Government of Western Australia
Department of Environment Regulation

Licence

Environmental Protection Act 1986, Part V

Licensee: Boral Resources (W.A.) Ltd

Licence: L6265/1983/8

Registered office: Level 3
40 Mount Street
NORTH SYDNEY NSW 2060

ACN: 008 686 904

Premises address: Boral Asphalt
90 McDowell Street
WELSHPOOL WA 6106
Being Lot 43 on Plan 3217
(as depicted in Schedule 1)

Issue date: Thursday 28 July 2011

Commencement date: Wednesday 03 August 2011

Expiry date: Tuesday 02 August 2016

Prescribed premises category
Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
35	Asphalt manufacturing: premises on which hot or cold mix asphalt is produced using crushed or ground rock aggregates mixed with bituminous or asphaltic materials for use at a place or premises other than those premises.	Not Applicable	250 000 tonnes per annual period
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.	1,000 or more tonnes per year	110,000 tonnes per annual period

Conditions
This Licence is subject to the conditions set out in the attached pages.

.....
Officer delegated under section 20
of the *Environmental Protection Act 1986*

Contents

Introduction

This Introduction is not part of the Licence conditions.

DER's industry licensing role
The Department of Environment Regulation (DER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER works with the business owners, community, consultants, industry and other representatives to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

Licence requirements
This Licence is issued under Part V of the Act. Conditions contained within the Licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:
http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.

- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.

- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.

You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.

Licence holders are also reminded of the requirements of section 53 of the Act which places restrictions on making certain changes to prescribed premises unless the changes are in accordance with a works approval, licence, closure notice or environmental protection notice.

Licence fees
If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

Ministerial conditions
If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and Licence summary
Boral Resources (W.A.) Ltd (Boral) operates an asphalt plant located in Welshpool in the City of Canning. It is situated on the northern extent of an area zoned for 'general industry' adjacent to a rail corridor with industrial zoned areas further north, approximately 1.1 kilometers from the nearest residence. Immediately south, east and west is other industry with the nearest sensitive receptors 1-1.1 km south east of the premises boundary in an area zoned 'urban development.'

The asphalt plant uses a pug mill batching plant where raw inputs are placed in a pug mill to be ground and mixed with liquid bitumen. Aggregates are weighed and conveyed to a drum dryer where they are heated and then discharged to a screen stack via a hot elevator. In the screen stack, the aggregate is resized and stored in a series of five hot bins. Bitumen is stored in heated tanks adjacent to the plant and filler material (lime and dust from the baghouse filters) is stored in purpose built silos. These materials are weighed and fed into the pug mill (mixing unit) along with hot aggregate. The hot mixed asphalt product is then either delivered directly into a delivery truck or transferred to one of a series of three hot storage bins, pending delivery to off-site. Boral have introduced the crushing and screening of unprocessed reclaimed asphalt pavement (RAP) through works approval W5881/2015/1 granted on 30 October 2015. Boral will locate crushing and screening equipment on site as required to process RAP for use in the asphalt manufacturing process. The processed RAP will be initially stored in exposed stockpiles and then transferred to an enclosed building. Boral has also submitted a wastewater treatment improvement proposal to upgrade its washbay treatment process.

The principle emissions of concern for this premises include point source emissions to air (particulates, oxides of nitrogen, carbon monoxide, volatile organic compounds and odour), fugitive emissions (dust and odour), noise and contaminated water discharges. The premises has a baghouse to remove particulates from the drum dryer air stream.

The capacity has been increased to 250,000 tonnes per year and the conditions of amended licence reflect DER's assessment of the risk of emissions, discharges and impacts associated with this production capacity. The hourly production rate has increased from 120 tonnes per hour (tph) to 180 tph. This licence does not authorise the licensee to discharge wastewaters beyond the premises boundary.

This amended licence is the result of works completed under works approval W5881/2015/1 for RAP processing and use in asphalt manufacturing and the submission of a wastewater treatment improvement proposal. The licence has also been converted to a new format.

The licences and works approvals issued for the Premises since 01/01/2011 are:

Instrument log		
Instrument	**Issued**	**Description**
L6265/1983/8	Draft	Licence amendment for RAP, approval of a wastewater treatment improvement proposal and conversion of the licence to a new format.

W5881/2015/1	30/10/2015	Works approval for crushing and screening of unprocessed reclaimed asphalt pavement (RAP) including processed RAP storage and use in the asphalt manufacturing process
L6265/1983/8	27/07/2011	Licence reissue

Severance

It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise *ultra vires* or invalid.

END OF INTRODUCTION

Licence conditions

1 General

1.1 Interpretation

1.1.1 Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the Licence, where the emission amounts to:
(a) pollution;
(b) unreasonable emission;
(c) discharge of waste in circumstances likely to cause pollution; or
(d) being contrary to any written law.

1.1.2 In the Licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.3 For the purposes of this Licence, unless the contrary intention appears:

'Act' means the *Environmental Protection Act 1986;*

'annual period' means the inclusive period from 1 July until 30 June in the following year;

'biannual' means the 2 inclusive periods from 1 July to 31 December and in the following year, 1 January to 30 June;

'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 or target is measured or a monitoring result is obtained;

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of correspondence means;

Chief Executive Officer
Department Administering the *Environmental Protection Act 1986*
Locked Bag 33
CLOISTERS SQUARE WA 6850
Email: info@der.wa.gov.au;

'fugitive emissions' means all emissions not arising from point sources identified in section 2.3;

'Licence' means this Licence numbered L6265/1983/8 and issued under the Act;

'Licensee' means the person or organisation named as Licensee on page 1 of the Licence;

'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;

'PM' means total particulate matter including both solid fragments of material and miniscule droplets of liquid;

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

'Processed RAP' means RAP which has been crushed and/or screened to size for recycling into new asphalt;

'RAP' means reclaimed asphalt pavement;

'Schedule 1' means Schedule 1 of this Licence unless otherwise stated;

'Schedule 2' means Schedule 2 of this Licence unless otherwise stated;

'spot sample' means a discrete sample representative at the time and place at which the sample is taken;

'stack test' means a discrete set of samples taken over a representative period at normal operating conditions;

'STP dry' means standard temperature and pressure (0^{o}Celsius and 101.325 kilopascals respectively), dry;

'USEPA' means United States (of America) Environmental Protection Agency;

'USEPA Method 5' means the promulgated Test Method 5 – Determination of Particulate Matter Emissions from Stationary Sources;

'USEPA Method 7E' means the promulgated Test Method 7E - Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure);

'USEPA Method 10' means the promulgated Test Method 10 – Determination of Carbon Monoxide Emissions from Stationary Sources (Instrumental Analyzer Procedure);

'USEPA Method 17' means the promulgated Test Method 17 – Determination of Particulate Matter Emissions from Stationary Sources; and

'usual working day' means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia.

1.1.4 Any reference to an Australian or other standard in the Licence means the relevant parts of the standard in force from time to time during the term of this Licence.

1.1.5 Any reference to a guideline or code of practice in the Licence means the version of that guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.

1.2 General conditions

1.2.1 The Licensee shall operate and maintain all pollution control and monitoring equipment to the manufacturer's specification or any relevant and effective internal management system.

1.2.2 The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.

1.3 Premises operation

1.3.1 The production of asphalt shall not exceed 180 tonnes per hour.

1.3.2 No raw materials, materials or fuels other than those listed in Table 1.3.2 and which comply with any specification stated shall be subjected to the relevant process in that table.

Table 1.3.2: Material handling and processing

Material	Process	Specifications
Granular raw materials	Receipt, storage and use in asphalt manufacturing process	The Licensee shall only store granular raw materials (excluding RAP) in dedicted ground bins, cold feed bins or above-ground bins. Ground bins are to: (a) comprise of at least three sides; (b) not contain stored materials in excess of the height or the width of the bin walls; and (c) be fitted with water misting sprayers that direct water spray across the entire surface area of stored materials. Cold feed bins are to: (a) be located so as to minimise exposure to wind; (b) be enclosed on three sides and roofed; and (c) not contain stored materials in excess of the height of the bin walls.
Bulk filler (e.g. Lime)	Receipt, storage and use in asphalt manufacturing process	The Licensee shall store bulk fillers (e.g. lime) in the dedicated filler silo and ensure that ports and hatches are sealed during filling activities.
Unprocessed RAP	Receipt, storage and processing (crushing and screening)	The Licensee shall only: (a) crush, screen and store unprocessed RAP within the area depicted in Schedule 1; (b) crush and screen unprocessed RAP with a PF 7000IC-R Mobile Impact Crusher or a make/model that has equivalent manfucturers specifications for noise emissions and dust minimisation controls; and (c) crush and screen unprocessed RAP if it does not contain any of the following materials: (i) granular pavement materials, clay, soil or organic matter; (ii) bricks, concrete, glass or building materials; and (iii) tar based products, geotextile fabrics, raised pavement markers or surface treatment such as high friction surfacings.
Processed RAP	Storage and use in the asphalt manufacturing process	None specified.

1.3.3 The Licensee is permitted to remove crushing and screening equipment for unprocessed RAP from the Premises and relocate it back within the Premises on an as needs basis, subject to the unprocessed RAP specifications in Table 1.3.2.

2 Emissions

2.1 General

2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit specified in any part of section 2 of this Licence.

2.2 Point source emissions to air

2.2.1 The Licensee shall ensure that where waste is emitted to air from the emission points in Table 2.2.1 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this Licence.

Table 2.2.1: Emission points to air

Emission point reference and location on Map of emission points	Emission point	Emission point height above ground level	Source, including any abatement
A1	Stack	12 m	Drum dryer via baghouse dust collector.

2.2.2 The Licensee shall not cause or allow point source emissions to air greater than the limits listed in Table 2.2.2.

Table 2.2.2: Point source emission limits to air

Emission point Reference	Parameter	Limit (including units)[1,2]	Averaging period
A1	PM	50 mg/m^3	Stack Test (Minimum 60 minute average)
	Stack velocity	>12m/s	Stack test (Minimum 30 minute average)

Note 1: All units are referenced to STP dry
Note 2: Concentration units for A1 are referenced to 17% O_2.

2.2.3 The Licensee shall ensure that displacement air from the filling of any silo passes through a baghouse dust collector that vents air emissions at less than1 m from ground level.

2.3 Fugitive emissions

2.3.1 The Licensee shall ensure materials stored in the ground bins and cold feed bins are maintained in a damp state.

2.3.2 The Licensee shall ensure that all conveyors are enclosed with wind shields or otherwise designed to prevent windblown dust.

3 Monitoring

3.1 General monitoring

3.1.1 The licensee shall ensure that all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table

3.1.2 The Licensee shall ensure that biannual monitoring is undertaken at least 5 months apart.

3.1.3 The Licensee shall record production or throughput data and any other process parameters relevant to any non-continuous monitoring undertaken.

3.1.4 The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications and the requirements of the Licence.

3.1.5 The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

3.2 Monitoring of point source emissions to air

3.2.1 The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

Table 3.2.1: Monitoring of point source emissions to air

Emission point reference	Parameter	Units[1, 3]	Averaging period	Frequency[2]	Method
A1	PM	mg/m^3 g/s	Stack test (Minimum 60 minute average)	Biannual	USEPA Method 5 or USEPA Method 17
	Oxides of nitrogen				USEPA Method 7E
	Carbon monoxide				USEPA Method 10

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 for A1 are referenced to 17% O_2.

3.2.2 The Licensee shall ensure that sampling required under Condition 3.2.1 of the Licence is undertaken at sampling locations in accordance with the AS 4323.1.

3.2.3 The Licensee shall ensure that all non-continuous sampling and analysis undertaken pursuant to condition 3.2.1 is undertaken by a holder of NATA accreditation for the relevant methods of sampling and analysis.

4 Information

4.1 Records

4.1.1 All information and records required by the Licence shall:
- (a) be legible;
- (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
- (c) except for records listed in 5.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
- (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
  - (i) off-site environmental effects; or
  - (ii) matters which affect the condition of the land or waters.

4.1.2 The Licensee shall ensure that:
- (a) any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and
- (b) any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.

4.1.3 The Licensee shall complete an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.

4.1.4 The Licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

4.2 Reporting

4.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 28 calendar days after the end of the annual period. The report shall contain the information listed in Table 5.2.1 in the format or form specified in that table.

Table 5.2.1: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form[1]
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
Table 3.2.1	Particulates	None specified
5.1.3	Compliance	Annual Audit Compliance Report (AACR)
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

4.2.2 The Licensee shall ensure that the Annual Environmental Report also contains:
- (a) any relevant process, production or operational data recorded under Condition 3.1.3; and
- (b) an assessment of the information contained within the report against previous monitoring results and Licence limits.

4.3 Notification

4.3.1 The Licensee shall ensure that the parameters listed in Table 5.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 5.3.1: Notification requirements

Condition or table (if relevant)	Parameter	Notification requirement[1]	Format or form[2]
2.2.2	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable	N1
3.1.5	Calibration report	As soon as practicable.	None specified

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act
Note 2: Forms are in Schedule 2

5 Works

5.1 General works conditions

5.1.1 The Licensee shall construct the works in accordance with the documentation detailed in Table 1.2.1:

Table 5.1.1: Construction Requirements[1]

Document	Parts	Date of Document
Welshpool Asphalt, Wastewater Treatment Improvement Proposal authored by Boral Resources (WA), March 2015, Version 1.1	All, including drawings and appendices	10 April 2015

Note 1: Where the details and commitments of the documents listed in condition 5.1.1 are inconsistent with any other condition of Section 5 of this licence, the conditions of this section of licence shall prevail.

5.2 Reporting

5.2.1 The Licensee shall submit a compliance document to the CEO, following the construction of the works.

5.2.2 The compliance document shall:
(a) certify that the works were constructed in accordance with the conditions of Section 5 of this licence;
(b) be signed by a person authorised to represent the Licensee and contain the printed name and position of that person within the company.

Schedule 1: Maps

Premises map

The Premises and emission points are shown in the maps below. The pink line depicts the Premises boundary . The blue point depict the location of the emission point defined in Table 2.2.1.

Map of RAP processing area

The RAP processing area for the purposes of Table 1.3.2 is shown in the map below. The black dash line depicts the boundary of the RAP processing area.

Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.

ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

SECTION A

LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name: Trading as:	ABN:
Reporting period: _____ to _____	

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of the Licence complied with within the reporting period? (please tick the appropriate box)

Yes ☐ Please proceed to Section C

No ☐ Please proceed to Section B

Each page must be initialled by the person(s) who signs Section C of this Annual Audit Compliance Report (AACR).

Initial:

SECTION B

DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each Licence condition that was not complied with.

a) Licence condition not complied with:	
b) Date(s) when the non compliance occurred, if applicable:	
c) Was this non compliance reported to DER?:	
☐ Yes ☐ Reported to DER verbally Date _____ ☐ Reported to DER in writing Date _____	☐ No
d) Has DER taken, or finalised any action in relation to the non compliance?:	
e) Summary of particulars of the non compliance, and what was the environmental impact:	
f) If relevant, the precise location where the non compliance occurred (attach map or diagram):	
g) Cause of non compliance:	
h) Action taken, or that will be taken to mitigate any adverse effects of the non compliance:	
i) Action taken or that will be taken to prevent recurrence of the non compliance:	

Each page must be initialled by the person(s) who signs Section C of this AACR

Initial:

SECTION C

SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) may only be signed by a person(s) with legal authority to sign it. The ways in which the AACR must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this AACR is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
An individual	□	by the individual licence holder, or
	□	by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	□	by the principal executive officer of the licensee; or
	□	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	□	by affixing the common seal of the licensee in accordance with the *Corporations Act 2001*; or
	□	by two directors of the licensee; or
	□	by a director and a company secretary of the licensee, or
	□	if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or
	□	by the principal executive officer of the licensee; or
	□	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	□	by the principal executive officer of the licensee; or
	□	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	□	by the chief executive officer of the licensee; or
	□	by affixing the seal of the local government.

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of $50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: _____

NAME:
(printed) _____

POSITION: _____

DATE: _____/_____/_____

SIGNATURE: _____

NAME:
(printed) _____

POSITION: _____

DATE: _____/_____/_____

SEAL (if signing under seal)

Licence: L6265/1983/8 Licensee: Boral Resources (W.A.) Ltd
Form: N1 Date of breach:

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.
Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of Boral Resources (W.A.) Ltd	
Date	

Government of Western Australia
Department of Environment Regulation

Decision Document

Environmental Protection Act 1986, Part V

Proponent: Boral Resources (W.A.) Ltd

Licence: L6265/1983/8

Registered office:	Level 3 40 Mount Street NORTH SYDNEY NSW 2060
ACN:	008 686 904
Premises address:	Boral Asphalt 90 McDowell Street WELSHPOOL WA 6106 Being Lot 43 on Plan 3217
Issue date:	Thursday, 28 July 2011
Commencement date:	Wednesday, 3 August 2011
Expiry date:	Tuesday, 2 August 2016

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue an amended licence. DER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by:	Chris Malley A/Senior Licensing Officer
Decision Document authorised by:	Lauren Trott A/Manager Licensing, Process Industries (Metro)

Contents

1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986.* Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.

2 Administrative summary

Administrative details		
Application type	Works Approval ☐ New Licence ☐ Licence amendment ☒ Works Approval amendment ☐	
Activities that cause the premises to become prescribed premises	**Category number(s)**	**Assessed design capacity**
	35	250,000 tonnes per annual period
	61A	110,000 tonnes per annual period
Application verified Application fee paid	Date: N/A Date: N/A	
Works Approval has been complied with Compliance Certificate received	Yes☒ No☐ N/A☐ Yes☒ No☐ N/A☐	
Commercial-in-confidence claim	Yes☐ No☒	
Commercial-in-confidence claim outcome	N/A	
Is the proposal a Major Resource Project?	Yes☐ No☒	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the *Environmental Protection Act 1986*?	Yes☐ No☒	Referral decision No: Managed under Part V ☐ Assessed under Part IV ☐
Is the proposal subject to Ministerial Conditions?	Yes☐ No☒	Ministerial statement No: EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the *Environmental Protection Act 1986*)?	Yes☐ No☒ Department of Water consulted Yes ☐ No ☒	
Is the Premises within an Environmental Protection Policy (EPP) Area Yes☐ No☒		
Is the Premises subject to any EPP requirements? Yes☐ No☒		

3 Executive summary of proposal and assessment

Boral Resources (W.A.) Ltd (Boral) operates an asphalt plant located in Welshpool in the City of Canning. It is situated on the northern extent of an area zoned for 'general industry' adjacent to a rail corrider with industrial zoned areas further north, approximately 1.1 kilometers from the nearest residence. Immediately south, east and west is other industry with the nearest sensitive receptors 1-1.1 km south east of the premises boundary in an area zoned 'urban development.'

The asphalt plant uses a pug mill batching plant where raw inputs are placed in a pug mill to be ground and mixed with liquid bitumen. Aggregates are weighed and conveyed to a drum dryer where they are heated and then discharged to a screen stack via a hot elevator. In the screen stack, the aggregate is resized and stored in a series of five hot bins. Bitumen is stored in heated tanks adjacent to the plant and filler material (lime and dust from the baghouse filters) is stored in purpose built silos. These materials are weighed and fed into the pug mill (mixing unit) along with hot aggregate. The hot mixed asphalt product is then either delivered directly into a delivery truck or transferred to one of a series of three hot storage bins, pending delivery to off-site. Boral have introduced the crushing and screening of unprocessed reclaimed asphalt pavement (RAP) through works approval W5881/2015/1 granted on 30 October 2015. Boral will locate crushing and screening equipment on site as required to process RAP for use in the asphalt manufacturing process. The processed RAP will be initially stored in exposed stockpiles and then transferred to an enclosed building.

This decision document has been prepared for the amended licence in response to the completion of works under works approval W5881/2015/1 and includes a conversion of the licence into a new format. The licensee has also submitted a proposal for an upgraded washbay wastewater treatment system that has been assessed.

For an asphalt plant, the principle emissions of concern are emissions to air including particulates, sulfur dioxide, nitrogen dioxide, carbon monoxide, and odour. Process controls and a bag filter are used to control these emissions. Potential environmental issues with processing RAP are dust from the crushing and screening, increased VOC emissions during use in the asphalt manufacturing process and potential contamination of stormwater if RAP contains contaminated material.

4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Licence section	**Condition number L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
General conditions	N/A	Condition G1(a) of the previous licence specified an annual quanity of asphalt that could be produced at the premises. This will be specified on page 1 of the licence therefore has been omitted from the amended licence.	N/A
Premises operation	L1.3.1 L1.3.2 L1.3.3 L1.3.4	Condition L1.3.1 replaces condition G1(b) specifying an hourly maximum rate of asphalt production. The rate has been increased from 120 tonnes per hour (tph) to 180 tph based on the assessed increased in capacity from 200,000 tonnes per year to 250,000 tonnes per year. On average, 250 operational days per year, with 4.5 hours per day asphalt production at 180 tph is equivalent to 250,000 tonnes of asphalt per year. Conditions A1, A2(a-d), A3(a), A4(a-c) and A10 have been replaced by condition L1.3.2 that includes Table 1.3.2. The table is materials received, stored and processed on site according to relevant specifications. New regulatory controls in Table 1.3.2 relate to works approval W5881/2015/1 to establish the crushing and screening of unprocessed RAP and the use of processed RAP in the asphalt manufacturing process. According to the risk assessment for W5881/2015/1, Table 1.3.2 will require the following RAP specifications: • unprocessed RAP must be crushed screened and stored in the designated area on the premises; • must be crushed and screened with the designated equipment or equivalent in manufacturers specifications for noise emissions and dust control; • must only be crushed and screen if it is free of specified contaminants. As per works approval W5881/2015/1 the crushing and screening equipment for	Works approval W5881/2015/1.

DECISION TABLE			
Licence section	**Condition number L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
		unprocessed RAP is mobile and will be located and removed from the premises on an as needs basis. Subject to locating the equipment in the designated unprocessed RAP area, condition L1.3.3 will permit the licensee to locate and remove the equipment as required.	
Emissions general	L2.1.1	Descriptive limits will be set through condition 2.2.2 of the licence and therefore the condition regarding recording and investigation of exceedances of limits has been included.	N/A
Point source emissions to air including monitoring	L1.3.1 L2.2.1 L2.2.2 L2.2.3 L3.1.1 L3.1.2 L3.1.3 L3.1.4 L3.1.5 L3.2.1 L3.2.2 L3.2.3	Emission Description *Emission:* Combustion gases (NOx, CO and particulates) from the drum dryer via Stack A1 (normal operation). Dark smoke may also be emitted. *Impact:* Reduced local air quality. Nearest residents are located approximately 1.1km from the premises and industrial premises are imediately adjacent. *Controls:* Air emissions from the drum dryer are treated by a baghouse for the removal of particulates. A baghouse will reduce particulate emissions to less than 50mg/m^3. Baghouse emissions are discharged via a 12 m stack at a velocity greater than 12 m/s. Bitumen is added directly to the pugmill to mitigate VOC generation. Processed RAP is not directly heated by the burners, but indirectly heated and moisture content of RAP is also managed which minimises VOC generation. Risk Assessment *Consequence:* Minor *Likelihood*: Possible *Risk Rating:* Moderate Regulatory Controls As per the 'premises operation' section, condition 1.3.1 replaces condition G1(b) that limits the hourly asphalt production rate as a surrogate control for point source air emissions. The licensee is currently operating at 180 tph without known environmental consequence.	

DECISION TABLE			
Licence section	**Condition number L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
		Condition A8 requiring air emissions from the drum dryer to pass through a baghouse prior to stack discharge has been replaced by column 4 of Table 2.2.1 in condition 2.2.1. As a result of licensee comments on the draft licence (refer to point 7 in section 5 of this report), point 'A2' that had been included for the baghouse vents on the filler silo was removed from Table 2.2.1. This was replaced by a more general condition in 2.2.3 to ensure displacement air from the filling of silo's passes through a baghouse dust collector that vents air emissions at less than 1 m from ground level. This condition replaces A10 in the previous licence and is consistent with the licensee's draft comments. Condition A7 specified the minimum height of stack (12 m) and discharge velocity (12 m/s) for the baghouse stack. This will be replaced by condition 2.2.1 and 2.2.2. Condition A8 specified an emission limit for particulates of 150 mg/m^3 from the baghouse stack. The limit for particulates will be specified in condition 2.2.2 and reduced to 50 mg/m^3 which is achievable for this technology. Historical stack monitoring results show the licensee has normal operating concentrations less than 20 mg/m^3. It is not known why previous licences imposed a particulate limit on baghouse emissions but did not require any emissions monitoring to assess compliance with the limit. Stack monitoring requirements have been included in condition 3.2.1 for the licensee to monitor its performance and confirm compliance with the particulate limit. The licensee will also be required to monitor NOx and CO which are standard parameters to confirm combustion efficiency and consistent with other asphalt manufacturing licences. As the licence contains requirements for stack monitoring, conditions 3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.1.5, 3.2.2 and 3.2.3 will be included to ensure sampling and analysis is performed according to specified standards. The previous licence contained conditions A9 relating to the emission of dark smoke from stacks. This requirement duplicated the provisions of the *Environmental*	

DECISION TABLE			
Licence section	**Condition number L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
		Protection (Unauthorised Discharges) Regulations 2004 which makes it an offense in connection with a business or commercial activity, to burn material so as to cause dark smoke for more than 4 minutes in any hour. Condition A9 has therefore been removed. Residual Risk *Consequence*: Minor *Likelihood:* Unlikely *Residual Risk Rating:* Moderate	
Point source emissions to surface water including monitoring	N/A	The premises does not have point source emissions to surface water. There are no new discharges to surface water proposed therefore there is no change to the risk of discharges to surface water and no conditions are to be included on the amended licence.	N/A
Point source emissions to groundwater including monitoring	N/A	The premises does not have point source emissions to groundwater. There are no new discharges to groundwater proposed therefore there is no change to the risk of discharges to groundwater and no conditions are to be included on the amended licence.	N/A
Emissions to land including monitoring		**Washbay wastewater treatment upgrade proposal** Refer to the 'works' section of this table for further information. There is a risk of wastewater contaminating soil and groundwater therefore the risk of this has been assessed. Emission Description *Emission:* Contaminated wastewater from the washing down of vehicles including pavers, spray trucks, crew trucks and light vehicles. Kerosense is used to soften build-up bitumen on equipment. High pressure water is then used to remove the softened bitumen. A quick break degreaser is used to washdown light vehicles and equipment when required. The main contaminants consist of kerosene, bitumen, degreaser and	N/A

DECISION TABLE			
Licence section	**Condition number L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
		suspended solids. The conservative calculated wastewater generation rate is estimated at 4,824 L/day with average rates expected to be less. The system has a design maximum process flow rate of 5,000 L/hr which is two times the maximum flows generated by washdown hoses (2,400 L/hr). The updgraded treatment system has been designed to achieve a total petroleum hydrocarbon (TPH) concentration of less than 15 mg/L, total suspended solids less than 30 mg/L and surfactants less than 5 mg/L. *Impact:* Contamination of soil and groundwater. The site is located within an area zoned for general industry. The site is not located within a proclaimed drinking water catchment and there are no sensitive surface water ecosystems on the premises or in close proximity. DER's GIS Viewer WIN Groundwater them does not indicate there are beneficial groundwater users in close proximity to the premises. *Controls:* MyCelx Advanced Coalescer (MAC unit) treated hydrocarbon (i.e. kerosene), MXR unit to remove remaining free hydrocarbon and suspended solids and MX units for final polishing to remove emulsions, water soluble oils and solids prior to discharge. MXR units are fitted with independent automated backwash systems to prevent clogging as do the MX units. Treated wastewater exits the system and passes through a TPH monitor before entering the backwash storage tank. If the TPH monitor detects an a concentration in excess of 15 mg/L the water is redirected for re-treatment. <u>Risk Assessment</u> *Consequence*: Minor *Likelihood:* Unlikely *Risk Rating:* Moderate <u>Regulatory Controls</u> The amended licence will not contain any of the water pollution control conditions from the previous licence. DER will reassess the adequacy of wastewater management conditions on receipt of the compliance document following the wastewater upgrade. Submission of a compliance document is required by condition 5.2.1.	

DECISION TABLE			
Licence section	**Condition number L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
		Note this licence does not authorise the discharge of potentially contaminated stormwater beyond the premises boundary. The discharge of contaminated stormwater can be adequately regulated by the *Environmental Protection (Unauthorised Discharges) Regulations 2004* which make it an offence to discharge certain types of materials including hydrocarbon, sediment, degreaser and detergent into the environment. Residual Risk *Consequence:* Minor *Likelihood:* Unlikely *Risk Rating:* Moderate	
Fugitive emissions	L2.3.1 L2.3.2	Emission Description *Emission:* Fugitive dust from movement of vehicles, materials handling and lift of from stockpiles including unprocessed and processed RAP stockpiles. The RAP cushing and screening equipment is also a potential source of fugitive dust. *Impact:* Reduced local air quality. May cause a nuisance to nearby industrial receptors. Nearest sensitive receptors approximately 1.1 km away *Controls:* Water misters on ground bins. Materials in the ground bins and cold feed bins are maintained in a damp state. Ground bins and cold feed bins are designed to mitigate wind impacts. Conveyors fitted with wind shields. Trafficked areas are hardstand. Crushing and screening system is fitted with a dust suppression system. Bulk filler silo fitted with sealable ports and hatches. Risk Assessment *Consequence*: Minor *Likelihood:* Unlikely *Risk Rating:* Moderate	*Environmental Protection Act 1986* Application supporting documentation *Environmental Protection (Unauthorised Discharges) Regulations 2004.*

DECISION TABLE			
Licence section	**Condition number L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
		Regulatory Controls Condition A3(b) and A4(d) to maintain ground bin and cold feed bin materials in a damp state will be replaced by condition 2.3.1. Condition A5 to ensure conveyors are enclosed by wind shields has been replaced by condition 2.3.2. The Licensee is required to comply with the general provisions of the EP Act. Residual Risk *Consequence:* Minor *Likelihood:* Unlikely *Risk Rating:* Moderate	
Odour	N/A	The previous licence did not contain specific odour conditions. As per the risk assessment in works approval W5881/2015/1 the risk of odour can be regulated by the general provisions of the EP Act. There will be no odour conditions included in the amended licence.	*Environmental Protection Act 1986*
Noise	N/A	The previous licence did not contain specific noise conditions. As per the risk assessment in works approval W5881/2015/1 the premises is expected to comply with assigned noise levels in Regulation 8 of the *Environmental Protection (Noise) Regulations 1997* with the addition of RAP and associated crushing and screening equipment.	*Environmental Protection (Noise) Regulations 1997*
Monitoring general	N/A	General monitoring requirements have been addressed in the 'point source emissions to air including monitoring' section.	N/A
Monitoring of inputs and outputs	N/A	There were no requirements to monitor the inputs and outputs on the previous licence. The risk assessment of emissions, discharges and impacts has not identified any cause to include requirements to monitor inputs and outputs in the amended licence.	N/A
Process monitoring	N/A	There were no requirements to monitor the process on the previous licence. The risk assessment of emissions, discharges and impacts has not identified any cause to include requirements to monitor the process in the amended licence.	N/A

DECISION TABLE			
Licence section	**Condition number L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
Ambient quality monitoring	N/A	There were no requirements to monitor meteorology on the previous licence. The risk assessment of emissions, discharges and impacts has not identified any cause to include requirements to monitor meteorology in the amended licence.	N/A
Meteorological monitoring	N/A	There were no requirements to monitor the inputs and outputs on the previous licence. The risk assessment of emissions, discharges and impacts has not identified any cause to include requirements to monitor inputs and outputs in the amended licence.	N/A
Improvements	N/A	The risk assessment of emissions, discharges and impacts has not idientifed a need to include improvement conditions in the amended licence.	N/A
Information	L4.2.1 L4.2.2 L4.3.1	The Licensee will be required to submit an Annual Environment Report and Annual Audit Compliance Report. As the licensee has limits specified for point source emissions to air, it will be required to notify of limit exceedances.	
Licence Duration	N/A	Licence L6265/1983/8 expires on 2 August 2016 and as this is a licence amendment, the licence duration has not been altered.	N/A
Works	L5.1.1 L5.2.1 L5.2.2	The licensee has proposed upgrades to its wastewater treatment system. The key risk is the potential for contamination of soil and groundwater as treated wastewater is discharged to a filtration basin. Refer to the 'discharges to land' section above for the assessment of this risk. A summary of the wastewater treatment upgrade proposal is contained in Appendix A. To enable the licensee to carry out the works, condition 5.1.1 will be included to reference the proposal document that contains relevant information, plans and diagrams. Conditions 5.2.1 and 5.2.2 require submission of a compliance document.	Application supporting documentation

5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
10/11/15	Licensee sent notification of proposed licence changes along with a supporting draft decision document.	1. Licensee advised that its registered address details had changed and provided the address; 2. The Licensee requested an amendment to the hourly production rate limit to align with the plant's actual design capacity of 240 tonnes per hour (tph). This applies to a reference in the 'premises description and licence summary' and condition 1.3.1; 3. The Licensee requested the 'annual period' definition be changed from 30 June to 1 July to align with the financial year i.e. 1 July to 30 June; 4. Change the 'quarterly' definition to 'biannual' to reflect Table 3.2.1; 5. Remove references to 'laterite asphalt' and 'red or green pavement' in Table 1.3.2 with respect to unprocessed RAP specifications (c)(iii). These products have the same characteristics as normal RAP, they simply have different shaped aggregate or colour additive. Main Roads Dept specs do not allow these products in their RAP mixes for their own quality control/aesthetic prurposes. Local Coucils and private customers do not prohibit this type of RAP. These products do not pose any further environmental risk compared with the use of non-laterite/coloured asphalt. Prohibiting these products will	1. Licensee's advice noted. DER updated the licence; 2. DER further clarified this request with the licensee including reference to an email from Boral dated 6 March 2015 that an increase in annual throughput to 250,000 tonnes per year is based on an an hourly production rate of 180 tph. DER notes that doubling the hourly production rate (i.e. 120 tph to 240 tph) may significantly change the risk assessment of emissions, discharges and impacts and had not been assessed as part of this application. The Licensee provided clarification via email on 17 November 2015 that the plant currently operates at 180 tph. Condition 1.3.1 will be corrected to 180 tph. 3. DER modified as per licensee's request; 4. This was an oversight and DER updated the definition. 5. Licensee's advice noted. DER does not object to the request as it does not change the risk of emissions, discharges and impacts and updated the licence; 6. The specific reference to 12 m was retained. To clarify, the alteration of any discharge or emission pipe, channel or chimney through which

Date	Event	Comments received/Notes	How comments were taken into consideration
		limit innovation and potential recycling of these usable products; 6. In Table 2.2.2, should the 'A1' stack height be specified as 'minimum 12 m' or is the actual height required; 7. Removal of air emission point A2. There are a number of silos in the vicinity of the plant, each with a dedicated dust collector/air vent. It is our outstanding these vents are not typically regulated as a point source emission in other licences, as they only discharge displaced air when the silo is being filled. A condition detailing the requirement for silo vents to be within 1 m of the ground is considered appropriate; 8. Change condition 3.1.2 to remove quarterly and annual monitoring and replace with biannual; and 9. Update the premises map in schedule 1 to remove emission point A2 as per previous comment.	waste is or may be discharged into the environment may require approval under Section 53 of the *Environmental Protection Act 1986*. This may include increasing the height; 7. Licensee's advice noted. DER removed the reference to emission point A2 and included condition 2.2.3 which aligns with the licensee's request; 8. Similar to point 4, this was an oversight and DER updated condition 3.1.2; and 9. DER inserted an updated map with point 'A2' omitted in response to the action taken in response to point 7. *Note: Minor updates to the decision document were made where necessary to reflect any licence updates indicated above.*

6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High

Appendix A

Summary of proposed washbay wastewater treatment upgrade works

The site produces three separate water streams of differing contamination levels:

- contaminated washbay wastewater (subject of this proposal);
- potentially contaminated stormwater captured in the tank farm and filling area; and
- general site stormwater from the yar, parking bays etc.

Diagram 1 below depicts the existing wastewater treatment process for contaminated washbay wastewater.

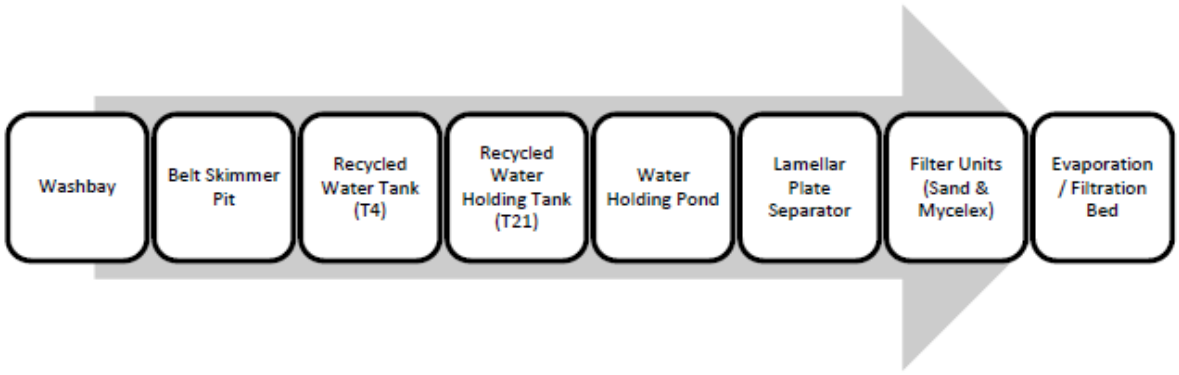

Diagram 1: Existing washbay wastewater treatment process (*Source: Diagram 1 on page 2 of Welshpool Asphalt, Wastewater Treatment Improvement Proposal authored by Boral Resources (WA), March 2015, Version 1.1*)

The proposed upgrades modify the treatment process as depicted in Diagram 2 below.

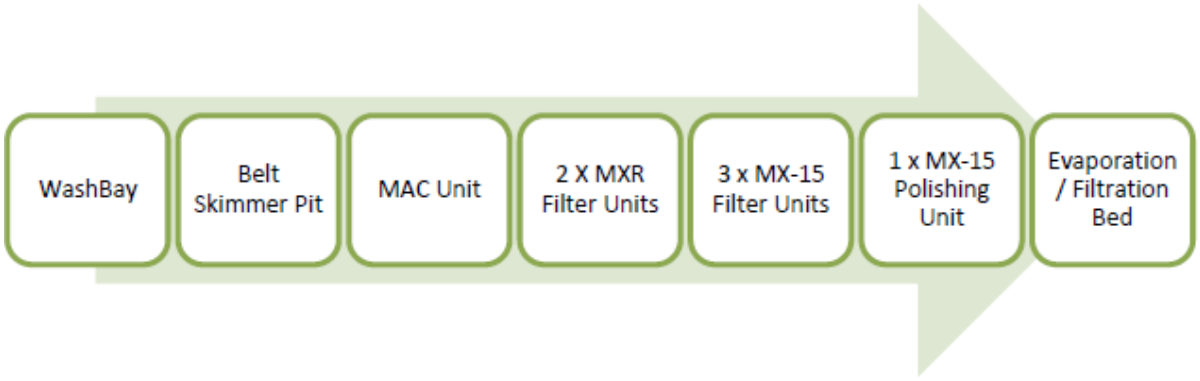

Diagram 2: Proposed washbay wastewater treatment process (Source: Diagram 4 on page 3 of *Welshpool Asphalt, Wastewater Treatment Improvement Proposal authored by Boral Resources (WA), March 2015, Version 1.1).*

Table 1 summarises the key improvements the Licensee believes will be achieved by the upgrades:

Table 1:

Improvement	Outcome
Wastewater segregation	Wastewater originating from the washbay will be segregated from stormwater. This results in smaller volumes of water requiring a high level of treatment and eliminates contamination of clean stormwater.
Pond Exclusion	The on-site Water Holding Pond will be excluded from the wastewater treatment process. This eliminates the risk of the pond overflowing which potentially results in release of contaminated wastewater. The proposed system will be fully enclosed eliminating the risk of unplanned / unauthorised discharges.
Technology and Capacity Upgrade	More effective and greater capacity treatment units will be installed resulting in improved water quality and treatment efficiency. Technology upgrades will provide automatic backwashing, continuous TPH monitoring and fault alarms to ensure effluent quality is maintained.
Increase Kerosene Recovery	New system components will increase Kerosene recovery rates resulting in increased recycling and reuse.

Source: Page 3 of Welshpool Asphalt, Wastewater Treatment Improvement Proposal authored by Boral Resources (WA), March 2015, Version 1.1

The system is designed for a maximum process flow rate of up to 5,000 L/hr which will accommodate two times the maximum flows generated by washdown hoses(i.e. 2,400 L/hr) plus additional future redundancy. The system is designed to achieve a total petroleum hydrocarbon concentration of less than 15 mg/L, total suspended solids less than 30 mg/L and sufactants less than 5 mg/L.

Figure 1 depicts the layout of proposed system upgrades.

Figure 1: proposed washbay wastewater treatment upgrades layout.

Treated wastewater is discharged to the existing evaporation/filtration bed as depicted in Figure 1.