

Works Approval

Works Approval Number	W6134/2018/1	
Works Approval Holder	Asphaltech Pty Ltd	
ACN	064 520 869	
Registered business address	Level 5 12 St Georges Terrace PERTH WA 6000	
File Number	DER2018/000378	
Duration	27/07/2018 to 26/07/2020	
Date of issue	27/07/2018	
Prescribed Premises	Category 35 – Asphalt manufacturing Category 61A – Solid waste facility	
Premises	Asphaltech Malaga 416 Victoria Road, MALAGA WA 6090	
	Legal description -	
	Lot 176 on Diagram 92075	
	Certificate of Title Volume 2103 Folio 290	

This Works Approval is granted to the Works Approval Holder, subject to the following conditions, on 27/07/2018, by:

Date signed: 27 July 2018 Paul Byrnes Manager, Process Industries

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

Explanatory notes

These explanatory notes do not form part of this Works Approval.

Defined terms

Definition of terms used in this Works Approval can be found at the start of this Works Approval. Terms which are defined have the first letter of each word capitalised throughout this Works Approval.

Department of Water and Environmental Regulation

The Department of Water and Environmental Regulation (DWER) is established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the *Environmental Protection Act 1986* (WA) (EP Act). The Department also monitors and audits compliance with licences and works approvals, takes enforcement action and develops and implements licensing and industry regulation policy.

Works Approval

Section 52 of the EP Act provides that an occupier of any premises commits an offence if any work is undertaken on, or in relation to, the premises which causes the premises to become, or to become capable of being, Prescribed Premises, except in accordance with a works approval.

Section 56 of the EP Act provides that an occupier of Prescribed Premises commits an offence if Emissions are caused or increased or permitted to be caused or increased, or Waste, noise, odour or electromagnetic radiation is altered or permitted to be altered from Prescribed Premises, except in accordance with a works approval or licence.

Categories of Prescribed Premises are defined in Schedule 1 of the *Environment Protection Regulations 1987* (WA) (EP Regulations).

This Works Approval does not authorise any activity which may be a breach of the requirements of another statutory authority including, but not limited to, the following:

- conditions imposed by the Minister for Environment under Part IV of the EP Act;
- conditions imposed by DWER for the clearing of native vegetation under Part V, Division 2 of the EP Act;
- any requirements under the Waste Avoidance and Resource Recovery Act 2007;
- any requirements under the *Environmental Protection (Controlled Waste) Regulations 2004*; and
- any other requirements specified through State legislation.

It is the responsibility of the Works Approval Holder to ensure that any action or activity referred to in this Works Approval is permitted by, and is carried out in compliance with, statutory requirements.

The Works Approval Holder must comply with the Works Approval. Contravening a Works Approval Condition is an offence under s.55 of the EP Act.

Responsibilities of Works Approval Holder

Separate to the requirements of this Works Approval, general obligations of Works Approval Holders are set out in the EP Act and the regulations made under the EP Act. For example, the Works Approval Holder must comply with the following provisions of the EP Act:

• the duties of an occupier under s.61; and

• 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 (s.53).

Strict penalties apply for offences under the EP Act.

Reporting of incidents

The Works Approval Holder has a duty to report to the Department all Discharges of Waste that have caused or are likely to cause Pollution, Material Environmental Harm or Serious Environmental Harm, in accordance with s.72 of the EP Act.

Offences and defences

The EP Act and its regulations set out a number of offences including:

- Offence of emitting an Unreasonable Emission from any Premises under s.49.
- Offence of causing Pollution under s.49.
- Offence of dumping Waste under s.49A.
- Offence of discharging Waste in circumstances likely to cause Pollution under s.50.
- Offence of causing Serious Environmental Harm (s.50A) or Material Environmental Harm (s.50B).
- Offence of causing Emissions which do not comply with prescribed standards (s.51).
- Offences relating to Emissions or Discharges under regulations prescribed under the EP Act, including materials discharged under the *Environmental Protection* (Unauthorised Discharges) Regulations 2004 (WA).
- Offences relating to noise under the *Environmental Protection (Noise) Regulations* 1997 (WA).

Section 53 of the EP Act provides that a Works Approval Holder commits an offence if Emissions are caused, or altered, from a Prescribed Premises unless done in accordance with a Works Approval, Licence or the requirements of a closure notice or an environmental protection notice.

Defences to certain offences may be available to a Works Approval Holder and these are set out in the EP Act. Section 74A(b)(iii) provides that it is a defence to an offence for causing Pollution, in respect of an Emission, or for causing Serious Environmental Harm or Material Environmental Harm, or for discharging or abandoning Waste in water to which the public has access, if the Works Approval Holder can prove that an Emission or Discharge occurred in accordance with a Works Approval.

This Works Approval specifies the Emissions and Discharges, and the limits and Conditions which must be satisfied in respect of specified Emissions and Discharges, in order for the defence to offence provision to be available.

Authorised Emissions and Discharges

The specified and general Emissions and Discharges from the Works authorised through this Works Approval are authorised to be conducted in accordance with the Conditions of this Works Approval.

Amendment of Works Approval

The Works Approval Holder can apply to amend the Conditions of this Works Approval under s.59 of the EP Act. An application form for this purpose is available from DWER.

The CEO may also amend the Conditions of this Works Approval at any time on the initiative of the CEO without an application being made.

Duration of Works Approval

The Works Approval will remain in force for the duration set out on the first page of this Works Approval or until it is surrendered, suspended or revoked in accordance with s.59A of the EP Act.

Suspension or revocation

The CEO may suspend or revoke this Works Approval in accordance with s.59A of the EP Act.

Definitions and interpretation

Definitions

In this Works Approval, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition	
Books	has the same meaning given to that term under the EP Act.	
CEO	means Chief Executive Officer.	
	CEO for the purposes of notification means:	
	Director General Department Administering the <i>Environmental Protection Act</i> <i>1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 <u>info@dwer.wa.gov.au</u>	
Condition	means a condition to which this Works Approval is subject under s.62 of the EP Act.	
Department	means the department established under section 35 of the <i>Public</i> Sector Management Act 1994 and designated as responsible for the administration of Part V, Division 3 of the EP Act.	
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Works Approva Holder in writing and sent to the Works Approval's address for notifications, as described at the front of this Works Approval, in relation to:	
	(a) compliance with the EP Act or this Works Approval;	
	(b) the Books or other sources of information maintained in accordance with this Works Approval; or	
	(c) the Books or other sources of information relating to Emissions from the Premises.	
Discharge	has the same meaning given to that term under the EP Act.	
DWER	Department of Water and Environmental Regulation	
Emission	has the same meaning given to that term under the EP Act.	
Environmental Harm	has the same meaning given to that term under the EP Act.	
EP Act	means the Environmental Protection Act 1986 (WA).	
EP Regulations	means the Environmental Protection Regulations 1987 (WA).	
Implementation Agreement or Decision	has the same meaning given to that term under the EP Act.	
Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.	

Material Environmental Harm	has the same meaning given to that term under the EP Act.
Pollution	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Works Approval applies, as specified at the front of this Works Approval and as shown on the map in Schedule 1 to this Works Approval.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Reportable Event	means an exceedance above the target limit specified in Column 4 of Table 6, in Schedule 3.
Serious Environmental Harm	has the same meaning given to that term under the EP Act.
Unreasonable Emission	has the same meaning given to that term under the EP Act.
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 6C	means the promulgated Test Method 6 - Determination of Sulfur Dioxide Emissions from Stationary Sources (Instrumental Analyzer Procedure).
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.
USEPA Method 18	means the promulgated Test Method 18 - Measurement of Gaseous Organic Compound Emissions by Gas Chromatography.
Waste	has the same meaning given to that term under the EP Act.
Works	refers to the Works described in Schedule 2, at the locations shown in Schedule 1 of this Works Approval to be carried out at the Premises, subject to the Conditions.
Works Approval	refers to this document, which evidences the grant of the works approval by the CEO under s.54 of the EP Act, subject to the Conditions.
Works Approval Holder	refers to the occupier of the Premises being the person to whom this Works Approval has been granted, as specified at the front of this Works Approval.

Interpretation

In this Works Approval:

- (a) the words 'including', 'includes' and 'include' will be read as if followed by the words 'without limitation';
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a Condition, each row in a table constitutes a separate Condition;
- (d) any reference to an Australian or other standard, guideline or code of practice in this Works Approval means the version of the standard, guideline or code of practice in force at the time of granting of this Works Approval and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Works Approval; and
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act.

Conditions

Infrastructure and equipment

- **1.** The Works Approval Holder must install and undertake the Works for the infrastructure and equipment:
 - (a) specified in Column 1;
 - (b) to the requirements specified in Column 2;

of Table 2 below.

- 2. The Works Approval Holder must not depart from the requirements specified in Column 2 of Table 2 except:
 - (a) where such departure does not increase risks to public health, public amenity or the environment; and
 - (b) all other Conditions in this Works Approval are still satisfied.
- **3.** Within 30 days of the completion of the Works specified in Column 1 of Table 2, the Works Approval Holder must provide to the CEO a report from an Engineer confirming each item of infrastructure or component of infrastructure specified in Column 1 of Table 2 below has been constructed with no material defects and to the requirements specified in Column 2.
- **4.** Where a departure from the requirements specified in Column 2 of Table 2 occurs and is of a type allowed by Condition2, the Works Approval Holder must provide to the CEO a description of, and explanation for, the departure along with the certification required by Condition 2(b).

Column 1	Column 2		
Infrastructure/ Equipment	Requirements (design and construction)		
Equipment Asphalt Plant (Marini Top Tower 2500)	 Maximum capacity of 200 tonnes per hour of asphalt production 5 raw materials feed bins; waste gases from the burner being extracted to a bag filter that will ensure that particulate emissions are less than 50 mg/Nm³ (under 17% O₂); Stack from the bag filter that has a height of at least 25m above ground level and fitted with a stack silencer; Stack to be fitted with sampling ports in compliance with AS4323.1-1995; Bag filter to be fitted with a pressure differential monitoring system linked to the central papel to allow for detection of a failure of the sector. 		
	 linked to the control panel to allow for detection of a failure of the bag filter; Mixing tower for mixing aggregate/RAP with Bitumen and additives to make asphalt in the mixing drum, to be fitted with dust extraction that extract waste gases to the bag filter; Two electrically heated bitumen tanks with a capacity of 60 m³ each; and To be located on a hard stand. 		

Table 2: Infrastructure and equipment requirements table

Emissions

5. The Works Approval Holder must not cause any Emissions from the Works authorised through this Works Approval except for specified Emissions and general Emissions described in Column 1 of Table 3, subject to the exclusions, limitations or requirements specified in Column 2, of Table 3.

Column 1	Column 2		
Emission type	Exclusions/Limitations/Requirements		
Specified Emissions			
Waste gases from the asphalt manufacturing	 Waste gases to be treated by the bag house filter at all times; 		
process	 Waste gases from the bag house must be emitted to atmosphere from a stack that is at least 25m above ground level; and 		
	- The concentration of particulates in the waste gases emitted to atmosphere must be less than 50 mg/Nm ³ (17% O_2) at all time.		
General Emissions (excluding Specified Emissions)			
Emissions which arise	Emissions excluded from General Emissions are:		
from undertaking the Works set out in	Unreasonable Emissions; or		
Schedule 2.	 Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or 		
	 Discharges of Waste in circumstances likely to cause Pollution; or 		
	 Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or 		
	 Emissions or Discharges which do not comply with an Approved Policy; or 		
	 Emissions or Discharges which do not comply with prescribed standard; or 		
	 Emissions or Discharges which do not comply with the conditions in an Implementation Agreement or Decision; or 		
	• Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the Environmental Protection (Unauthorised Discharges) Regulations 2004.		

Table 3: Authorised Emissions table

Record-keeping

- 6. The Works Approval Holder must maintain accurate Books including information, reports and data in relation to the Works and the Books must:
 - be legible; (a)
 - (b) if amended, be amended in such a ways that the original and subsequent amendments remain legible or are capable of retrieval;
 - be retained for at least 3 years from the date the Books were made; (c)
 - be available to be produced to an Inspector or the CEO. (d)
- 7. The Works Approval Holder must comply with a Department Request within 14 days from the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

Emissions from the works upon completion

8. The Works Approval Holder can only have emissions from the works for a maximum period of six months upon completion of the works, unless these emissions are otherwise authorised.

Monitoring

The Works Approval Holder must monitor emissions to air in accordance with Table 4. 9.

Emission point	Parameter	Units ^{1, 3}	Averaging period	Frequency ²	Method
Stack from the bag filter	Particulate matter	mg/m³ g/s	Stack test (Minimum 60 minute average)	k test imum 60 ute rage)	USEPA Method 5 or USEPA Method 17
	NO _x Carbon monoxide	mg/m ³ g/s	Stack test (Minimum 30 minute average)	^{'m³} Stack test (Minimum 30 minute average) Once, within 4 weeks of the start of operation of the	USEPA Method 7E USEPA Method 10
	Total Volatile Organic Compounds Benzene Toluene	mg/m³ g/s	Stack test (Minimum 30 minute average)	WUIKS	USEPA Method 18

Table 4 Point source emissions to air monitoring

Note 1: All units are referenced to STP dry

Monitoring shall be undertaken to reflect normal operating conditions and any limits or conditions on inputs or Note 2: production. Concentration units are referenced to 17% O₂.

Note 3:

Reporting

10. The Works Approval Holder must provide the CEO, within eight weeks of the start of operation of the works, a report of the results of the monitoring as required per Condition 9 of this Works Approval.

Schedule 1: Maps

Premises map



Premises boundary The Premises boundary is defined by the Yellow line in the figure below.





Decision Report

Application for Works Approval

Division 3, Part V Environmental Protection Act 1986

Works Approval Number W6134/2018/1 Applicant Asphaltech Pty Ltd ACN 064520869 **File Number** DER2018/000378 **Premises** Asphaltech 416 Victoria Road, MALAGA WA 6090 Legal description -Lot 176 on Diagram 92075 Certificate of Title Volume 2103 Folio 290 Date of Report 27 July 2018 **Status of Report** Final

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1. Definitions of terms and acronyms

In this Decision Report, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
AER	Annual Environment Report
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
Decision Report	refers to this document.
Delegated Officer	an officer under section 20 of the EP Act.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EPA	Environmental Protection Authority
EP Act	Environmental Protection Act 1986 (WA)
EP Regulations	Environmental Protection Regulations 1987 (WA)
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of, and during this Review
m ³	cubic metres
NEPM	National Environmental Protection Measure
Noise Regulations	Environmental Protection (Noise) Regulations 1997 (WA)
Occupier	has the same meaning given to that term under the EP Act.
PM ₁₀	used to describe particulate matter that is smaller than 10 microns (μm) in diameter
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report
Primary Activities	as defined in Schedule 2 of the Revised Licence
Review	this Licence review

Revised Licence	the amended Licence issued under Part V, Division 3 of the EP Act following the finalisation of this Review.	
Risk Event	As described in Guidance Statement: Risk Assessment	
UDR	Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)	
µg/m³	micrograms per cubic metre	

2. Purpose and scope of assessment

This Decision Report is prepared for the assessment of an application for a Works Approval for a new asphalt manufacturing plant that will replace the existing asphalt manufacturing plant located at 416 Victoria Road in Malaga. The scope of this assessment lies with the impact of the proposed changes to the premises to the emissions and discharges from the premises. As the premises is already licensed for asphalt manufacturing no assessment will be made for location or siting of the premises. The premises are located within an industrial area with nearest sensitive receptors located at approximately 750m to the North, with many other companies in between.

Upon completion of the works the Applicant will have to request for a licence amendment to reflect the changes to the premises. As this may take some time, the Applicant would like to have the opportunity to operate the new asphalt manufacturing plant under the Works Approval for a period of time.

2.1 Application details

Table 2 lists the documents submitted during the assessment process.

Table 2: Documents and information submitted during the assessment process

Document/information description	Date received
Application for a Works Approval	2 March 2018

3. Background

The Applicant currently holds a licence for the premises at 416 Victoria Road in Malaga, as the premises is prescribed under category 35, asphalt manufacturing. The current asphalt manufacturing plant will be replaced by a complete new one which also allows for a higher production of asphalt. The new asphalt manufacturing plant will also be able to use Reclaimed Asphalt Pavement (RAP). As such the Applicant also applied to have category 61A added to the licence.

Table 3 lists the prescribed premises categories that have been applied for.

Table 3: Prescribed Premises Categories in the Existing Licence

Classification of Premises	Description	Approved Premises production or design capacity or throughput
Category 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	Up to 110,000 tonnes per year
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	Up to 1,000 tonnes per year

4. Overview of Premises

4.1 **Operational aspects**

The Applicant currently operates an asphalt manufacturing plant within the premises. This plant has aged and the Applicant decided to replace the existing plant with a more modern asphalt plant that also has the capability to use RAP as part of the asphalt manufacturing process. The rest of the supporting infrastructure onsite stays the same (roads, storage bins, office etc).

4.2 Infrastructure

The new asphalt manufacturing plant equipment consist of the infrastructure as listed in Table 4.

Table 4: Proposed Infrastructure

	New Asphalt Manufacturing Plant Infrastructure
1	Cold feeder bins, including conveyor
2	Aggregate Dryer, drum, burner (using natural gas) with silencer.
3	Baghouse filter with stack >25m height
4	RAP storage bin
5	Raw materials silos and silo for recovered fines
6	Mixing Tower, hot elevator, hot mix storage and load out
7	Control room
8	Heated bitumen storage

5. Legislative context

5.1 Planning approvals

The City of Swan granted an approval to commence development for the works on 21 June 2018.

5.2 Part V of the EP Act

5.2.1 Applicable regulations, standards and guidelines

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

The guidance statements which inform this assessment are:

- Guidance Statement: Regulatory Principles (July 2015)
- Guidance Statement: Setting Conditions (October 2015)
- Guidance Statement: Decision Making (February 2017)
- Guidance Statement: Risk Assessments (February 2017)

5.2.2 Works approval and licence history

No recent works approvals have been issued for the premises. The last licence issued for the premises was L8447/2010/3, on 2 October 2015. This licence expires on 3 October 2021.

6. Consultation

The Application was advertised for public comment in The West Australian newspaper on 30 April 2018. No submissions have been received.

7. Risk assessment

7.1 Determination of emission, pathway and receptor

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

The identification of the sources, pathways and receptors to determine Risk Events are set out in Tables 12 and 13 below.

Table 5. Identification of emissions, pathway and receptors during construction

Risk Events						Continue to	Reasoning
Sources/Activities		Potential emissions	Potential receptors Potential adverse impacts		assessment		
Construction, mobilisation and positioning of infrastructure	Vehicle movements on unsealed access roads	Noise	Residences at approximately 750m to the North	Air / wind dispersion	Amenity impacts	No	Premises located within Industrial Area at a relatively large distance from sensitive receptors. Works to be done mainly during the day. Not expected to cause any impact on receptors. Noise Regulations apply.
		Dust				No	Works mainly on sealed road within the premises. Due to distance with sensitive receptors it is not expected to cause an impact.
	Construction of new buildings, plant and infrastructure	and ioning of structure Construction of new buildings, plant and Noise Residences at approximately 750n	Residences at approximately 750m to the	Air / wind dispersion	Amenity impacts	No	Premises located within Industrial Area at a relatively large distance from sensitive receptors. Works to be done mainly during the day. Not expected to cause any impact on receptors. Noise Regulations apply.
		Dust	North			No	Equipment will be constructed within the premises on hard stand. As such no dust emissions are expected to occur from the premises that could cause an amenity impact at the sensitive receptors.

	Risk Events						Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts	assessment	
Asphalt manufacturing	Noise (premises as a whole)	Noise	Residential premises about 750m to the North	Air	Low level amenity impacts	No	No recent history of noise complaints from the premises. Premises is relatively far from sensitive receptors. Noise Regulations apply.
	Aggregate drying	Particulate emissions	Residential premises about 750m to the North	Air	Low level amenity impacts	Yes	See 7.4.
	Asphalt mixing, bitumen storage and delivery of the asphalt into trucks	Odour/VOC	Residential premises about 750m to the North	Air	Low level amenity Impacts	Yes	See 7.5.
	Bulk diesel storage	Potential spill to soil	Soil underneath the premises	Direct discharge	Potential contamination of soil/groundwater	No	No regular source of emissions. Fuel storage is regulated by the Department of Mines, Industry Regulation and Safety.

Table 6: Identification of emissions, pathway and receptors during operation

Consequence and likelihood of risk events 7.2

A risk rating will be determined for risk events in accordance with the risk rating matrix set out in Table 14 below.

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		

Table 7: Risk rating matrix

DWER will undertake an assessment of the consequence and likelihood of the Risk Event in accordance with Table 15 below.

Table 8: 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.

"onsite" means within the Prescribed Premises boundary.

7.3 Acceptability and treatment of Risk Event

DWER will determine the acceptability and treatment of Risk Events in accordance with the Risk treatment table 16 below:

Table 9: Risl	k treatment table
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Rating of Risk Event	Acceptability	Treatment
Extreme	Unacceptable.	Risk Event will not be tolerated. DWER may refuse application.
High	May be acceptable. Subject to multiple regulatory controls.	Risk Event may 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 – Particulate Emissions

7.4.1 Description of Risk Event 1

Risk Event 1 is described as follows:

Particulate emissions caused by the asphalt manufacturing process are released from the bag house filter stack into atmosphere and carried by the wind to nearby residents who are negatively impacted by the particulates.

7.4.2 Identification and general characterisation of emission

The bag house filter that is proposed for the new asphalt manufacturing plant will have a guaranteed performance of reducing particulate emissions to less than 50 mg/m³. The particulates are being emitted from a stack that is approximately 27m above ground level. The particulates will in general be relatively small as the bag filter has a pre-separator that will take out most of the larger particulates (>63 µm) prior to the waste gases being treated by the bag filter, which under normal circumstances only releases very small particulates. The particulates that are emitted are generally inert.

7.4.3 Description of potential adverse impact from the emission

Dust from asphalt plants are more of a nuisance than a health impact for the general public.

7.4.4 Criteria for assessment

The National Environmental Protection Measure provides an ambient standard for particulates smaller than 10 microns (PM_{10}) of 50 µg/m³ as a 24 hour average. As there is no modelling done for this proposal, the Delegated Officer assesses the proposal against emission standards that are used elsewhere for particulates, especially looking at a similar kind of industry like the concrete batching industry. The *Environmental Protection (Concrete batching*)

and cement product manufacturing) Regulations 1998 provides a limit of 50 mg/m³ for particulates from this industry including the requirement to use a bag house filter.

7.4.5 Applicant controls

The Applicant stated in the application that the new asphalt plant has a bag house filter that will ensure emissions from the stack will be below 50 mg/m³. The bag filter is equipped with a pressure differential monitoring system that will be able to detect significant pressure changes within the bag house due to ruptured bags. The bag house filter is designed with a preseparator to reduce loading on the bags and to recover fines from the waste gases. Emissions to atmosphere will be occurring from a stack that is at least 27m high.

7.4.6 Consequence

If Risk Event 1 occurs, then the Delegated Officer has determined that the particulates will have a low level local impact to amenity. Therefore, the Delegated Officer considers the consequence of Risk Event 1 to be **Minor**.

7.4.7 Likelihood of Risk Event

The Delegated Officer has determined that based upon the used technology and the location of the premises and the fact there are no recent dust complaints about the premises, Risk Event 1 may only occur in exceptional circumstances. Therefore, the Delegated Officer considers the likelihood of Risk Event 1 to be **Rare**.

7.4.8 Overall rating of Risk Event 1

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 10) and determined that the overall rating for Risk Event 1 is **Low**.

7.5 Risk Assessment – Odour Emissions

7.5.1 Description of Risk Event 2

Risk Event 2 can be described as follows:

Odour emissions from the asphalt manufacturing process are released through the bag house filter stack into the atmosphere and carried by the wind to nearby residents who are negatively impacted by the odours.

7.5.2 Identification and general characterisation of emission

The asphalt manufacturing process uses bitumen which when kept warm releases some volatile organic compounds. When the bitumen storage is refilled, the replaced are is vented to atmosphere and this air can contain some odours as such.

The asphalt mixer mixes the heated aggregate with the bitumen, additives (when used) and RAP. The air from the mixer is extracted and discharges via the bag house filter to atmosphere. Odour emissions can be released from this process.

Another potential source of odours is the discharge of the asphalt into the truck. The warm asphalt can still release odours when it's poured into the truck. But also the warm asphalt can cause the truck coating (can be kerosene, diesel or an alternative product) to evaporate and this can cause odours.

The Applicant did not provide details on the exact amount of volatile organic compounds they expect the plant will emit to atmosphere, as such general knowledge of and the experience with asphalt manufacturing premises was used.

7.5.3 Description of potential adverse impact from the emission

The Department has received over the years complaints about odours from asphalt manufacturing plants, which mainly can categorised as nuisance complaints instead of health complaints. As such the adverse impact from Risk Event 2 is deemed an amenity impact.

7.5.4 Criteria for assessment

With regards to odour criteria, when it is not measured, Section 49 of the Act applies, which can be interpreted as that a person may not cause an odour which unreasonably interferes with the health, welfare, convenience, comfort or amenity of any person.

7.5.5 Applicant controls

The main control mechanism for odour is to control the temperature during the asphalt manufacturing process and to extract all air that potentially has odours to the stack to disperse any odours released to atmosphere and thus reducing odour concentration outside the premises.

7.5.6 Consequence of Risk Event 2

If *Risk Event 2* occurs, *then* the Delegated Officer has determined that the impact of odour emissions will be *minimal*. Therefore, the Delegated Officer considers the consequence of *Risk Event 2* to be **Minor**.

7.5.7 Likelihood of Risk Event 2

The Delegated Officer has determined that Risk Event 2 could occur at some time. Therefore, the Delegated Officer considers the likelihood of Risk Event 2 to be **Possible**.

7.5.8 Overall rating of Risk Event 2

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 10) and determined that the overall rating for the risk of Risk Event 2 is **Medium**.

7.6 Summary of acceptability and treatment of Risk Events

A summary of the risk assessment and the acceptability or unacceptability of the risk events set out above, with the appropriate treatment and control, are set out in Table 18 below. Controls are described further in section 11.

Table 10: Risk assessment summary

	Description of Risk Event	Applicant controls	Risk rating	Acceptability with controls (conditions on instrument)
1.	Particulate emissions caused by the asphalt manufacturing process are released from the bag house filter stack into atmosphere and carried by the wind to nearby residents who are negatively impacted by the particulates.	Bag house filter and 27m stack	Minor consequence Rare likelihood Low Risk	Acceptable subject to bag house filter conditioned.

	Description of Risk Event	Applicant controls	Risk rating	Acceptability with controls (conditions on instrument)
2.	Odour emissions from the asphalt manufacturing process are released through the bag house filter stack into the atmosphere and carried by the wind to nearby residents who are negatively impacted by the odours.	Extraction of fumes and discharge of these fumes through 27m stack	Minor consequence Possible likelihood Medium risk	Acceptable subject to infrastructure build as per application.

8. Regulatory controls

8.1 Works Approval controls

The Delegated Officer is of the opinion that following the risk assessment it is needed to prescribe the infrastructure as per the application and include stack testing requirements to ensure that the plant will have emissions that are similar or less than the emissions presented in the application. The Applicant will be allowed to have emissions from the new asphalt manufacturing plant as long as the Applicant will be compliant with the conditions of the Works Approval.

9. Applicant's comments

The Applicant was provided with the draft Decision Report and draft Works Approval> on 28 June 2018. The Applicant provided some clarification on outstanding issues and also clarified that the burner will only be fuelled by gas, which removes the need to conduct stack testing for SO2. The Delegated Officer has amended the information in this Decision Document and the Works Approval to reflect the Applicant's response to the draft.

10. 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.

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

Paul Byrnes 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.	Works Approval Application	Application	DWER document id A1628968
2.	Comments on draft documents	-	DWER document id A1704768
3.	DER, July 2015. <i>Guidance Statement:</i> <i>Regulatory principles.</i> Department of Environment Regulation, Perth.	DER 2015a	accessed at <u>www.dwer.wa.gov.au</u>
4.	DER, October 2015. <i>Guidance</i> <i>Statement: Setting conditions.</i> Department of Environment Regulation, Perth.	DER 2015b	
5.	DER, November 2016. <i>Guidance</i> <i>Statement: Risk Assessments.</i> Department of Environment Regulation, Perth.	DER 2016b	
6.	DER, November 2016. <i>Guidance</i> <i>Statement: Decision Making.</i> Department of Environment Regulation, Perth.	DER 2016c	