-2-2003-I that was lodged with the NSW Department of Planning on 11 March 2003.

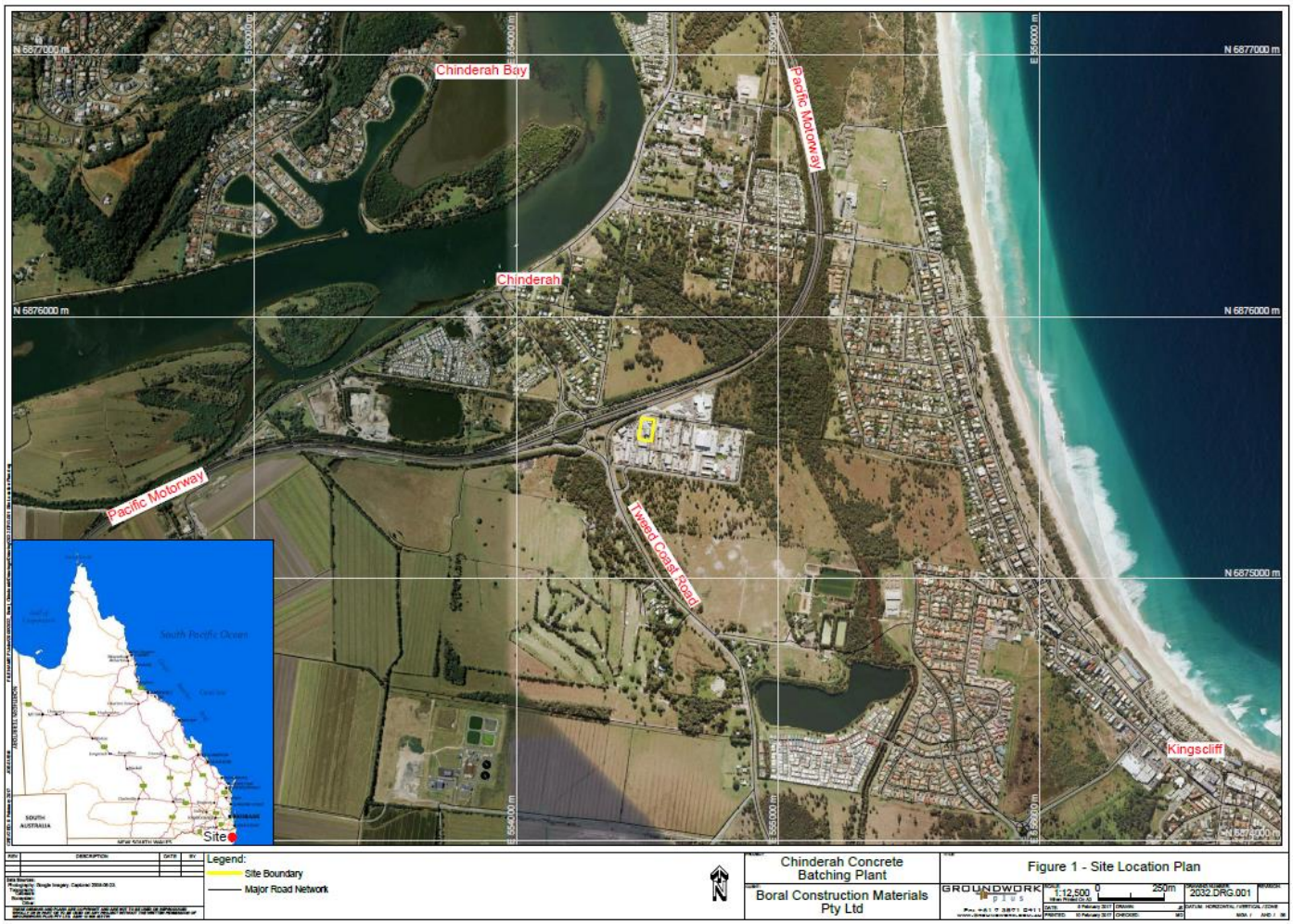


Figure 1 – *Chinderah Concrete site Location Plan*

The concrete batch plant operations are limited to a maximum of 50,000 tonnes of concrete per annum in accordance with condition 1.4 of the Development Consent. Refer to **Figure 2 – Site Layout Plan** for an overview of the layout of the concrete batch plant.

Figure 2 – *Site Layout Plan*

The approved operations hours are 6am to 6pm Monday to Friday and 6am to 2pm on Saturdays in accordance with condition 2.9 of the Development Consent.

The plant is described as a front-end loader facility where aggregates (gravel and sand) are transferred from holding bins via a front-end loader and deposited into weigh bins. The weigh bins measure the material and transfer it to the truck mounted agitator via a conveyor system. No crushing or grinding of aggregates occurs on site.

Cement and fly ash components are weighed directly into a three (3) tonne capacity cement weigh bin located directly below the storage silo discharge points.

The loading process begins with approximately 90% of the batch water and the additives being dispensed into the truck mounted agitator via a discharge pipe in the load hopper (at the end of the load conveyor). As the aggregate and sand on the belt feed into the agitator, cement and fly ash are uniformly fed into the load hopper.

The entire discharge process is computer controlled and is set up so that approximately 5% of the aggregate and sand is fed into the agitator before cement discharge begins and cement discharge ends with 5% of the aggregates and sand still to be discharged. This process minimises dust generation and the dust extraction shroud, which surrounds the load hopper and rear of the agitator bowl, captures any dust that does escape. On completion of the discharge of aggregates, sands and cementitious material, the final 10% of batch water is added to achieve the desired consistency and moisture 'slump' which also serves the purpose of washing in any material on the rear fins.

On completion of loading, the agitator truck pulls out from under the loading sock and proceeds to the slump stand.

Delivery trucks containing cement and aggregates will enter the site from Ozone Street. Aggregate deliveries will proceed to the aggregate storage and loading area that accepts reverse delivery of materials directly into the storage bins. Cement and fly ash deliveries will proceed around the site to a position adjacent to the loading area and pneumatically deliver material into the silos.

Agitators on return from a delivery will proceed to the active drying bay (one (1) of three (3)) for cleaning of residual material in the drum. If a truck is already in the drying bay agitators will park and wait in the truck parking spaces provided. Once cleaned, the agitators proceed to the loading area where concrete is loaded and the product is dispatched off-site.

This report has been provided in accordance with Schedule 2, Condition 3.3 of DA 76-02-2003-i issued by the NSW Department of Planning on 18 June 2003, for the period 1 July 2020 to 30 June 2021. Condition 3.3 states:

*Within 12 months of operation of the development, and after each subsequent year, the applicant shall submit an **Annual Environmental Management Report** which:*

a) *Includes a detailed summary of all complaints received during the past year;*
b) *Includes a detailed summary of monitoring results for the past year and an assessment of these monitoring results against the relevant impact assessment criteria;*
c) *Identify any non-compliances during the previous year; and*
d) *Describe what actions are being taken to ensure compliance.*

3. Approvals

Currently the Chinderah Concrete plant operates under the following approvals.

Table 5. Chinderah Approvals.

Approval	Date
DA 76-2-2003-i	2003
Environmental Management Plan	March 2020

No changes to approvals or management plans have occurred during this annual period.

4. Operations Summary

Concrete Operations

Throughout the reporting period, total production decreased from the previous reporting period. Table 1 below provides the production volumes for the period between July 2020 and June 2021. In total the batching plant produced 0 tonnes of concrete.

Table 6 Annual Production totals

Material	Approved Limit (DA 76-02-2003-i)	Previous reporting period (1/07/19–30/06/20)	This reporting period (01/07/2019–30/06/210)	Next reporting period (01/07/210-30/06/221)
Concrete	50,000 Tonnes	2,066.4 tonnes	0 tonnes	22,800 tonnes

The next 12 months (July 2021 – June 2022) expected volumes around 22,800 are forecast however is subject to change based on market and customer demand.

Other Operations

Throughout the period, there was no operations on site. There was no production during the period which was due to a reduction in projects, customer requirements and the ongoing COVID-19 pandemic.

Next Reporting Period

No significant changes are expected in the next reporting period. No infrastructure upgrades are currently planned.

5. Actions required from previous Annual Review

In accordance with Schedule 2, Condition 1.7 of the approval the Secretary (previously known as the Director-General) requests the following be included in all subsequent Annual Reviews for the Site:

> *a) Water monitoring results from the previous reporting periods be analysed against data from the active reporting period to assess any trends or changes to water quality over time.*

This has been included in section 6.

6. Environmental Performance

The site continues to complete its Environmental Permit Planner (an environmental checklist) monthly to ensure all environmental controls are being implemented effectively and to identify any issues that were not previously picked up. Any environmental hazards, incidents or community complaints are tracked via Boral's incident management system, which includes investigation, corrective actions and an escalation process to ensure timely close out of actions.

Water Management

The site continues to operate its water management infrastructure as designed. Upgrades to the water management systems in previous years has allowed the site to capture a higher design capacity resulting in fewer releases from site. A revised management plan implement in the 2019-2020 period has allowed the site to manage water effectively, resulting in no non-compliances with water discharge during the period. Water results for the period have been provided in table 7.

Air Management

No changes to air management controls have been made during the reporting period. Directional sprayers are currently installed and adjusted as required.

Noise Management

During the annual period, there was no operation however the site continues to utilise the sites EPP to achieve compliance with all environmental aspects including noise.

Waste Management

No changes to waste management have occurred during the reporting period.

Environmental Monitoring

Environmental monitoring required by the approved Environmental Management Plan includes:

- Water , Section 4.1
- Air (dust and odour), Section 4.2 and;
- Noise, Section 4.3

No air (dust and odour) or noise monitoring was undertaken during the period as there were no community complaints or requests from the Department to undertake monitoring.

Water monitoring was required during the reporting period and is summarised below, as per section 4.1 *Table 2 – Surface Water Release Limits*.

Table 2 – Surface Water Release Limits

Release Location	Quality Characteristic	Limit	Limit Type	Minimum Monitoring Frequency
Release point R1 and R2	pH	6.5 – 9.0	Range	Monthly upon discharge
	Suspended solids	50mg/L	Maximum	Once every three (3) months during discharge
	Oil, grease and hydrocarbons	No visible sheen in the discharge (<10mg/L)	Maximum	Monthly upon discharge
	Solid litter	No observable litter discharged	Maximum	Monthly Upon discharge

Release locations are inspected by Boral staff following significant rainfall across the region and sampled if discharge occurs. During the period, water discharge was reported to have

occurred through the approved release locations with results presented in table 7 below). This monitoring is discussed in section 9.

There were no non-compliant results for water discharge in the reporting period.

Table 7. Discharge water monitoring results.

Discharge Location	Date	pH (6.5-8.5)	TSS (<50mg/L)	Visible oil or grease	Visible Litter
R1	17/12/2020	7.53	<5	Nil	Nil
R2	17/12/2020	7.18	<5	Nil	Nil
R1	26/03/2021	7.8	<5	Nil	Nil
R1	17/05/2021	8.15	<5	Nil	Nil

On comparing previous year results, site water infrastructure upgrades, improved environmental monitoring, and changes to water management processes has significantly improve water discharge quality. Changes to infrastructure has increased the overall water holding capacity of site resulting in reduced discharge events. The large storage capacity enables the site to conduct controlled releases of excess what to ensure water quality limits are met prior to any discharge offsite. In this reporting period (FY21) there were no results above water quality limits during discharge events from site.

Figure 3 and 4 compares the monitoring results undertaken over a 4-year period at site.

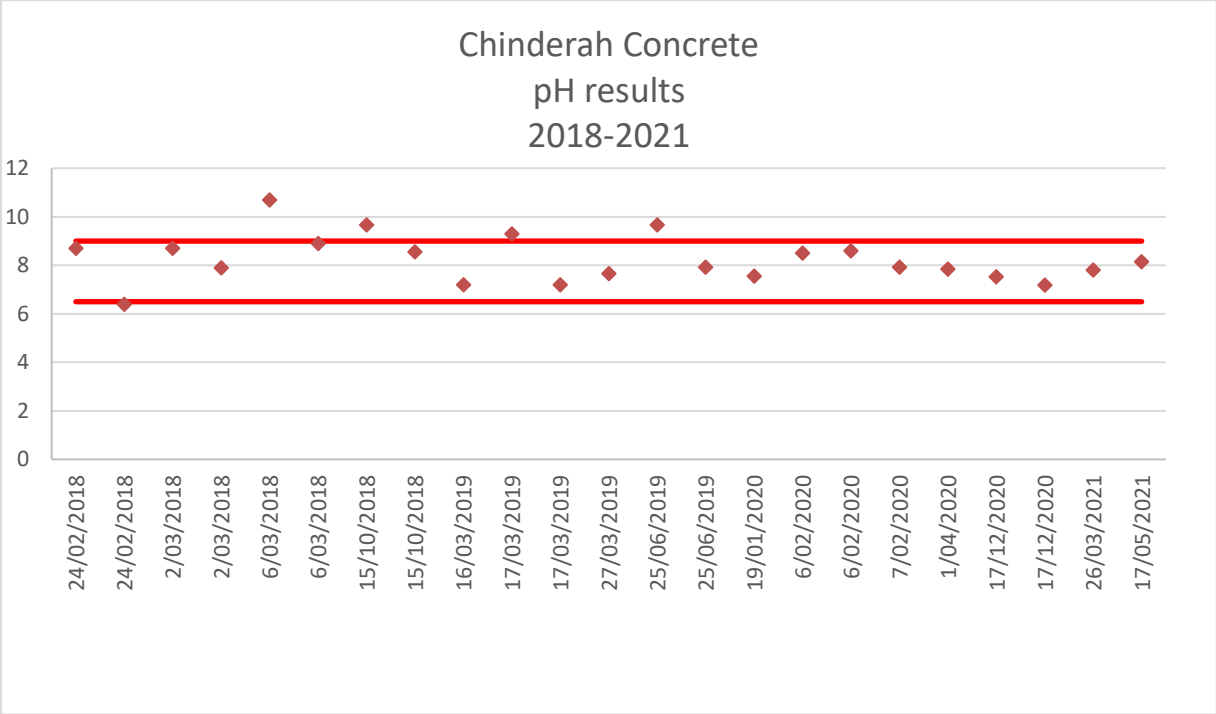


Figure 3. Chinderah Concrete pH monitoring results 2018-2021

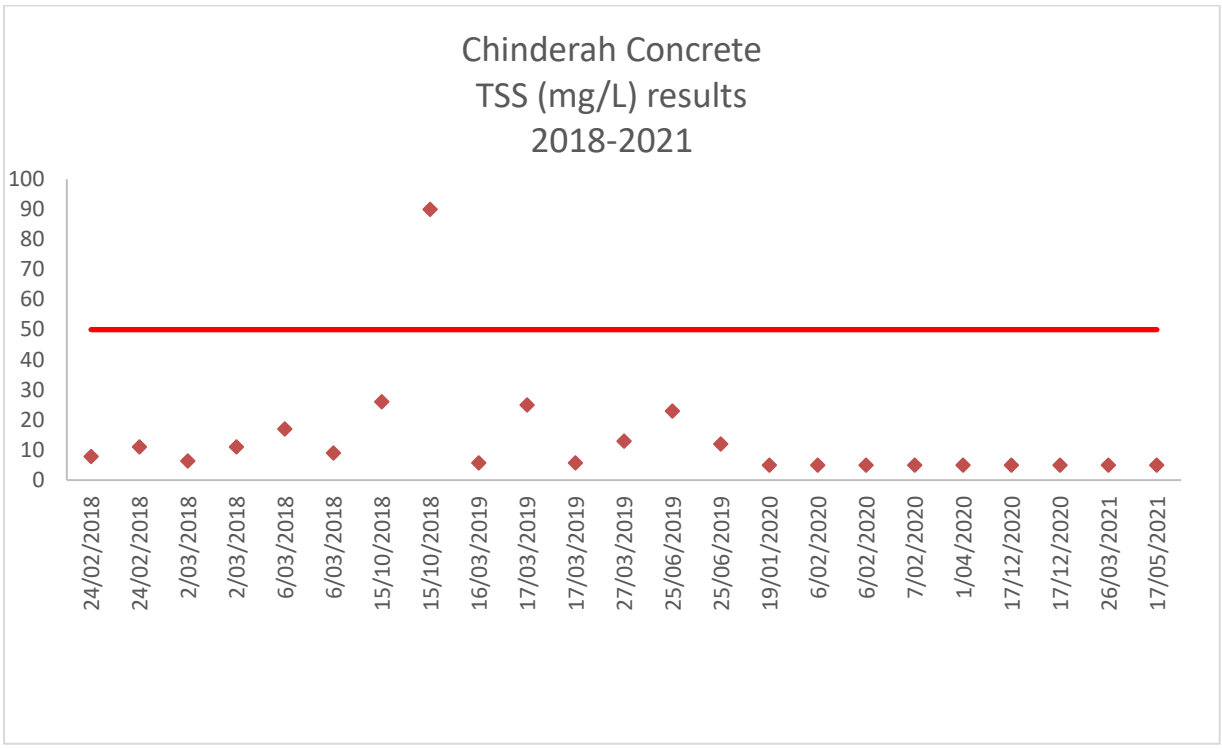


Figure 4. Chinderah Concrete TSS monitoring results 2018-2021

Assessing results from previous years, suspended solid results from releases have dramatically decreased from ~25mg/L on average to less then the limit of reporting which is <5mg/L. This is attributed to changes in infrastructure and process which has allowed the site to store more water within pits and water tanks.

pH results over the previous years have also decreased and are more consistent. pH range between 7 and 8.6 with slight increases being recorded and potentially being associated with the site in operation. The reduction of pH over the previous years can be attributed to reducing the contaminated area through site reconfiguration and infrastructure upgrades, resulting in most of the water being captured within the site storages as fresh surface water runoff and less contaminated water.

7. Community

Environmental incidents and associated complaints for Boral's Chinderah Concrete Plant are reported and tracked in Boral's incident management system. All complaints received, and/or any employee becoming aware of an incident with actual or potential environmental implications, are reported to the Production Manager immediately in accordance with Boral's HSEQ incident management procedures. Throughout the period no community complaints have been received.

8. Independent Audit

During the period no independent party audit was undertaken nor was one requested by the Director-General as per condition 3.4 of DA 76-2-2003-i.

9. Incidents and Non-compliances

Water monitoring exceedances:

There were no non-complaint discharges during this reporting period.

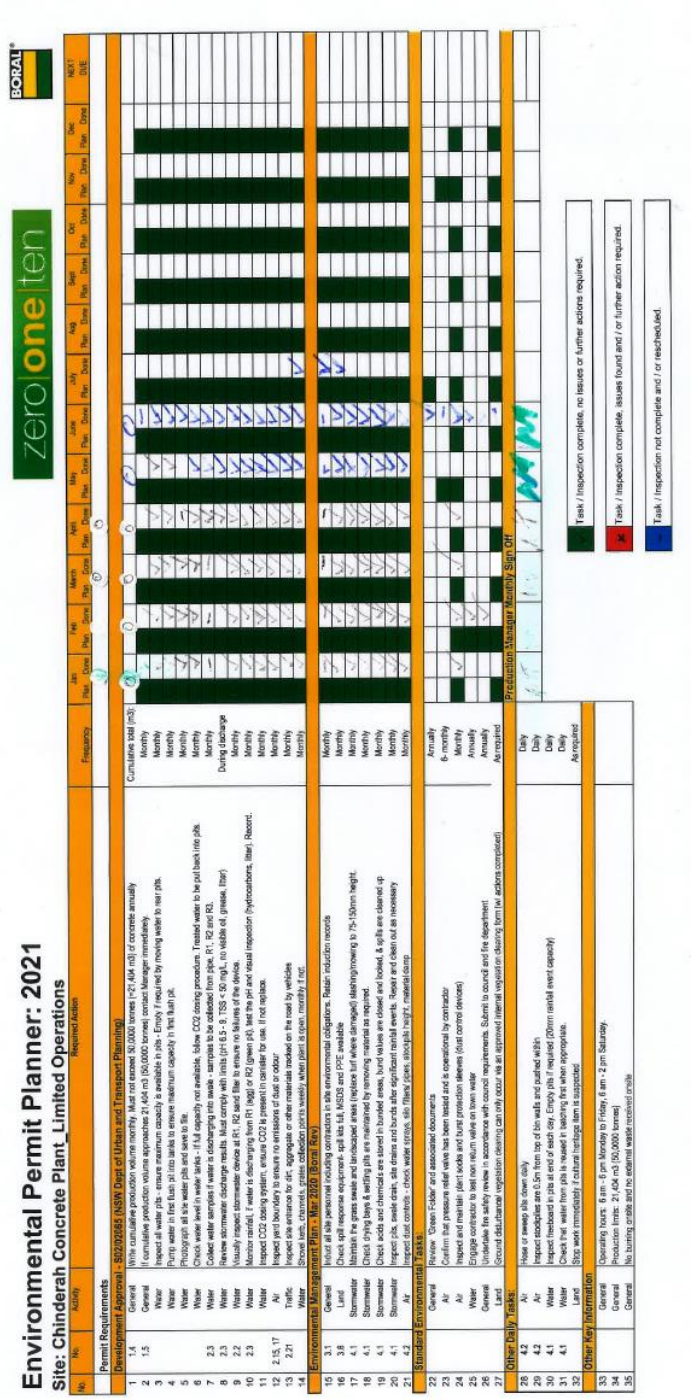
10. Activities to be completed in the next reporting period

Boral will continue to inspect and monitor the environmental performance. Environmental monitoring of water discharge will continue to measure the effectiveness of the controls that have been implemented.

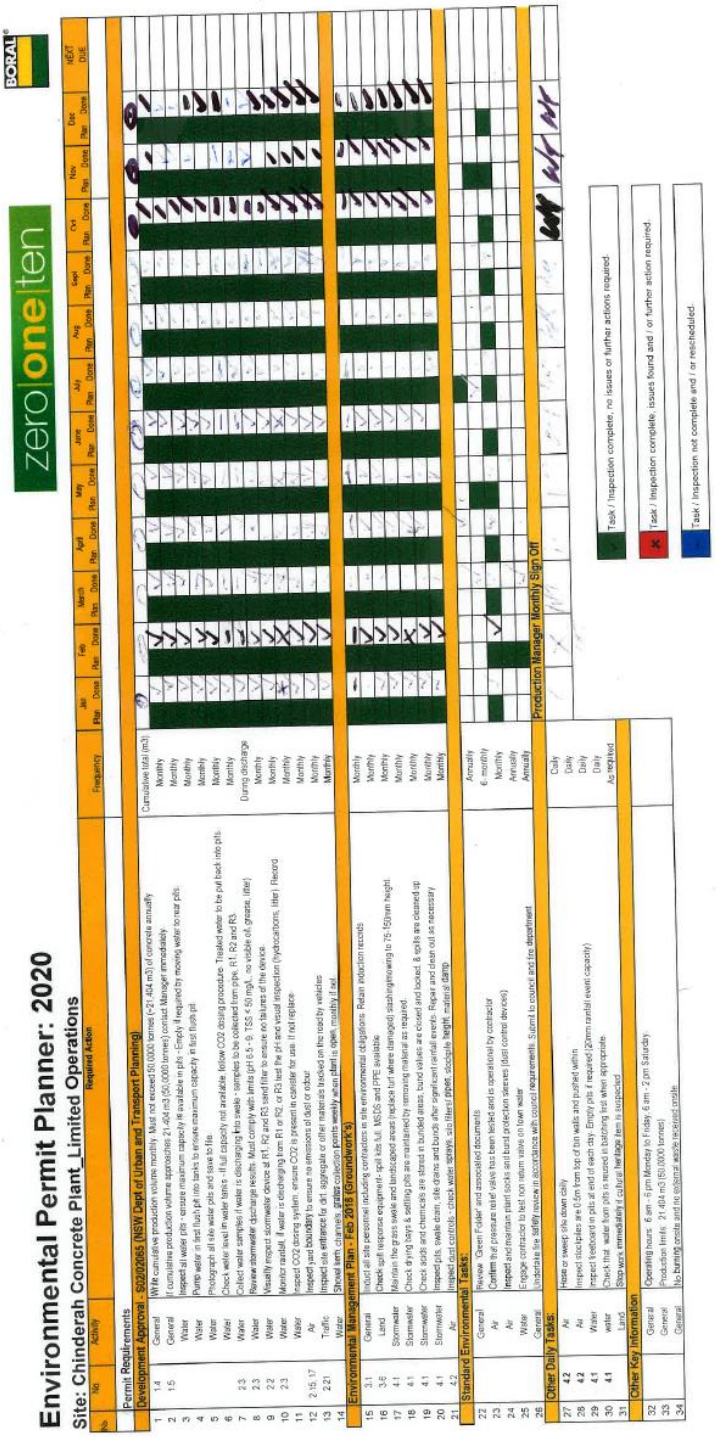
The site will continue to complete its Environmental Permit Planner (an environmental checklist) monthly to ensure all environmental controls are being implemented effectively and to identify any issues that were not previously picked up. Any environmental hazards, incidents or community complaints are tracked via Boral's incident management system, which includes investigation, corrective actions and an escalation process to ensure timely close out of actions.

Appendix 1

Environmental Permit Planner 2021



Environmental Permit Planner 2020



Environmental Permit Planner: 2020

Site: Chinderah Concrete Plant_Limited Operations

zero one ten

BORAL

No	No	Activity	Required Action	Frequency	Jan Plan	Jan Done	Feb Plan	Feb Done	March Plan	March Done	April Plan	April Done	May Plan	May Done	June Plan	June Closed	July Plan	July Done	Aug Plan	Aug Done	Sept Plan	Sept Done	Oct Plan	Oct Done	Nov Plan	Nov Done	Dec Plan	Dec Done	HEAT DUE
		Permit Requirements																											
		Development Approval - SD2/02065 (NSW Dept of Urban and Transport Planning)																											
1	1.4	General	Write cumulative production volume monthly. Must not exceed 50,000 tonnes (=21,404 m3) of concrete annually	Cumulative total (m3)																								
2	1.5	General	If cumulative production volume approaches 21,404 m3 (50,000 tonnes) contact Manager immediately	Monthly																								
3		Water	Inspect all water pits - ensure maximum capacity is available in pits - Empty if required by moving water to next pits.	Monthly																								
4		Water	Pump water in first flush pit into tanks to ensure maximum capacity in first flush pit	Monthly																								
5		Water	Photograph all site water pits and save to file	Monthly																								
6		Water	Check water level in water tanks - if full capacity not available follow CO2 dosing procedure. Treated water to be put back into pits.	Monthly																								
7	2.3	Water	Collect water samples if water is discharging into swale - samples to be collected from pipe, R1, R2 and R3.	During discharge																								
8	2.3	Water	Review stormwater discharge results. Must comply with limits (pH 6.5 - 9, TSS < 50 mg/L, no visible oil, grease, litter)	Monthly																								
9	2.2	Water	Visually inspect stormwater device at R1, R2 and R3 and filter to ensure no failures of the device.	Monthly																								
10	2.3	Water	Monitor rainfall. If water is discharging from R1 or R2, or R3 test the pH and visual inspection (hydrocarbons, litter). Record	Monthly																								
11		Water	Inspect CO2 dosing system, ensure CO2 is present in canister for use. If not replace	Monthly																								
12	2.15, 17	Air	Inspect and boundary to ensure no emissions of dust or odour	Monthly																								
13	2.21	Traffic	Inspect site entrance for dirt, aggregate or other materials tracked on the nearby vehicles	Monthly																								
14		Water	Shovel kerb channels, grates collection points weekly when plant is open, monthly if not	Monthly																								
		Environmental Management Plan - Feb 2018 (Groundwork's)																										
15	3.1	General	Induct all site personnel including contractors as site environmental obligations. Retain induction records	Monthly																								
16	3.6	Land	Check spill response equipment - spill kits full. MSDS and PPE available.	Monthly																								
17	4.1	Stormwater	Maintain the grass swale and landscaped areas (replace turf where damaged) slashing/mowing to 75-150mm height.	Monthly																								
18	4.1	Stormwater	Check drying bays & settling pits are maintained by removing material as required.	Monthly																								
19	4.1	Stormwater	Check, assist and chemicals are stored in bunded areas, bund values are closed and locked, & spills are cleaned up	Monthly																								
20	4.1	Stormwater	Inspect pits, swale drain, site drains and bunds after significant rainfall events. Repair and clean out as necessary	Monthly																								
21	4.2	Air	Inspect dust controls, check water sprays, silo filters/ pipes, dropsafe height, material damp	Monthly																								
		Standard Environmental Tasks:																										
22		General	Review 'Green Folder' and associated documents	Annually																								
23		Air	Confirm that pressure relief valve has been locked and is operational by contractor	6 monthly																								
24		Air	Inspect and maintain plant (socks and bund protection sleeves (dust control devices)	Monthly																								
25		Water	Engage contractor to blast non return valve on town water	Annually																								
26		General	Undertake site safety review in accordance with council requirements. Submit to council and fire department	Annually																								
		Other Daily Tasks:																										
27	4.2	Air	Hose or sweep site down daily	Daily																								
28	4.2	Air	Inspect truck tyres are 4/5m from top of bin walls and pushed within	Daily																								
29	4.1	Water	Inspect freeboard on pits is respect in batching bay when appropriate	Daily																								
30	4.1	Water	Check first flush pits are empty at end of each day. Empty pits if required (20mm rainfall event capacity)	Daily																								
31		Land	Stop work immediately if cultural heritage item is suspected	As required																								
		Other Key Information																										
32		General	Opening hours: 6 am - 5 pm Monday to Friday, 6 am - 2 pm Saturday																									
33		General	Production limits: 21,404 m3 (50,000 tonnes)																									
34		General	No burning (onsite and no onsite) waste received onsite																									

Task / Inspection complete, no issues or further actions required.

Task / Inspection complete, issues found and / or further action required.

Task / Inspection not complete and / or rescheduled.