



<b>Licence Number</b>	L9020/2016/1
<b>Licence Holder</b>	Kimberley Quarry Pty Ltd
<b>ACN</b>	093 519 638
<b>File Number:</b>	DER2016/002337
<b>Premises</b>	Hardrock Quarry Lot 20 East Chapman Road NARRA TARRA WA 6532 Lot 20 on Deposited Plan 6975
<b>Date of Amendment</b>	7 November 2018

## Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

**Alana Kidd**

**Manager, Resource Industries**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

## Definitions and interpretation

### Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

**Table 1: Definitions**

Term	Definition
ACN	Australian Company Number
AER	Annual Environment Report
Amendment Notice	refers to this document
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means:  Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EPA	Environmental Protection Authority
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder Licensee	Kimberley Quarry Pty Ltd
Minister	the Minister responsible for the EP Act and associated regulations
tpa	tonnes per annum

NEPM	National Environmental Protection Measure
Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997 (WA)</i>
Occupier	has the same meaning given to that term under the EP Act.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report.
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>
UDR	<i>Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)</i>
VOC	Volatile organic compounds

## Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

This notice is limited only to an amendment for Category 35 and 61A. No changes to the aspects of the original Licence relating to Category 12 have been requested by the Licence Holder.

The following guidance statements have informed the decision made on this amendment:

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Land Use Planning (February 2017)*
- *Guidance Statement: Licence Duration (August 2016)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessment (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

## Amendment description

The Hardrock Quarry is a hard rock extraction operation at Lot 20 East Chapman Road, Narra Tarra, approximately 15km north-east of the centre of Geraldton. Operations include crushing and screening of rock material, supplying products and services to the mining and construction industry. The main services provided are quarrying, crushing and screening, drilling and blasting and equipment hire. Kimberley Quarry Pty Ltd has an agreement with the landowner to conduct operations and has been operating on the site since 2000.

Kimberley Quarry Pty Ltd has applied to amend the existing licence to install and operate a mobile asphalt plant on the premises. The asphalt plant will utilise reclaimed asphalt material (RAP) in the batching process and therefore meets the description of Category 61A – Solid waste facility.

Additional categories and the nominated production throughput applied for under this amendment are shown in Table 2.

**Table 2: Additional categories**

Category Number	Description	Nominated production throughput
35	Asphalt manufacturing: premises on which hot or cold mix asphalt is produced using crushed or ground rock aggregate missed with bituminous materials for use at places or premises other than those premises.	50,000tpa <sup>1</sup>
61A	Solid waste facility: premises (other than premises within category 67A) on which solid waste produced on other premises is stored, reprocessed, treated, or discharged onto land.	12,500tpa

Note 1: The asphalt plant is capable of producing 200 tonnes per hour equating to 876,000tpa based on operating 12 hours per day, 365 days per year.

## Operational aspects

The proposed plant will operate on a campaign basis and will be mobilised to and from the site as required to service local short term projects. The plant is a Ciber iNOVA mobile drum mix plant consisting of the infrastructure listed in Table 3. The layout of the plant is shown in **Error! Reference source not found.** and Figure 1.

Materials used on the process include:

- Aggregate;
- Sand;
- Bitumen; and
- Fillers(lime or flyash).

The plant is also designed to use up to 15% RAP in the manufacturing process. RAP may be received at the Premises processed or unprocessed. If crushing and screening is required it will be undertaken using existing equipment.

**Table 3:** Proposed infrastructure

Category 35 – Asphalt plant	
1	Four 10m <sup>3</sup> cold feed bins
2	Counter-flow drum dryer
3	Baghouse filter with 6.m stack
4	Pug mill mixing chamber
5	Enclosed drag elevator and loadout chute
6	75kL dual chamber bitumen kettle
7	Horizontal lime/filler storage tank
8	Aggregate and feed material, including RAP, will be stored in open stockpiles.
9	20kL self-bunded diesel storage tank to service the generator a drum drier burner.



**Figure 1 : Site layout**

Licence: L9020/2016/1

## Planning approval

A development application for the proposal was approved by the City of Greater Geraldton on 18 September 2018. The approval includes conditions requiring the development of a Dust Management Plant and compliance with the Noise Regulations limiting hours of operation from 7:00am to 5:00pm Monday to Saturday with no operations on Sundays or public holidays (unless otherwise approved).

## Amendment history

Table 4 provides the amendment history for L9020/2016/1.

**Table 4:** Licence amendments

Instrument	Issued	Amendment
L9020/2016/1	25/10/2017	New Application (Category 12)
L9020/2016/1	7/11/2018	Amendment Notice 1: Addition of Category 35

## Location and receptors

Table 5 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment (also refer to Figure 2). There are no sensitive receptors within 1,000m of the Premises.

**Table 5: Receptors and distance from activity boundary**

Residential and sensitive premises	Distance from Prescribed Premises
Rural residence	1,950m east (measured from the residence building(s) to the location of the asphalt plant within Lot 20)
Rural residence	2,004m north-east (measured from the residence building(s) to the location of the asphalt plant within Lot 20).

Table 6 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

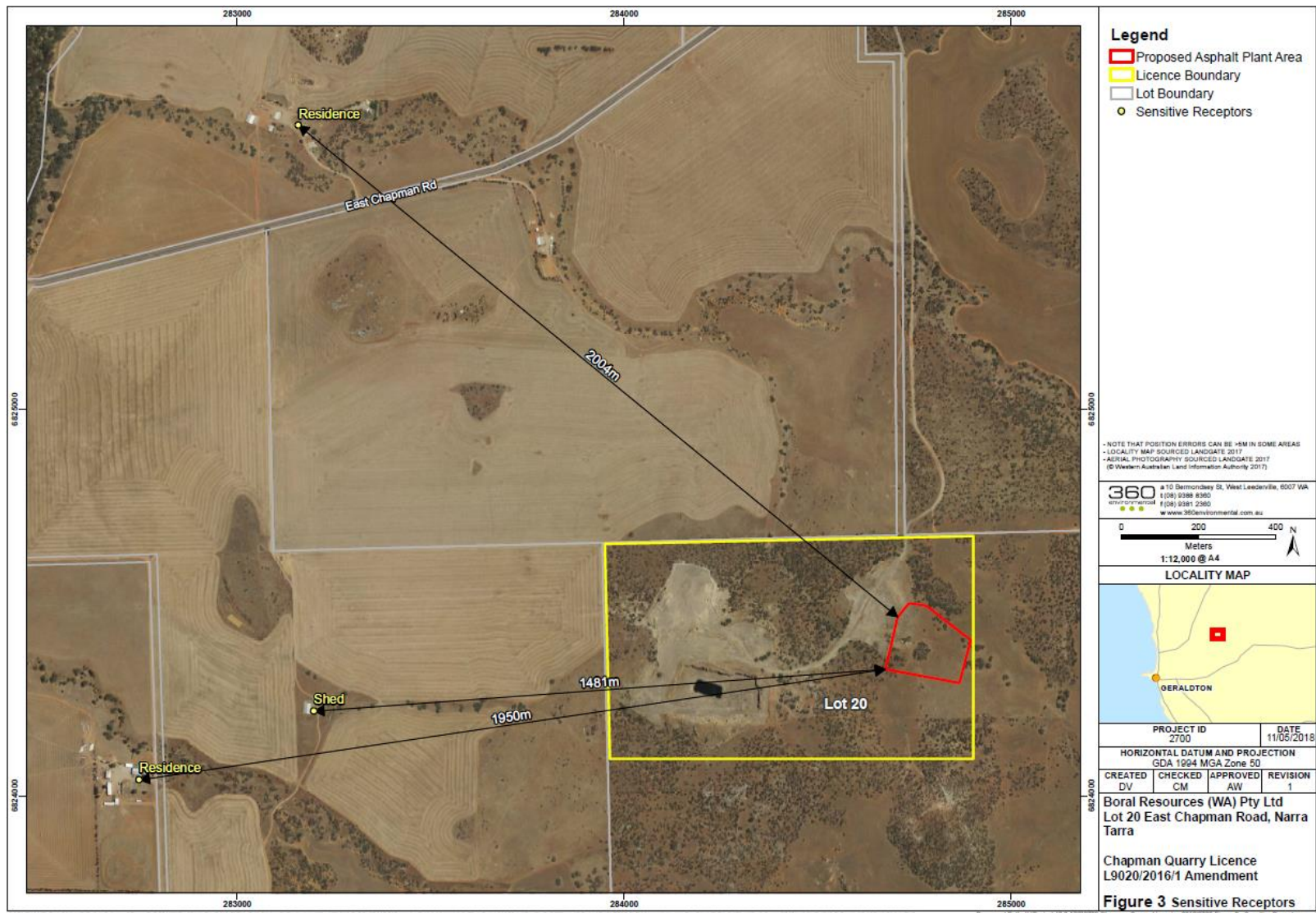
**Table 6: Environmental receptors and distance from activity boundary**

Environmental receptors	Distance from Prescribed Premises	Environmental Value
Groundwater <sup>1</sup>	Depth to groundwater on site has not been determined. Water levels inferred to be between 50m to 100m Australian Height Datum. Elevation at the operational areas is at least 140m therefore the depth to groundwater is assumed to be 40mbgl	Not located within a Public Drinking Water Source Area. Nearest (Wicherina Catchment Area) is 12km east. Located within a <i>R/VI Act 1914</i> designated groundwater area (Gascoyne Groundwater Area). Limited TDS data from bores approximately 3km away indicate TDS of 2,000-5,000 mg/L.
Minor non-perennial watercourses (drain to the Chapman River East located 2.5km north west of the asphalt plant site)	One located on the boundary of Stockpile Area 1 and another crosses the haul road near the entrance to Stockpile area 2 (approximately 50m from the proposed asphalt plant).	Not located within a <i>R/VI Act 1914</i> designated surface water area.

Environmental receptors	Distance from Prescribed Premises	Environmental Value
Threatened/Priority Fauna and Flora	None within 3km.	-

Note 1: Northern Perth Basin Bulletin: Figure 58 (DoW 2017) states water levels south west of Northampton decrease to less than 50 mAHD. The site however is located closer to the 100 mAHD contour.





**Figure 2: Location of the asphalt plant and distance to sensitive receptors.**

## Risk assessment

Table 7 and Table 8 below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. Both tables identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

**Table 7: Risk assessment for proposed amendments during construction**

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning	
Source/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts					
Cat 35 Asphalt manufacturing	Installation of mobile asphalt plant	Dust: associated with construction activities	Residence 1.2km north & east of the Premises.	Air	Health and amenity impacts	Slight	Rare	Low	Limited dust is expected as construction involves the assembly of pre-constructed modular (mobile) equipment. Furthermore, the Delegated Officer considers that there is sufficient separation distance to mitigate impact.
		Noise associated with construction activities	Residence 1.2km north & east of the Premises	Air	Amenity impacts	Slight	Rare	Low	Limited noise is expected due to minimal construction activity as above. The Delegated Officer considers that the Noise Regulations are sufficient for regulating noise impacts during construction.

**Table 8: Risk assessment for proposed amendments during operation**

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning	
Source/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts					
Cat 35 Asphalt manufacturing	Operation of the asphalt plant	Dust: associated with storage and handling of aggregate/RAP	Residence 1.2km north & east of the Premises.	Air	Health and amenity impacts	Minor	Rare	Low	Refer to detailed risk assessment below
		Dust:				Minor	Rare	Low	Refer to detailed risk assessment

		emissions from the baghouse (expected to be <50mg/m <sup>3</sup> )							below
		<b>Noise</b>				Minor	Rare	Low	The closest sensitive residential receptor is located more than 1300m from the Premises. The Delegated Officer considers that the Noise Regulations are sufficient for regulating noise impacts during operation.
		<b>Odour</b>				Minor	Rare	Low	Refer to detailed risk assessment below
		<b>Air emissions:</b> Combustion gases (NO <sub>x</sub> and CO)				N/A	N/A	N/A	Emissions of combustion gases are not expected to significantly contribute to ambient air quality. The Delegated Officer considers that there is sufficient separation distance between the asphalt plant and sensitive receptors.
	Diesel / bitumen storage	<b>Waste:</b> Spills or leaks of hydrocarbons	Soil Groundwater estimated at 40mbgl	Direct discharge and infiltration via soil	Contamination of soil	Minor	Rare	Low	Refer to detailed risk assessment below
	Stormwater management	<b>Waste:</b> Stormwater coming into contact with sediment or hydrocarbons	Minor tributary of the East-Chapman River located west of the asphalt plant	Direct discharge	Ecosystem impacts	Minor	Rare	Low	Refer to detailed risk assessment below

## 1.1 Risk Assessment –Dust

### 1.1.1 Description of dust

Particulates (dust) from the operation of the asphalt plant, including the storage and handling of raw materials, released to atmosphere impacting the health and amenity of nearby residential receptors.

### 1.1.2 Identification and general emission characterisation

Sand and aggregate are stored in open stockpiles. A front end loader feeds materials into the plant via cold feed bins and transferred to the drying section of the plant via conveyors. There is potential for dust emissions to be generated from storage and handling of raw materials including sand, aggregate and RAP.

The dryer, which uses diesel fuel, dries the aggregate inside a rotating drying drum. Waste gas is released to atmosphere from a 6.1m stack via a baghouse filter to remove particulate emissions.

The plant is a mobile plant that was commissioned at another site in Western Australia under Licence L6265/1983/8. Results of testing undertaken in accordance with Licence L6265/1983/8 show that the baghouse is capable of reducing emissions well below the design specification of 50mg/m<sup>3</sup>.

### 1.1.3 Description of potential adverse impact from the emission

Dust emissions have the potential to reduce local air quality and impact on the health and amenity of nearby residential receptors. There are no sensitive receptors within 1,000m of the site with the nearest receptor approximately 1,900m away.

### 1.1.4 Criteria for assessment

The National Environmental Protection Measure provides an ambient standard for particulates smaller than 10 microns (PM<sub>10</sub>) of 50 µg/m<sup>3</sup> as a 24 hour average. As there is no modelling done for this proposal, the Delegated Officer assesses the proposal against emission standards that are used elsewhere for particulates, especially looking at a similar kind of industry like the concrete batching industry. The *Environmental Protection (Concrete batching and cement product manufacturing) Regulations 1998* provides a limit of 50 mg/m<sup>3</sup> for particulates from this industry including the requirement to use a bag house filter.

### 1.1.5 Applicant/Licence Holder controls

This assessment has reviewed the controls set out in Table 17 below.

**Table 9:** Licence Holder's proposed controls for dust emissions

Site infrastructure	Description
Asphalt plant	<ul style="list-style-type: none"><li>Dust emissions from the drum dryer are discharged to atmosphere via a bag house filter designed to reduce particulate emissions below 50mg/m<sup>3</sup>.</li><li>Baghouse is fitted with pressure differential monitoring system and programmable logic controller (PLC) to detect failures and initiate maintenance.</li><li>Visual inspections of the baghouse are undertaken monthly to identify any obvious faults or failures.</li><li>The plant is mobile equipment that is only expected to operate at the</li></ul>

Site infrastructure	Description
	site on a campaign basis as required to service local projects.
Raw materials storage and handling	<ul style="list-style-type: none"> <li>• Stockpiles are kept damp to control dust lift off.</li> <li>• When loading the cold feed bins the front end loader operator shall minimise the height at which materials are dropped into the bins to minimise dust generation.</li> <li>• Continual visual dust monitoring will occur.</li> <li>• Fillers are stored in silos.</li> </ul>

### 1.1.6 Consequence

The Delegated Officer has determined that dust emissions from the drying process and the storage and handling of raw materials will have minimal impact offsite with low level onsite impacts. Therefore, the Delegated Officer considers the consequence of dust emissions to be **Minor**.

### 1.1.7 Likelihood of Risk Event

The Delegated Officer has determined that the likelihood of dust impacting sensitive receptors will be such that it will only occur in exceptional circumstances. Therefore, the Delegated Officer considers the likelihood of dust emissions to be **Rare**.

### 1.1.8 Overall rating of dust

The Delegated Officer has determined that the overall rating for the risk of dust emissions is **Low**.

## 1.2 Risk Assessment – Odour

### 1.2.1 Description of odour

Odour emissions from the operation of the asphalt plant released to atmosphere impacting the health and amenity of nearby residential receptors.

### 1.2.2 Identification and general characterisation of emission

Odour emissions are created from the heated bitumen when it is sprayed into the mixing drum to mix with the heated aggregate and RAP (when used). The temperature of the bitumen inside the mixing drum is controlled to reduce odour emissions from this part of the process. Odour emissions are caused by Volatile Organic Compounds (VOCs) that evaporate from the bitumen.

Air from the mixing drum is extracted through dryer and emitted via the baghouse filter stack.

### 1.2.3 Description of potential adverse impacts from the emissions

The asphalt manufacturing process uses bitumen which, when kept warm, releases some volatile organic compounds. Odour emissions have the potential to impact on the amenity of nearby residential receptors. There are no sensitive receptors within 1,000m of the site with the nearest receptor approximately 1,900m away.

### 1.2.4 Criteria for assessment

In relation to nearby premises, the generic criteria for the assessment of odour is outlined by Section 49 of the EP Act which specifies *to not cause an odour emission that unreasonably*

*interferes with the health, welfare, convenience, comfort or amenity of any person.*

### 1.2.5 Applicant/Licence Holder controls

This assessment has reviewed the controls listed below:

- The bitumen kettle is fitted with automatic temperature control devices including over-temperature alarms and auto shut off systems to prevent overheating of the bitumen.
- Gaskets installed on kettle hatches and hinged flaps on kettle overflow outlet to reduce emissions.
- The slat conveyor transferring asphalt to the loading chute is fully enclosed to prevent fugitive emissions.
- Monitoring of temperature of aggregate, bitumen and final asphalt mix is undertaken automatically to ensure the process remains at the correct temperature.
- RAP material will not contain any tar based products, pavement markers or geotextile fabrics and is fed directly into the mixing chamber, bypassing the drum dryer and direct flame heating.

### 1.2.6 Consequence

The Delegated Officer has determined that odour will have minimal off-site impacts on a local scale with wide scale impacts not detected. Therefore, the Delegated Officer considers the consequence of odour emissions to be **Minor**.

### 1.2.7 Likelihood of Risk Event

Considering the Licence Holder's controls and distance to sensitive receptors, the Delegated Officer has determined that impact from odour emissions will only occur in exceptional circumstances. Therefore, the Delegated Officer considers the likelihood of odour to be **Rare**.

### 1.2.8 Overall rating of odour

The Delegated Officer has determined that the overall rating for the risk of odour is **Low**.

## 1.3 Risk Assessment – Potentially contaminated stormwater

### 1.3.1 Description of discharge of potentially contaminated stormwater

Potentially contaminated stormwater causing contamination of soil, groundwater or nearby surface waters affecting ecosystem health.

### 1.3.2 Identification and general characterisation of emission

There is potential for stormwater to become contaminated if it comes into contact with sediments or hydrocarbons from the asphalt manufacturing process including the storage of raw materials, storage of reclaimed asphalt, storage of diesel, filling of the bitumen tanks and any leaks or spills within the operational area.

### 1.3.3 Description of potential adverse impact from the emission

Stormwater that is contaminated with hydrocarbons or sediments and that is not contained or treated appropriately, could lead to contamination of surface water, soil and groundwater. Depth the groundwater is estimated to be at least 50m below ground level. An ephemeral tributary of the East Chapman River is situated to the west/south-west of the asphalt plant.

### 1.3.4 Criteria for assessment

General provisions of the EP Act make it an offence to cause or allow pollution. Additionally, it is an offence to discharge sediment, petrol, diesel or other hydrocarbon into the environment under regulation 3 of the UDRs.

### 1.3.5 Applicant/Licence Holder controls

This assessment has reviewed the controls set out in Table 17 below.

**Table 10:** Applicant's/Licence Holder's proposed controls for managing the discharge of sediment laden water

Site infrastructure	Description
Stormwater infrastructure	<ul style="list-style-type: none"><li>• The operational area will be graded to drain in a southerly direction into a settlement basin in the south west corner of area. The settlement pond is designed to receive a 1 in 10 year 2 hour rainfall event (ARI) and will provide retention to settle out sediments with overflow from the basin occurring via a rock filter dam into the natural drainage line.</li><li>• A diversion bund will be installed on the western, southern and northern boundary to divert runoff from the surrounding areas.</li><li>• Bitumen will be stored in a dual chamber 70kL (35kL per chamber) bitumen kettle with a third chamber (10kL) for the storage of heating oil. The bitumen kettle will be situated on hardstand (most likely unsealed).</li><li>• The additional 20,000L of diesel fuel required to service the asphalt plant is stored in a self-bunded tank in accordance with Australian Standard <i>AS1940: Storage and handling of flammable and combustible liquids</i>.</li><li>• Spills kits will be available onsite in the event of spills/leaks of hazardous material.</li><li>• Spill containment trays will be used when transferring diesel or bitumen.</li></ul>
Management	<ul style="list-style-type: none"><li>• Diesel and bitumen storage areas will be regularly inspections to identify spills or leaks.</li><li>• Spills will be cleaned up immediately.</li><li>• Transfer of material will be undertaken by personnel with appropriate training.</li><li>• No major servicing of machinery will be undertaking onsite, only regular maintenance.</li></ul>

### 1.3.6 Consequence

Noting the temporary nature of the plant and the Applicant controls, the Delegated Officer has determined that the impact of contaminated stormwater entering the environment will have low level onsite impacts and minimal offsite impacts on a local scale. Therefore, the Delegated Officer considers the consequence of contaminated stormwater entering the environment to be **Minor**.

### 1.3.7 Likelihood of Risk Event

The Delegated Officer has determined that impacts from contaminated stormwater entering the environment may only occur in exceptional circumstances. Therefore, the Delegated Officer considers the likelihood of Risk Event 1 to be **Rare**.

### 1.3.8 Overall rating of sediment laden water discharge

The Delegated Officer has determined that the overall rating for the risk of contaminated stormwater impacting the environment is **Low**.

### Decision

The Delegate Officer has decided to grant the amendment subject to the following regulatory controls.

### Infrastructure and equipment - Construction

Condition 1.3.4 specifies the works to be carried as follows:

Infrastructure/Equipment	Requirements (constructions and operation)
Ciber iNova 2000 asphalt plant or equivalent	<ul style="list-style-type: none"><li>• Construction on hardstand;</li><li>• Baghouse filter to be designed and constructed such that all air from the dryer is treated and that particulate emissions are less than 50mg/m<sup>3</sup>;</li><li>• Stack of the bag filter is required to have a stack sampling port that is compliant with AS 4323.1; and</li><li>• Located as per the map in Schedule 1.</li></ul>
Stormwater infrastructure	<ul style="list-style-type: none"><li>• Unlined retention basin design to receive a 1 in 10 year, 2 hour rainfall event; and</li><li>• Located as per the map in Schedule 1.</li></ul>

**Grounds:** The approved infrastructure and equipment will suitably minimise the risk of dust emissions and stormwater contamination associated with the operation of the asphalt plant. The requirements are based on Applicant controls.

Construction requirements for the stack have been imposed requiring that sampling ports meet relevant Australian Standards to ensure that stack testing provides accurate and representative results.

On completion of installation, the Licence Holder is required to submit a compliance document confirming that the above equipment has been installed as stated.

### Infrastructure and equipment - Operation

Condition 1.2.4 of the Licence allows the asphalt plant to be relocated from the Premises and relocated back within the Premises on an as needs basis.

**Grounds:** The Delegated Officer notes that the asphalt plant consist of mobile plant that will remain on the Premises for short periods to service local contracts. The condition allows that should the plant be removed from the Premises it can be relocated back to the Premises at a later date without being subject to further assessment provided that equipment and infrastructure remains the same and is located within the same area as specified in the Licence.

### Waste acceptance and processing

Condition 1.2.3 has been included on the Licence specifying that the following waste can be accepted on the Premises:



**Table 11: Types of waste authorised to be accepted onto the premises**

Waste type	Rate at which waste is received	Acceptance specification
RAP	12,500 tonnes per annual period	The Licence Holder shall ensure that RAP does not contain any of the following materials: (a) granular pavement materials, clay, soil or organic matter; (b) bricks, concrete, glass or building materials; and (c) tar based products, geotextile fabrics, raised pavement markers or surface treatment such as high friction surfacings.

**Grounds:** The assessment has determined an acceptable level of risk based on the type, rate and specification of RAP material to be processed in the asphalt plant. Therefore, the Licence specifies the types of waste and volumes of waste allowed to be accepted at the Premises.

### Monitoring requirements

Monitoring of emissions from the stack is required as follows:

Emission point	Parameter	Reporting unit <sup>1, 3</sup>	Averaging period	Frequency <sup>2</sup>	Method
Ciber iNOVA 2000 Asphalt plant stack	Particulate matter	mg/m <sup>3</sup> g/s	Stack test (Minimum 60 minute average)	Annual	USEPA Method 5 or USEPA Method 17
	Total Volatile Organic Compounds		Stack test (Minimum 30 minute average)		USEPA Method 18

Note 1: All units are referenced to STP dry

Note 2: Monitoring shall be undertaken to reflect normal operating conditions and any limits or conditions on inputs or production.

Note 3: Concentration units are referenced to 17% O<sub>2</sub>.

Note 4: Monitoring may be carried out while the asphalt plant is located at any other prescribed premises.

**Grounds:** The Licence includes stack testing requirements to ensure that the particulate emissions from the plant are meeting the design specifications. Requirements to monitor VOC emissions have also been included to monitor effectiveness of odour controls and performance of the plant over time. The Licence requires annual monitoring which can be conducted while the plant is operating offsite on other licensed Premises under similar operating conditions.

### Reporting

Results of monitoring required by the Licence are required to be submitted to DWER on an annual basis in an Annual Environmental Report (AER). The Licence Holder is also required to provide:

- details of the periods of the year the plant was operational at the premises; and
- a summary of any complaints received and recorded in accordance with condition 2.1.2 of the Licence

### Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 2 November 2018. The Licence Holder provided further information relating to the processing of RAP, planning approval, VOC emissions and the sedimentation basin as requested but did not provide any comment on the draft conditions.

## Amendment

- The Prescribed premises categories are amended by the insert of the bold text shown in underline below:

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
12	Screening, etc. of material: premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	50 000 tonnes or more per year	200,000 tonnes per annual period
<b><u>35</u></b>	<b><u>Asphalt manufacturing: premises on which hot or cold mix asphalt is produced used crushed or ground rock aggregates mixed with bituminous or asphaltic materials for use at places or premises other than those premises.</u></b>	<b><u>Not applicable</u></b>	<b><u>50,000 tonnes per annual period</u></b>
<b><u>61A</u></b>	<b><u>Solid waste facility: premises (other than premises within category 67A) on which solid was produced on other premises is stored, reprocessed, treated, or discharged onto land.</u></b>	<b><u>1,000 tonnes or more per year</u></b>	<b><u>12,500 tonnes per annual period</u></b>

- The Licence is amended by the insertion of the definitions below:

‘**AS 4323.1**’ means the Australian Standard AS4323.1 Stationary Source Emissions Method 1: Selection of sampling positions;

‘**averaging period**’ means the time over which a limit is measured or a monitoring result is obtained;

‘**NATA**’ means the National Association of Testing Authorities, Australia;

‘**NATA accredited**’ means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

‘**normal operating conditions**’ means any operation of a particular process (including abatement equipment) excluding start-up, shut-down and upset conditions, in relation to stack sampling or monitoring;

‘**STP dry**’ means standard temperature and pressure (0o Celsius and 101.325 kilopascals respectively), dry;

‘**RAP**’ means reclaimed asphalt pavement;

‘**USEPA Method 5**’ means the United States Environmental Protection Agency *Method 5 Determination of particulate matter emissions from stationary sources*;

‘**USEPA Method 17**’ means United States Environmental Protection Agency *Method 17 Determination of Particulate Emissions From Stationary Sources*;

‘**USEPA Method 18**’ means United States Environmental Protection Agency *Method 18 Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry*;

3. Table 1.2.1 of the Licence is amended by the insertion of the bold text shown in underline below:

<b>Table 1.2.1 Authorised Activities</b>		
<b>Category<sup>1</sup></b>	<b>Category description<sup>1</sup></b>	<b>Process limits</b>
12	Screening etc. of material	200,000 tonnes per annual period
<b>35</b>	<b>Asphalt manufacturing</b>	<b>50,000 tonnes per annual period</b>
<b>61A</b>	<b>Solid waste facility</b>	<b>12,500 tonnes per annual period</b>

Note 1: *Environmental Protection Regulations 1987*, Schedule 1.

4. The Licence is amended by the insertion of the following Conditions:

- 1.2.3** The Licensee must only accept onto the premises waste of a waste type, which does not exceed the corresponding rate at which waste is received, and which meets the corresponding acceptance specification set out in Table 1.2.3.

<b>Table 1.2.3: Types of waste authorised to be accepted onto the premises</b>		
<b>Waste type</b>	<b>Rate at which waste is received</b>	<b>Acceptance specification</b>
RAP	12,500 tonnes per annum period	The Licensee shall ensure that RAP does not contain any of the following materials: (d) granular pavement materials, clay, soil or organic matter; (e) bricks, concrete, glass or building materials; and (f) tar based products, geotextile fabrics, raised pavement markers or surface treatment such as high friction surfacings.

- 1.2.4** The Licensee is permitted to remove asphalt manufacturing equipment from the Premises and relocate it back within the Premises on an as needs basis.

### **1.3 Works**

- 1.3.1** The Licensee must install and undertake the Works for the infrastructure and equipment:

- (a) specified in Column 1;
- (b) to the requirements specified in Column 2; of Table 1.3.1 below.

- 1.3.2** The Licensee must not depart from the requirements specified in Column 2 of Table 2 except:

- (a) where such departure does not increase risks to public health, public amenity or the environment; and
- (b) all other Conditions in this Licence are still satisfied.

- 1.3.3** Within 30 days of the completion of the Works specified in Column 1 of Table 1.3.1, the Licensee must provide to the CEO a report from an Engineer confirming each item of infrastructure or component of infrastructure specified in Column 1 of Table 1.3.1 below has been constructed with no material defects and to the requirements specified in Column 2.

**1.3.4** Where a departure from the requirements specified in Column 2 of Table 1.3.1 occurs and is of a type allowed by Condition 2, the Licensee must provide to the CEO a description of, and explanation for, the departure along with the certification required by Condition 2(b).

<b>Table 1.3.1 Works</b>	
<b>Column 1</b>	<b>Column 2</b>
<b>Infrastructure/Equipment</b>	<b>Requirements (constructions and operation)</b>
Ciber iNova 2000 asphalt plant or equivalent	<ul style="list-style-type: none"> <li>• Construction on compacted hardstand;</li> <li>• Baghouse filter to be designed and constructed such that all air from the dryer is treated and that particulate emissions are less than 50mg/m<sup>3</sup>;</li> <li>• Stack of the bag filter is required to have a stack sampling port that is compliant with AS 4323.1; and</li> <li>• Located as per the map in Schedule 1.</li> </ul>
Stormwater infrastructure	<ul style="list-style-type: none"> <li>• Unlined retention basin design to receive a 1 in 10 year, 2 hour rainfall event; and</li> <li>• Located as per the map in Schedule 1.</li> </ul>

## 1.5 Monitoring

**1.5.1** The Licensee must monitoring emissions:

- from the emission point;
- for the corresponding parameter;
- in the corresponding reporting unit;
- for the corresponding averaging period;
- at the corresponding frequency; and
- using the corresponding method,

as set out in Table 1.5.1.

<b>Table 1.5.1: Stack emission monitoring</b>					
<b>Emission point (and reference on the Premises map in Schedule 1)</b>	<b>Parameter</b>	<b>Frequency<sup>1</sup></b>	<b>Averaging period</b>	<b>Unit<sup>2, 3</sup></b>	<b>Method</b>
Asphalt plant stack	Particulate matter	Annual	Stack test (Minimum 60 minute average)	mg/m <sup>3</sup> g/s	USEPA Method 5 or USEPA Method 17
	Total Volatile Organic Compounds		Stack test (Minimum 30 minute average)		USEPA Method 18

Note 1: Monitoring shall be undertaken to reflect normal operating conditions and any limits or conditions on inputs or production.

Note 2: All units are referenced to STP dry

Note 3: Concentration units are referenced to 17% O<sub>2</sub>.

Note 4: Monitoring may be carried out while the asphalt plant is located at any other prescribed premises.

**1.5.2** The Licensee must ensure that all monitoring and analysis as required per condition 1.5.1 is undertaken by a holder of a current NATA accreditation for the relevant parameters and/or methods as per condition 1.5.1.

- 2.1.3** The Licensee must maintain accurate and auditable Books including the following records, information, reports and data required by this Licence:
- (a) the calculation of fees payable in respect of this Licence;
  - (b) the works conducted in accordance with Condition 1.3.1 of this Licence;
  - (c) the maintenance of infrastructure required to ensure that it is kept in good working order in accordance with Condition 1.2.2 of this Licence; and
  - (d) monitoring undertaken in accordance with Conditions 1.5.1 and 1.5.2 of this Licence.

In addition, the Books must:

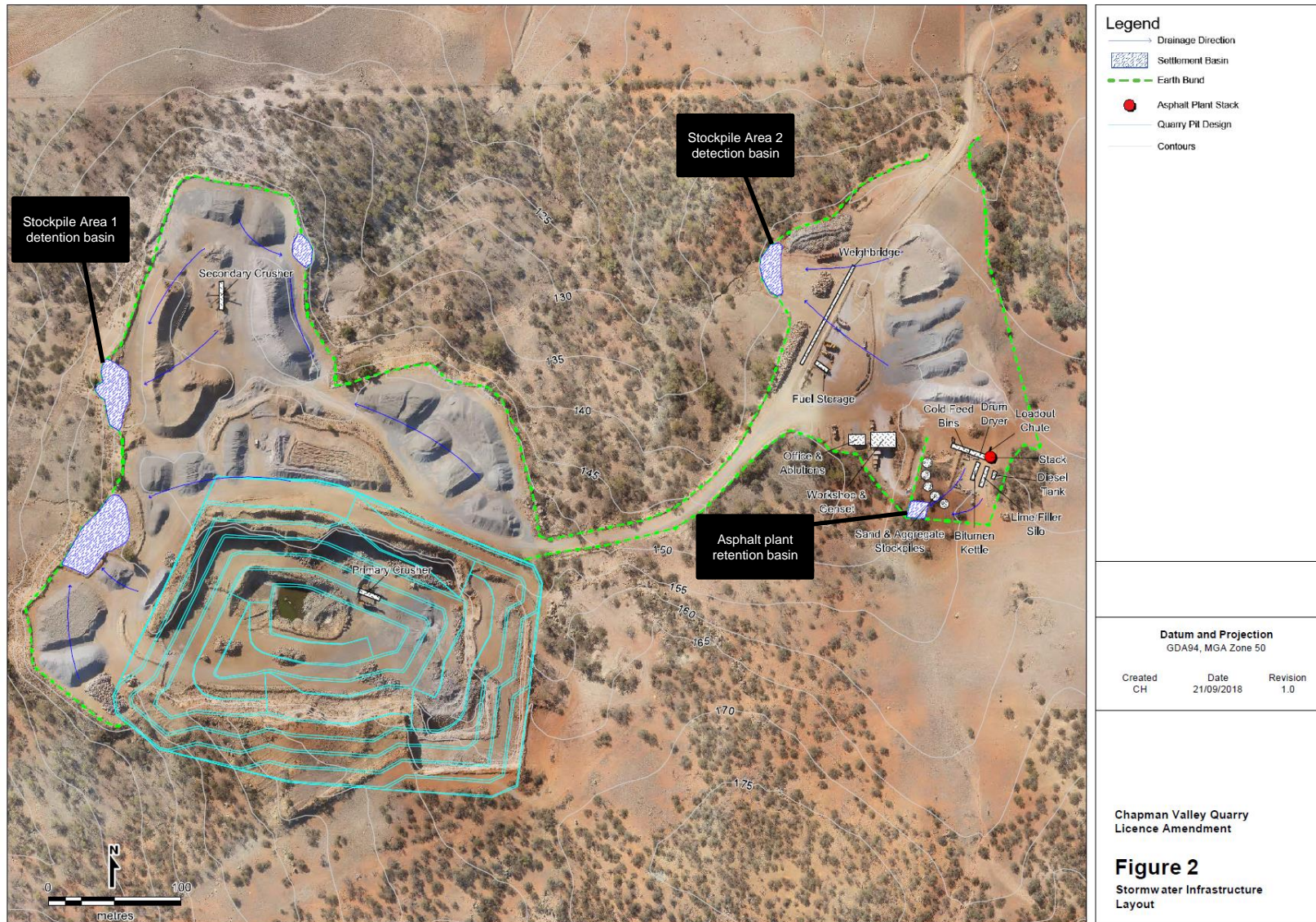
- (a) be legible;
- (b) if amended, be amended in such a way that the original and subsequent amendments remain legible and are capable of retrieval;
- (c) be retained for at least 3 years from the date the Books were made; and
- (d) be available to be produced to an Inspector or the CEO.

- 2.1.4** The Licensee must submit to the CEO by no later than 90 days after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 2.1.1, and which provides information in accordance with the corresponding requirement set out in Table 2.1.1.

<b>Table 2.1.1: Annual Environmental Report</b>	
<b>Condition</b>	<b>Requirement</b>
1.4.1 and 1.4.2	Submission of the original stack testing and sampling reports from the company/companies that conducted the stack testing and sampling.
-	Details of the periods the plant was operational at the time (days of the year).
2.1.2	A summary of any complaints received.
2.1.1	Annual Audit Compliance Report in the approved form and signed as per the requirements of that form.

- 5.** The Site layout map and Stormwater infrastructure map are replaced with the Site layout map attached to this Amendment Notice.

# Attachment 1: Site layout map



## Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L9020/2016/1 – Hardrock Quarry	L9020/2016/1	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
2	Application Form and supporting documentation	Boral 2018a	DWER records
3	Boral Australia, <i>Response to RFI – Application for an amendment to Licence L9020/2016/1</i> (Letter dated 26 September 2018)	Boral 2018	
4	Email from Craig Holness (Boral) dated 5 November 2018 entitled <i>Re: APPLICANT NOTIFICATION - L9020/2016/1 - NOTICE OF PROPOSED AMENDMENT TO LICENCE</i>	Boral 2018	
5	Ektimo, 2018. <i>Emission testing report: Ciber iNova Mobile Asphalt Plant Boral Asphalt (Report Number R006469a)</i> , Welshpool, Western Australia	Ektimo, 2018	
6	DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	DER 2015a	
7	DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	DER 2015b	
8	DER, August 2016. <i>Guidance Statement: Licence duration</i> . Department of Environment Regulation, Perth.	DER 2016a	
9	DER, November 2016. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	DER 2016b	
10	DER, November 2016. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.	DER 2016c	
11	DoW, January 2017. Northern Perth Basin: Geology, hydrogeology and groundwater resources, Department of Water, Perth	DoW 2017	accessed at <a href="http://www.water.wa.gov.au">www.water.wa.gov.au</a>