Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

Application for Licence

Division 3, Part V *Environmental Protection Act 1986*

Licence Holder	Asphaltech Pty Ltd
ACN:	064520869
Licence Number:	L9004/2016/1
File Number:	DER2016/002036
Premises:	Asphaltech Road Pavement Recycling Operation 69 Mather Drive, NEERABUP, WA, 6031 Lot 2004 on Deposited Plan 70103 Certificate of Title Volume 2765 Folio 588
Date of report:	Thursday, 5 September 2019
Status of Report	Final

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Definitions of terms and acronyms

Term	Definition
AER	Annual Environment Report
Base-course road-base	40 mm to 100 mm sized aggregate made of gravel, emulsion stabilised limestone, asphalt or a mixture of these materials recovered from roads and asphalt paving.
Category/Categories (Cat.)	categories of prescribed premises as set out in Schedule 1 of the EP Regulations
Compliance Report	means a report in a format approved by the CEO as presented by the Licence Holder or as specified by the CEO (guidelines and templates may be available on the Departments website
CS Act	*Contaminated Sites Act 2003* (WA)
DWER	Department of Water and Environmental Regulation.
Decision Report	this document
Delegated Officer	An officer under section 20 of the EP Act.
EPA	Environmental Protection Authority
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
ESB	Emulsion stabilised base-course
Licence Holder	Asphaltech Pty Ltd
m^3	cubic metres
mtpa	million tonnes per annum
NEPM	National Environmental Protection Measure
Noise Regulations	*Environmental Protection (Noise) Regulations 1997* (WA)
Occupier	is defined in the EP Act to mean a person who is in occupation or control of a premises, or part of a premises, whether or not that person is the owner of the premises or part of the premises.
Premises	refers to the premises to which this Licence applies, as specified at the front of this Licence and as shown on the map in Schedule 1 to this Licence.
PM	Particulate Matter
PM_{10}	used to describe particulate matter that is small than 10 microns (µm)

Term	Definition
	in diameter.
Prescribed Premises	Premises prescribed under Schedule 1 to the EP Regulations
RAP	Reclaimed Asphalt Pavement
Sub-base	means approximately 300 mm limestone aggregate recovered from road and asphalt paving.
UDR	*Environmental Protection (Unauthorised Discharge) Regulations 2004* (WA)
Works Approval	means works approval W5993/2016/1

1. Purpose and scope of assessment

An application for a works approval and licence was received from the Licence Holder on 27 September 2016 date for a new prescribed premises that will produce ESB through a mobile wet-mixer using RAP, recycled and blended granulated materials and bitumen emulsion.

It is planned that the Premises will manufacture both bitumen emulsion and ESB in the future, and *Category 61A Solid waste processing* and *Category 36 Bitumen manufacturing* will apply. In the short-term, however, it is proposed by the Licence Holder that only ESB will be manufactured using bitumen emulsion which is purchased and RAP which is obtained from other sources.

This Decision Report presents an assessment of potential environmental and public health risks from emissions and discharges from the operation of the activities related to the production of ESB only (no bitumen emulsion production).

Works Approval for construction of the facility was granted on 24 April 2017 and the infrastructure constructed under the Works Approval is listed in Table 3. The Works Approval compliance certificate was received on 17 July 2019

1.1 Application details

Table 1 lists the documents submitted during the assessment process.

Table 1: Documents and information submitted during the assessment process

Documents	Date received
Works Approval Application and supporting documentation	20 September 2016
Asphaltech Updated Site Plan	16 December 2016
Compliance Report for Works Approval W5993/2016/1	17 July 2019

2. Background

The Licence Holder is an Australian proprietary company limited by shares. The holding company is Balacre Pty Ltd, which is the legal owner of the Premises that has provided the Licence Holder legal access to the site.

The Premises is located at 69 Mather Drive, Neerabup, within a relatively new industrial area. The Premises will function primarily as a road pavement recycling operation in which road pavement materials such as RAP, base-course road base and road sub-base will be brought to site and mixed with a bitumen emulsion to produce the ESB, which is used in the construction of roads.

Table 2 describes the premises categories applicable to the Premises, based on the production of ESB only.

Table 2: Prescribed Premises Categories

Classification of Premises	Description	*Premises production or design capacity or throughput*
Category 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.	<160,000 tonnes per annual period

3. Overview of Premises

3.1 Infrastructure

The infrastructure of the Premises, as it relates to Category 61A activities, is detailed in Table 3 and with reference to the Site Plan (provided in Attachment 1).

Table 3: Asphaltech Category 61A infrastructure

	Infrastructure
Prescribed Activity Category 61A	
The Premises accepts solid waste (RAP and other recycled and blended granulated materials) and mixes these with bitumen emulsion in a mobile wet mixer to produce ESB. The ESB is used at locations other than the Premises.	
1	Internal access roads made from asphalt
2	Concrete hardstand for future bitumen emulsion plant and transportable office
3	Mobile wet mixer
4	Reclaimed materials stockpile area with hardstand made from ESB
5	Landscaped area of for infiltration of stormwater falling on the site
6	380 m^2 earth-lined compensating basin at least 1.3 m deep
7	Mobile crusher and screener moved onto the site on an as needs basis.
8	Mobile bitumen emulsion tanker brought onto the site on an as needs basis
9	Not more than two front end loaders operating on site.

3.2 Operational aspects

The Licence Holder proposes that the Premises will largely operate between the hours of 6:00am and 5:00pm weekdays only. However there may be occasional periods of overnight and weekend operation due to the requirements of specific projects according to the requirements of the road building industry.

There are three stages to the production process being conducted on site:

1. crushing, screening and stockpiling of RAP;
2. manufacture of ESB; and

3. transport or temporary storage of ESB.

Crushing, screening, and stockpiling

The stockpiling and raw materials handling process is shown in Figure 1.

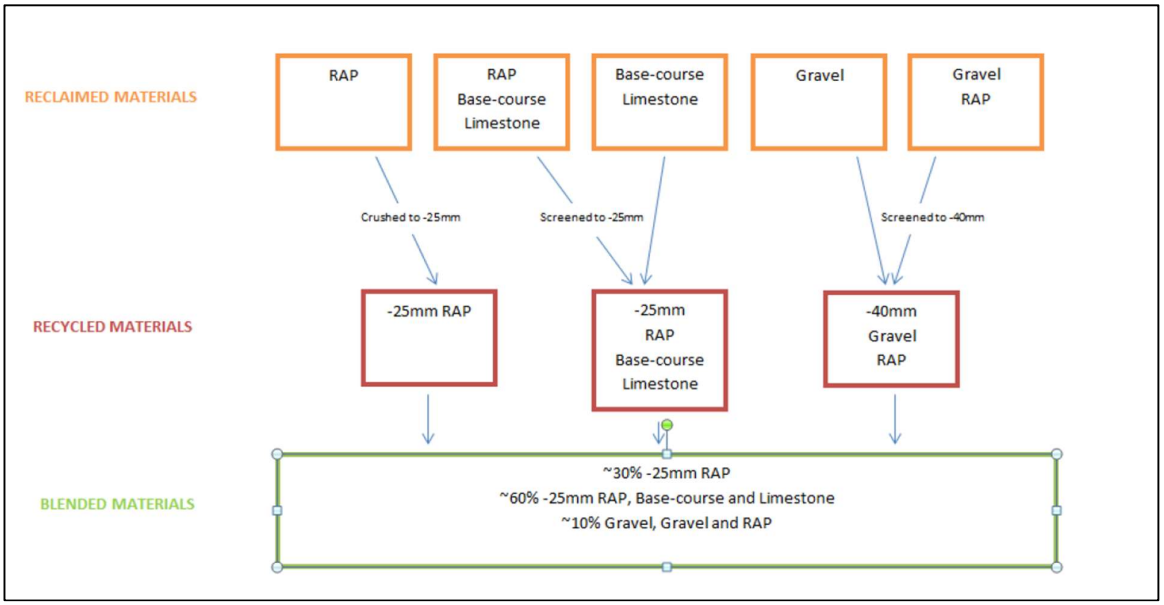
RAP and other granular reclaimed materials (such as base-course granite, gravel and limestone) will be received by truck from various sites and stored within the Premises in up to five 'reclaimed material stockpiles'. These stockpiles will be created upon a layer of ESB to reduce dust lift off from the area and to better manage stormwater.

The materials will then be crushed, screened and then mixed by front end loader in the stockpiling area. The crushing and screening activities will be conducted by external contractors who will bring their mobile equipment to the Premises, crush and screen the materials and then remove the equipment off site. This crushing and screening will occur on an as needed basis.

The 'recycled materials' generated by the crushing and screening processes are stored in the stockpiling area in 3 different stockpiles: -25mm RAP, -25mm RAP base-course limestone, and -40mm Gravel RAP. Material from each of the three recycled materials stockpiles is then used to create a blend for the mobile wet mixer. This blend is stored in the 'blended materials stockpile' which is the feed stockpile for solid material used in the manufacture of ESB.

Although the materials within the stockpiles are not known to generate significant amounts of fugitive dust due to their particle size, the stockpiles will be managed with sprinklers to keep the stockpile material moist and reduce emissions.

Figure 1 Stockpiling and raw materials handling process



Manufacture of ESB

ESB is manufactured at the Premises within a mobile wet-mixer, using a batch process.

Bitumen emulsion will be delivered by tanker to the Premises and will be directly transferred from the truck to the wet mixer using a hose and pump arrangement. The transfer process will be conducted on an asphalt hardstand.

A measured amount of blended material will be transferred from the stockpile into the hopper

of the wet-mixer using a front end loader. ESB will be produced by mixing the blended material with bitumen emulsion within the wet-mixer. No heating will be used.

Transport or Storage of ESB

The moist ESB is transported from the wet-mixer via a conveyor belt into another hopper. The hopper provides temporary storage for the ESB which is then transferred under controlled release into a truck. The ESB can either be directly transported offsite for use or transferred to a day-to-day surge stockpile for temporary storage.

Operations outside of normal operating hours

Before operating plant overnight or on Sunday and public holidays, the Licence Holder will conduct monitoring and modelling to demonstrate that noise emissions will comply with the assigned noise levels for those times.

The facility is located inside an industrial area and light overspill for night time operation is highly unlikely to be an issue.

3.3 Exclusions from the licence and assessment

This Decision Report does not include an assessment of potential emissions from the ablutions block and associated septic tanks and the future proposed bitumen manufacture operations that is shown in the Site Layout Plan as the Emulsion Plant Shed, which has not been constructed.

4. Legislative context

4.1 Contaminated sites

The site has not been reported as a contaminated site under the *Contaminated Sites Act 2003*.

4.2 Other relevant approvals

4.2.1 Planning approvals

The City of Wanneroo granted a development approval to construct and operate a waste a road paving recycling facility on 5 April 2017 (DA2016/1312). The approval includes 8 conditions one of which requires that stormwater is collected and retained on-site. The other conditions are unrelated to the environmental performance of the site.

4.2.2 Water Licensing

The Licence Holder has obtained a licence to construct or alter a well (CAW183325(1), and a licence to take groundwater for use as dust suppression and site maintenance (GWL183328(1)) under the *Rights of Water and Irrigation Act 1914*.

4.3 Part V of the EP Act

4.3.1 Applicable regulations, standards and guidelines

The overarching legislative framework of this assessment is the EP Act and EP Regulations.

DWER Guidance Statements which inform this assessment are listed in Appendix 1.

4.3.2 Works approval

Works approval W5993/2016/1 for construction of the facility was granted on 24 April 2017.

The Licence Holder submitted a compliance document 17 July 2019 confirming that the following infrastructure has been constructed:

Table 4: Infrastructure installed under Works Approval

Infrastructure Requirements Table	
Infrastructure	Requirements (Design and Construction)
Internal access roads and hardstand	Made from asphalt and graded to allow drainage of stormwater away from the process and stockpile area and towards the landscaped area.
Hardstand for RAP and product storage	Made from ESB and graded to allow drainage of excess stormwater away from the process and stockpile areas, and towards the landscaped area
Mobile wet-mixer	Compliant with *Environmental Protection (Noise) Regulations 1997*.
Landscaped area	To have sufficient area and permeability of soil to capture stormwater that falls on the whole site area.
Compensating Basin	380 m^2 earth-lined compensating basin, at least 1.3m deep.
Sprinklers for stockpile area	Sprinklers to have sufficient throw to cover stockpiles as required to suppress dust.

The Works Approval included a hardstand area for a future bitumen emulsion production plant. The Licence Holder has advised that construction for the future plant has been postponed and will be constructed when a decision to install the bitumen emulsion plant has been made.

5. Consultation

The application for a concurrent works approval and licence was advertised on 17 October 2016 and a letter was sent to the City of Wanneroo seeking comments on the application on the same day.

No comments were received from the general public or from the City of Wanneroo.

6. Location and siting

6.1 Siting context

The Premises is located within a relatively new industrial area in Neerabup. Some premises have already been constructed and are operational; but there are still a large number of lots available for other industrial premises.

A location map is presented in Figure 2

6.2 Residential and sensitive premises

The distances to residential and sensitive receptors are as follows:

Table 5: Receptors and distance from activity boundary

Sensitive Land Uses	Distance from Prescribed Activity
Residential premises	850m to the south-southwest (Special Rural Area, suburb of Carramar) 950m to the south-southeast (residential suburb of Banksia Grove)
Industrial premises	The Premises are contiguous with industrial premises and vacant lots zoned for industrial zone. The immediate neighbour is a depot for drilling equipment and there is an accident repair facility separated by 25 metres.
Commercial and Recreation Premises	The nearest recreational premises are Barbagello Raceway 1.3 km north of the facility and Wanneroo Golf Course 1.5 km south west of the facility. There are no commercial premises within 1 km of the Premises.

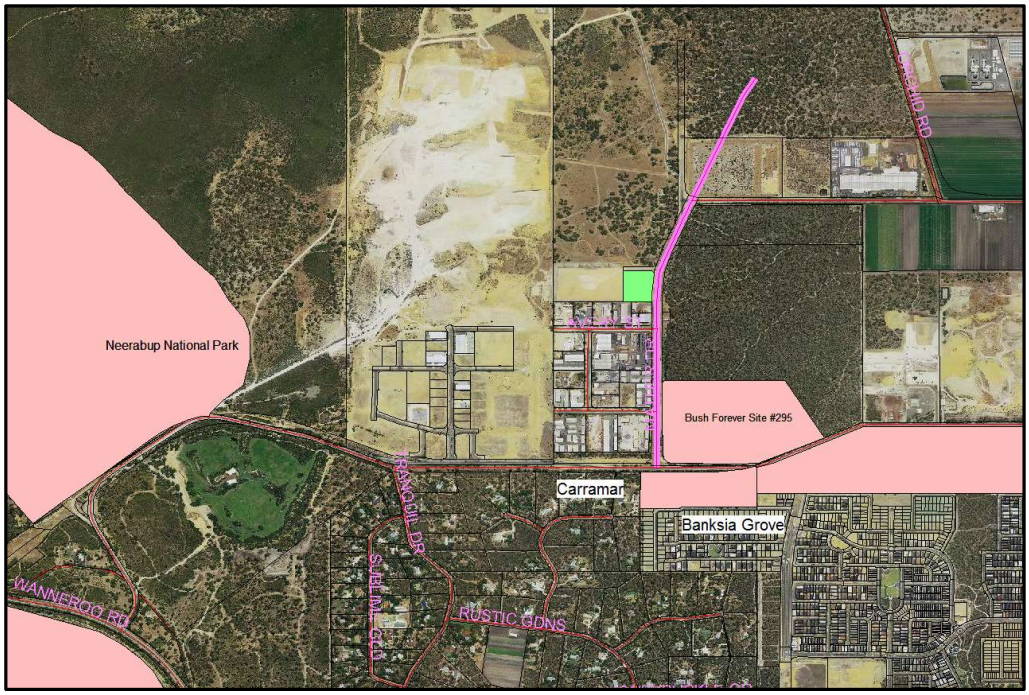
6.3 Specified ecosystems

The distances to specified ecosystems are shown in Table 4 and displayed in Figure 2.

Table 6: Specified ecosystems

Specified ecosystems	Distance from the Premises
Bush Forever Area #295, Flynn Drive Bushland, Neerabup	365m to the south east
Neerabup National Park	1.5km to the west

Figure 2: Map showing location of specified ecosystems



6.4 Groundwater and water sources

The distances to groundwater and water sources are shown in Table 7.

Table 7: Groundwater and surface water sources

Groundwater and water sources	Distance from Premises	Environmental Value
Groundwater	Depth to groundwater is approximately 34mbgl, with a variation of 3m between historic minimum and maximum.(Note 1) Within a radius of about 900m, and within the industrial area, there are 9 groundwater bores.	The groundwater is likely to have a salinity level between 500-1000mg/L. The groundwater is deemed suitable for Garden Bores.(Note 2)
Neerabup Lake	Approximately 2.4km to the west as part of the larger bush forever site #384 (boundary is approximately 1.5km to the west of the Premises).	Neerabup Lake is part of Neerabup National Park and has a high environmental value. It is a reserve with a conservation purpose.(Note 3)

*1 *Source: DWER's GIS information*
*2 *Source: Perth Groundwater Atlas as available on www.water.wa.gov.au*
*3 *Source: Bush Forever, Volume 1 Policies, Principles and Processes, December 2000, WA Government*.

6.5 Soil type

The surface geology type of the Premises is Tamala Limestone, predominantly calcarenite. There is a low risk of iron staining and there is no known risk of acid sulphate soils. The groundwater salinity is expected to be in the range of 500-1000 mg/L as Total Dissolved Solids and as such the groundwater is suitable for use as proposed by the Licence Holder.

6.6 Meteorology

The Premises is located on the Swan Coastal Plain in the Perth Region. The Perth Region experiences a Mediterranean climate characterised by mild and wet winters and warm to hot dry summers. Highest temperatures occur between December to March with average monthly maximum ranging from 30°C in December to 34°C in January. The summer period also experiences heat waves that can last for four to five days. Most rainfall occurs during winter in association with cold fronts from the south-west.

7. Risk assessment

7.1 Determination of emission, pathway and receptor

In undertaking its risk assessment, DWER will identify all potential emissions pathways and potential receptors to establish whether there is a Risk Event which requires detailed risk assessment.

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission. Where there is no actual or likely pathway and/or no receptor, the emission will be screened out and will not be considered as a Risk Event. In addition, where an emission has an actual or likely pathway and a receptor which may be adversely impacted, but that emission is regulated through other mechanisms such as Part IV of the EP Act, that emission will not be risk assessed further and will be screened out through Table 8.

The identification of the sources, pathways and receptors to determine Risk Events are set out in Table 8 below.

Table 8: Identification of emissions, pathway and receptors during operation

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
Raw Materials Handling	Truck movement and unloading of RAP	Dust	Special Rural premises located approximately 685m SSW of the Premises. Residential premises located approximately 850m SSE of the Premises Industrial premises located adjacent 25 m away	Air / wind dispersion	Amenity and public health	Yes	See section 8.4
		Noise			Amenity impacts	Yes	See Section 8.6
	Stockpiling	Dust	Special Rural premises located approximately 685m SSW of the Premises. Residential premises located approximately 850m SSE of the Premises Industrial premises located adjacent 25 m away	Air / wind dispersion	Amenity and public health	Yes	See section 8.4

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
	Crushing and screening	Dust	Special Rural premises located approximately 685m SSW of the Premises. Residential premises located approximately 850m SSE of the Premises Industrial premises located adjacent 25 m away	Air / wind dispersion	Amenity impacts	Yes	See Section 8.6
		Noise					
	Stormwater	Sediment contaminated stormwater	Soil and groundwater local government drainage network	Over land to stormwater gullies	Contamination of soil or groundwater and build-up of sediment in drains.	Yes	See section 8.5
Wet mixing	Wet Mixing	*Noise*	Special Rural premises located approximately 685m SSW of the Premises. Residential premises located approximately 850m SSE of the Premises Industrial premises located adjacent 25 m away	Air / wind dispersion	Amenity impacts	Yes	See Section 8.6
		Odour			Odour impact and potential health impact	No	The emission of VOCs is expected to be low as the bitumen emulsion is manufactured off site and brought to the site in an enclosed mobile tanker. Mixing occurs with cold materials and there is no heating involved in the process,

7.2 Risk Criteria

A risk rating will be determined for risk events in accordance with the risk rating matrix set out in Table 9 below.

Table 9: Risk rating matrix

Likelihood	Consequence				
	Slight	Minor	Moderate	Major	Severe
Almost certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High

DWER will undertake an assessment of the consequence and likelihood of the Risk Event in accordance with Table 10 below.

Table 10: Risk criteria table

Likelihood		Consequence		
The following criteria has been used to determine the likelihood of the Risk Event occurring.		The following criteria has been used to determine the consequences of a Risk Event occurring:		
			Environment	Public health* and amenity (such as air and water quality, noise, and odour)
Almost Certain	The risk event is expected to occur in most circumstances	Severe	• **onsite impacts**: catastrophic • **offsite impacts local scale**: high level or above • **offsite impacts wider scale:** mid-level or above • Mid to long-term or permanent impact to an area of high conservation value or special significance^ • Specific Consequence Criteria (for environment) are significantly exceeded	• Loss of life • **Adverse health effects:** high level or ongoing medical treatment • Specific Consequence Criteria (for public health) are significantly exceeded • **Local scale impacts:** permanent loss of amenity
Likely	The risk event will probably occur in most circumstances	Major	• **onsite impacts**: high level • **offsite impacts local scale**: mid-level • **offsite impacts wider scale**: low level • Short-term impact to an area of high conservation value or special significance^ • Specific Consequence Criteria (for environment) are exceeded	• **Adverse health effects:** mid-level or frequent medical treatment • Specific Consequence Criteria (for public health) are exceeded • **Local scale impacts**: high level impact to amenity
Possible	The risk event could occur at some time	Moderate	• **onsite impacts**: mid-level • **offsite impacts local scale**: low level • **offsite impacts wider scale**: minimal • Specific Consequence Criteria (for environment) are at risk of not being met	• **Adverse health effects:** low level or occasional medical treatment • Specific Consequence Criteria (for public health) are at risk of not being met • **Local scale impacts:** mid-level impact to amenity
Unlikely	The risk event will probably not occur in most circumstances	Minor	• **onsite impacts**: low level • **offsite impacts local scale**: minimal • **offsite impacts wider scale**: not detectable • Specific Consequence Criteria (for environment) likely to be met	• Specific Consequence Criteria (for public health) are likely to be met • **Local scale impacts:** low level impact to amenity
Rare	The risk event may only occur in exceptional circumstances	Slight	• **onsite impact**: minimal • Specific Consequence Criteria (for environment) met	• **Local scale**: minimal to amenity • Specific Consequence Criteria (for public health) met

^ Determination of areas of high conservation value or special significance should be informed by the *Guidance Statement: Environmental Siting.*

* In applying public health criteria, DWER may have regard to the Department of Health's *Health Risk Assessment (Scoping) Guidelines*.

7.3 Acceptability and treatment of Risk Event

DWER will determine the acceptability and treatment of Risk Events in accordance with the Risk Treatment Matrix in Table 11 below:

Table 11: Risk Treatment

Rating of Risk Event	Acceptability	Treatment
Extreme	Unacceptable.	Risk event will not be tolerated. DWER may refuse application.
High	Acceptable subject to multiple regulatory controls.	Risk event will be tolerated and may be subject to multiple regulatory controls. This may include both outcome-based and management conditions.
Medium	Acceptable, generally subject to regulatory controls.	Risk event is tolerable and is likely to be subject to some regulatory controls. A preference for outcome-based conditions where practical and appropriate will be applied.
Low	Acceptable, generally not controlled	Risk event is acceptable and will generally not be subject to regulatory controls.

7.4 Risk Assessment – Fugitive dust

7.4.1 General hazard characterisation and impact

Dust may be released during the delivery and transfer of raw materials and recycled material, and during the crushing and screening operation. The dust is expected to be inert and only be an amenity issue, although in an extreme event it could cause issues for public health by the level of fine particulates.

7.4.2 Criteria for assessment

Fugitive dust from stockpiles or unsealed areas can cause complaints from neighbours if they are negatively impacted by (either directly through inhalation or indirectly through dust on property, such as a car). For fine dust particulates (smaller than 10 microns) the standards from the NEPM are used, if possible, to assess the impact.

7.4.3 Licence Holder controls

This assessment has reviewed the information regarding fugitive dust control within the application and summarised the controls set out in Table 12 below.

Table 12: Licence Holder controls for fugitive dust emissions

Site Infrastructure	Infrastructure Details	Operational Details	Reference to Issued Licence plan (Schedule 1)
Controls for dust			
Stockpiles	Stockpiles of raw material will be created by unloading trucks. Stockpiles of screened recycled product are created by the outfall from the screens. A sprinkler system will be installed that can be either manually or automatically triggered. 25mm hardstand constructed with emulsion stabilised basecourse	Sprinklers to be used whenever dust lift off is occurring or likely to occur. Stockpiles to be retained to hardstand Height of stockpiles limited to ensure throw of sprinklers can reach all surfaces.	Site Layout Plan
Crushing and screening RAP	Crushing and screening will be undertaken by third party contractors using equipment brought on to the site periodically as required and located in stockpile area on emulsions stabilised bitumen surface. Fine dust suppression sprinklers will be fitted on conveyor feed and discharge points of the crushing and screening machines.	Raw materials will be kept moist to reduce fugitive dust during the crushing and screening of the raw materials .	N/A

7.4.4 Key findings

The Delegated Officer has reviewed the information regarding the dust impacts from the Premises and has found:

1. the particle size of the raw and blended materials is sufficiently large to limit the amount of fugitive dust generated by the raw material and blended stockpiles;
2. ESB temporarily stored in the day-to-day surge stockpile is moist and hence fugitive dust emissions from this stockpile is expected to be low; and
3. the Licence Holder proposed dust controls are considered adequate to limit fugitive dust.

7.4.5 Consequence

Based upon the Licence Holder's proposed controls and the distance to sensitive receptors, the Delegated Officer has determined that the potential impact of dust emissions off-site will be minimal at a local scale. Therefore, the Delegated Officer considers the consequence to be **minor**.

7.4.6 Likelihood of consequence

Based upon the kind of dust, the distance to the nearest sensitive receptors, the land use in between, the Delegated Officer has determined that the likelihood of minor dust impacts off-site is unlikely. Therefore, the Delegated Officer considers the consequence to be **unlikely**.

7.4.7 Overall rating

The Delegated Officer has compared the consequence and likelihood ratings described above for the Risk Criteria and determined that the overall rating for the risk of fugitive dust from the Premises on sensitive receptors during operation is **medium**.

7.5 Risk Assessment - Contaminated Stormwater Runoff

7.5.1 General hazard characterisation and impact

Stormwater contaminated with fine particles of dust or RAP could flow off-site to the local drainage system causing sedimentation and consequent overflow of stormwater system. Direct discharge of bitumen emulsion could contaminate stormwater, however spills can be contained by soil or sand until product sets hard.

7.5.2 Criteria for assessment

Australian water quality guidelines (ANZECC and ARMCANZ 2000) provide recommended trigger values for freshwater and marine water. *DWER Guideline: Assessment and Management of Contaminated Sites* provides ecological and human health assessment levels for soil. Sediment runoff is also proscribed by the *Environmental Protection (Unauthorised Discharge) Regulations 2004*.

7.5.3 Licence Holder controls

The controls proposed by the Licence Holder to reduce and manage contaminated stormwater run-off are set out in Table 13.

Table 13: Licence Holder infrastructure and operational controls for contaminated runoff.

Site Infrastructure	Infrastructure Details	Operational Details	Reference to Issued Licence (Schedule 1)
Controls Contaminated Run-off			
Hardstand – Trafficable areas around buildings, carpark and wet mixer output.	Bitumen hardstand.	Hardstand graded to drain to the landscaped area at the eastern part or the Premises. Emulsion transfer to occur on bitumised hardstand	Site Layout Plan
Hardstand – Stockpile area.	Hardstand area for stockpiles constructed from emulsion stabilised base materials.	Hardstand graded to drain to the landscaped area at the eastern part or the Premises.	
Landscaped area	Tree lined landscaped area on	Area to be inspected	

Site Infrastructure	Infrastructure Details	Operational Details	Reference to Issued Licence (Schedule 1)
and compensating basin	eastern part of Premises. Compensating basin is 380 m^2 and at least 1.3 m deep. Landscaped area and compensating basin to be of a sufficient area and to have sufficiently permeable soil to allow infiltration of rain water and stormwater runoff from the rest of the site.	and maintained to ensure no surface run-off.	

7.5.4 Key findings

The Delegated Officer has reviewed the information regarding contaminated run-off from the Premises and has found:

1. the most likely contaminant in stormwater runoff will be minor amounts of sediment collected from the raw material and blended stockpiles; and
2. the site will be graded so that excess stormwater will run into a compensating basin and landscaped area located on the eastern boundary of the site and infiltrate into the ground.

7.5.5 Consequence

Based upon the type of contamination likely to be present in the stormwater and the protection of the local authority stormwater drainage by the landscape area, the Delegated Officer has determined that the potential impact of contaminated run-off will be minor off-site at a local scale. Therefore, the Delegated Officer considers the consequence to be **minor**.

7.5.6 Likelihood of consequence

Based upon Licence Holder's controls, the Delegated Officer has determined that the likelihood of contaminated runoff affecting off site infrastructure will only occur in exceptional circumstances. Therefore, the Delegated Officer considers the consequence to be **rare**.

7.5.7 Overall rating

The Delegated Officer has compared the consequence and likelihood ratings described above for the Risk Criteria (Table 14) and determined that the overall rating for the risk of contaminated stormwater run-off on sensitive receptors during operation is **Low**.

7.6 Risk Assessment – Noise

7.6.1 General Characterisation of Hazard and Impacts

Noise will be generated by normal operations on site including the operation of a mobile crusher and screener, bitumen tanker truck and transfer pumps, front end loaders, and the wet mixer. Noise has the capacity to unreasonably impact the comfort and amenity of off-site receptors.

Operating hours are for the majority of the time restricted to 6 am to 5 pm weekdays. Occasionally there will be a need to operate 24 hours, 7 days a week for specific road building projects. Noise impacts at these times are likely to be greater and at greater risk of exceeding

the assigned levels which are lowest during these times.

7.6.2 Criteria for assessment

Noise emissions from the Premises should comply with *the Environmental Protection (Noise) Regulations 1997 (WA)*. The regulations assign permitted noise levels at sensitive receptors and the noise levels are lower in the evening and on Sundays and public holidays. The permitted noise levels are lower still between 11pm and 7am on any day.

7.6.3 Licence Holder controls

The controls proposed by the Licence Holder to reduce and manage noise emissions are set out in Table 15

Table 15: Licence Holder controls for noise emissions (from Application)

Management Control	Operational Details	Reference to Issued licence plan (Schedule 1)
Controls for Noise		
Operating Hours	Operating hours are for the majority of the time restricted to 6 am to 5 pm weekdays. Occasionally there will be a need to operate 24 hours, 7 days a week for specific road building projects.	NA
Vehicle travel routes	On-site vehicle travel routes will be set to minimise the need to reverse to reduce the impact of back up alarms.	NA
Noise assessment	Noise estimations based on measurements of noise output will be conducted by a noise assessor when the plant is commissioned.	NA

7.6.4 Key findings

The Delegated Officer has reviewed the information regarding noise emissions from the Premises and has found:

There is a risk of noise impacting adjacent industrial and nearby sensitive receptors if the Premises operates overnight or at weekends.

7.6.5 Consequence

Based upon the Licence Holder's proposed controls and the distance to noise sensitive receptors, the Delegated Officer has determined that the potential impact of noise emissions from daytime (Monday to Friday) operations off-site will be low level at a local scale and minimal at a wider scale. For night time and weekend operations the potential impact is greater.

Therefore, the Delegated Officer considers the consequence to be **moderate**.

7.6.6 Likelihood of consequence

Based upon Licence Holder's controls, the Delegated Officer has determined that noise emissions exceeding assigned levels off-site will probably not occur during daytime/weekday operations in most circumstances. However noise emissions during night time and weekend operations may exceed assigned levels. Therefore, the Delegated Officer considers the consequence to be **possible**.

7.6.7 Overall rating

The Delegated Officer has compared the consequence and likelihood ratings described above for the Risk Criteria (Table 16) and determined that the overall rating for the risk of noise emissions impacting sensitive receptors during operation is **Medium**.

7.7 Summary of risk assessment and acceptability

A summary of the risk assessment and the acceptability of the risks with treatments are set out in below. Controls are described further in section 8.

Table 17: Risk assessment summary

	Emission		Pathway and Receptor	Licence Holder controls	Impact	Risk Rating	Acceptability with treatment (conditions on instrument)
	Type	**Source**					
1	Dust	Delivery and despatch of materials Stockpiles Crushing and screening of materials.	Air/wind dispersion to special rural areas and residential areas up to 850m away	Water Truck. Retractable covers on delivery vehicles Sprinklers for keeping the materials moist Fine Dust suppression sprinklers fitted to conveyor feed and discharge points. Crushing and screening is infrequent and will be confined to periods of favourable weather conditions.	Amenity and health impacts.	Minor consequence Unlikely **Medium risk**	Acceptable, subject to licence holder controls; conditioned
2.	Contaminated stormwater	Stormwater run-off from stockpile and hardstand areas	Direct from infrastructure.	Infrastructure and management controls.	Water quality impacts on off-site stormwater drainage network.	Minor consequence Rare **Low risk**	Acceptable subject to Licence Holder controls; conditioned
3	Noise	Delivery and dispatch of materials. Movement of loaders Crushing and screening Wet mixing	Air/ wind dispersion to industrial (adjacent) and residential premises (850 metres.	Management controls and confirmation assessment	Amenity	Moderate consequence Possible **Medium risk**	Acceptable, subject to licence holder controls; conditioned and regulatory controls specified in the EP Noise Regulations

8. Regulatory Controls

A summary of regulatory controls determined to be appropriate for the Risk Event is set out in Table 18. The risks are set out in the assessment in Section 7 and the controls are detailed in this section. DWER will determine controls having regard to the adequacy of controls proposed by the Licence Holder. The conditions of the Issued Licence will be set to give effect to the determined regulatory controls.

Table 18: Summary of regulatory controls to be applied

		Controls (references are to sections below setting out details of controls)		
		8.1.1 Infrastructure and Equipment	8.1.2 Specified Action	8.1.3 Monitoring
Risk Items (see risk analysis in section 7)	1. Dust from crushing and screening and stockpiles	•	•	
	2. Contaminated stormwater runoff.	•		
	3. Noise	•		•

8.1 Licence controls

8.1.1 Dust control infrastructure and equipment

The following requirements will be included in the Issued Licence:

- paved hardstand and trafficable areas to be swept and maintained free of dust;
- sprinklers designed with sufficient throw to cover all stockpiles; and
- fine sprinklers fitted to conveyor feed and discharge points of screens

Grounds:

The approved infrastructure was proposed by the Licence Holder and will minimise the risk of dust crossing the Premises boundary and having an impact on surrounding premises. The risk of impacts from fugitive dust is discussed in Section 7.4.

8.1.2 Contaminated run-off infrastructure and equipment

The following requirements will be included in the Issued Licence:

- paved and unpaved hardstand for process and trafficable areas graded to drain to the compensating basin and landscaped area;

- compensating basin and landscaped area to allow the infiltration of stormwater from the site; and
- stockpiles to be positioned on emulsion stabilised bitumen hardstand area.

Grounds:

The Licence Holder's proposed infrastructure and management will reduce the risk of contaminated stormwater leaving the Premises and entering the environment. The risk of impacts from stormwater is discussed in Section 7.5.

8.1.3 Specified actions

The following specified actions will be included in the Licence:

- loads to be wetted; and
- ensure loads are covered when trucks are entering or leaving the site.

Grounds:

The risk assessment in Section 7.4 outlined the potential for dust to impact the surrounding premises. The Licence Holder has advised that loads on trucks will be wetted down and loads will be covered when entering and leaving the site. These actions are specified as conditions of licence to minimise the risk from dust emissions impacting receptors nearby.

8.1.4 Monitoring and reporting

The following requirements will be included in the Issued Licence:

- record the waste inputs and waste outputs for the Premises
- noise monitoring to confirm compliance with the Noise Regulations.

Grounds:

The Issued Licence permits specific types and quantities of waste to be imported to the site. Reporting of inputs monitors compliance and reporting of outputs will ensure that waste is not stockpiled or accumulated beyond a level appropriate for the Premises.

Confirmation noise assessment is an undertaking given in the supporting documentation for the Licence application. This is necessary to ensure that Premises is compliant with the Noise Regulations prior to any future overnight operation.

9. Determination of Licence conditions

The conditions in the Issued Licence in Attachment 1 have been determined in accordance with DWER's *Guidance Statement on Setting Conditions*.

DWER's *Guidance Statement on Licence Duration* has been applied and the Issued Licence expires in 20 years from date of issue.

DWER notes that it may review the appropriateness and adequacy of controls at any time, and that following a review, DWER may initiate amendments to the licence under the EP Act.

10. Licence Holder's comments

The Licence Holder was provided with the draft Decision Report and draft issued Licence on 26 August 2019. The Licence Holder provided comments which are summarised, along with DWER's response, in Appendix 2

11. Conclusion

This assessment of the risks of activities on the Premises has been undertaken with due consideration of a number of factors, including the documents and policies specified in this decision report (summarised in Appendix 1).

Based on this assessment, it has been determined that the Issued Licence will be granted subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

Caron Goodbourn
Manager, Process Industries
Delegated Officer
under section 20 of the *Environmental Protection Act 1986*

Appendix 1: Key Documents

	Document Title	In text ref	Availability
1.	Asphaltech Works Approval and Licence Application with supporting documentation.	The Application	DWER Records A108463 and A1344843
2	Works Approval W5993/2016/1	Works Approval	accessed at http://www.dwer.wa.gov.au
3	Works Approval Compliance Document	Compliance Report	DWER Records A1806722
4	DER, July 2015. *Guidance Statement: Regulatory principles.* Department of Environment Regulation, Perth.		
5	DER, October 2015. *Guidance Statement: Setting conditions.* Department of Environment Regulation, Perth.		
6	DER, August 2016. *Guidance Statement: Licence duration.* Department of Environment Regulation, Perth.		Accessed at www.dwer.wa.gov.au
6	DER, February 2017. *Guidance Statement: Risk Assessments*. Department of Environment Regulation, Perth.		
8	DER, November 2016. *Guidance Statement: Decision Making*. Department of Environment Regulation, Perth.		

Appendix 2: Summary of Licence Holder's comments on risk assessment and draft conditions

Condition	Summary of Licence Holder comment	DWER response
Instrument front page	Correction of registered business address	Change has been made
Condition 15	The condition should be amended from within 14 days of commencement of licence to within 14 days of wet mixer and mobile crusher commencing operation because these operations only occur from time to time. It may take 9 to 12 months before combined operation of both pieces of equipment.	DWER agrees to this change and notes that Condition 2 of the licence prevents night time operations until this monitoring is complete. The Licence has been amended to specify noise monitoring when both the mobile crusher and wet mixer are operating are operating together.

Attachment 1: Issued Licence L9004/2017/1