



Licence

Environmental Protection Act 1986, Part V

Licensee: Downer EDi Works Pty Ltd

Licence: L8498/2010/2

Registered office: 39 Delhi Road
NORTH RYDE NSW 2113

ACN: 008 709 608

Premises address: Works-Emoleum-Karratha Nickol Bay Asphalt Plant
Part of General Purpose Lease G47/42
Within coordinates: E473264.33 N7713601.67; E473329.18
N7713536.71; E473371 N7713554; E473489 N7713516; E473400.71
N7713677.21; E473479 N7713533; E473622.01 N7713484.7;
E473613.93 N7713476.23
BURRUP WA 6714 as depicted in Schedule 1

Issue date: Thursday, 3 December 2015

Commencement date: Sunday, 6 December 2015

Expiry date: Tuesday, 5 December 2020

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	50 000 tonnes per annual period

Conditions

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

Date signed: 3 December 2015

.....
Jonathan Bailes
Manager Licensing (Process Industries)
Officer delegated under section 20
of the *Environmental Protection Act 1986*



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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 regulates 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

Downer EDI Works Pty Ltd (Downer EDI) operate an Ammann Contimix ACM140 Quick asphalt batch plant at their existing Nickol Bay site, located within the Holcim quarry site, approximately 3 kilometres (km) south-east of Dampier and approximately 15 km west of Karratha. The land is zoned for heavy industrial use. Construction of the asphalt plant was authorised under works approval W5766/2014/1.

The asphalt plant is semi-mobile and a skid mounted design that produces up to 140 tonnes of asphalt per hour through a continuous mixing process. The plant consists of:

- six cold feeders with belt scales;
- drum dryer;
- baghouse;
- two x 20m³ reclaimer filler silos;
- two x 55m³ bitumen tanks; and
- a loading silo.

The key emissions associated with the asphalt plant are point source emissions to air. Air emissions are directed from the drum dryer through a baghouse filtration system and out of a stack.

This Licence is the successor to licence L8498/2010/1 and has been updated to the current licence template. The licences and works approvals issued for the Premises are:

Instrument log		
Instrument	Issued	Description
L7915/2004/1	17/05/2004	New application.
L7915/2004/2	15/11/2004	Licence reissue.
L7915/2004/3	15/11/2007	Licence reissue.
L8498/2010/1	02/12/2012	New licence.
L8498/2010/1	19/08/2013	Licence amendment to new template.
L8498/2010/1	07/11/2013	Licence amendment to increase Premises production capacity.
L8498/2010/1	04/06/2015	Licence amendment to incorporate new Ammann Contimix ACM140 Quick asphalt batch plant and associated operating conditions.
L8498/2010/2	05/12/2015	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 In the Licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 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 January until 31 December in the same year;

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

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

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

'CEO' for the purpose of correspondence means:

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

'Licence' means this Licence numbered L8498/2010/2 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;

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

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

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

'STP dry' means standard temperature and pressure (0°Celsius and 101.325 kilopascals respectively), dry;

'TSP' means total suspended particles each having an equivalent aerodynamic diameter of less than 50 micrometres;



‘**USEPA**’ means United States (of America) Environmental Protection Agency;

‘**USEPA Method 2**’ means USEPA Test Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube);

‘**USEPA Method 5**’ means USEPA Test Method 5 – 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.

1.1.3 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.

1.1.4 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 Premises operation

1.2.1 The licensee shall ensure that automatic safeguards are incorporated within the process to prevent the ignition of bitumen within the drum.

1.2.2 The Licensee shall ensure that:

- (a) the baghouse is operational prior to start-up of the drier and operated continuously whilst the dryer is operating;
- (b) the baghouse filters are regularly inspected; and
- (c) when detected, blocked, frayed, or leaking baghouse filters are immediately replaced.

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 it is done so in accordance with the conditions of this Licence.

Table 2.2.1: Emission points to air			
Emission point reference	Emission Point	Emission point height (m)	Source, including any abatement
A1	Stack	12m	Drum dryer via baghouse

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	TSP	50 mg/m ³	Stack test (60 minute average)

Note 1: All units are referenced to STP dry and 17% O₂

Note 2: The addition of diluent gases shall not be used to achieve compliance with the emission limits.



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.
- 3.1.2 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.
- 3.1.3 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	Units¹	Frequency²	Method
A1	TSP	mg/m ³	Biennial	USEPA Method 5
	Stack velocity	m/s		USEPA Method 2

Note 1: All units are referenced to STP dry and 17% O₂

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

- 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 4.1.1(d) be retained for at least six 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 complete an Annual Audit Compliance Report (AACR) 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.



- 4.1.3 The Licensee shall:
- (a) implement a complaints management system that shall record the following information (if known or provided) about complaints received at the Premises concerning any environmental impact of the activities undertaken at the Premises:
 - (i) name and address of the complainants (if consented);
 - (ii) date and time of complaint;
 - (iii) date and time of the alleged incident;
 - (iv) alleged source of the incident;
 - (v) general description of the alleged incident, including any environmental or health impacts reported by the complainant;
 - (vi) wind direction, wind speed and temperature at the time of the alleged incident;
 - (vii) the likely source of the alleged incident; and
 - (viii) actions taken by the Licensee to address the complaint, including the outcome of any investigation(s) and action(s) to verify any impacts.
 - (b) complete an annual analysis and review of complaints recorded under 4.1.3(a) to identify any common factors and the root cause of complaints and proposals to address these.

4.2 Reporting

- 4.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 90 calendar days after the end of the annual period. The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table.

Table 4.2.1: 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
5.1.3	Compliance	AACR
5.1.4	Complaints summary	None specified
-	Annual throughputs	

Note 1: Forms are in Schedule 2

- 4.2.2 The Licensee shall submit the information in Table 4.2.2 to the CEO according to the specifications in that table.

Table 4.2.2: Non-annual reporting requirements				
Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form ¹
Table 3.2.1	Emissions to air monitoring results	Biennial	28 calendar days	AR1

Note 1: Forms are in Schedule 2

4.3 Notification

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



Table 4.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement¹	Format or form²
2.1.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5 pm of the next usual working day. Part B: As soon as practicable	N1
3.1.3	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

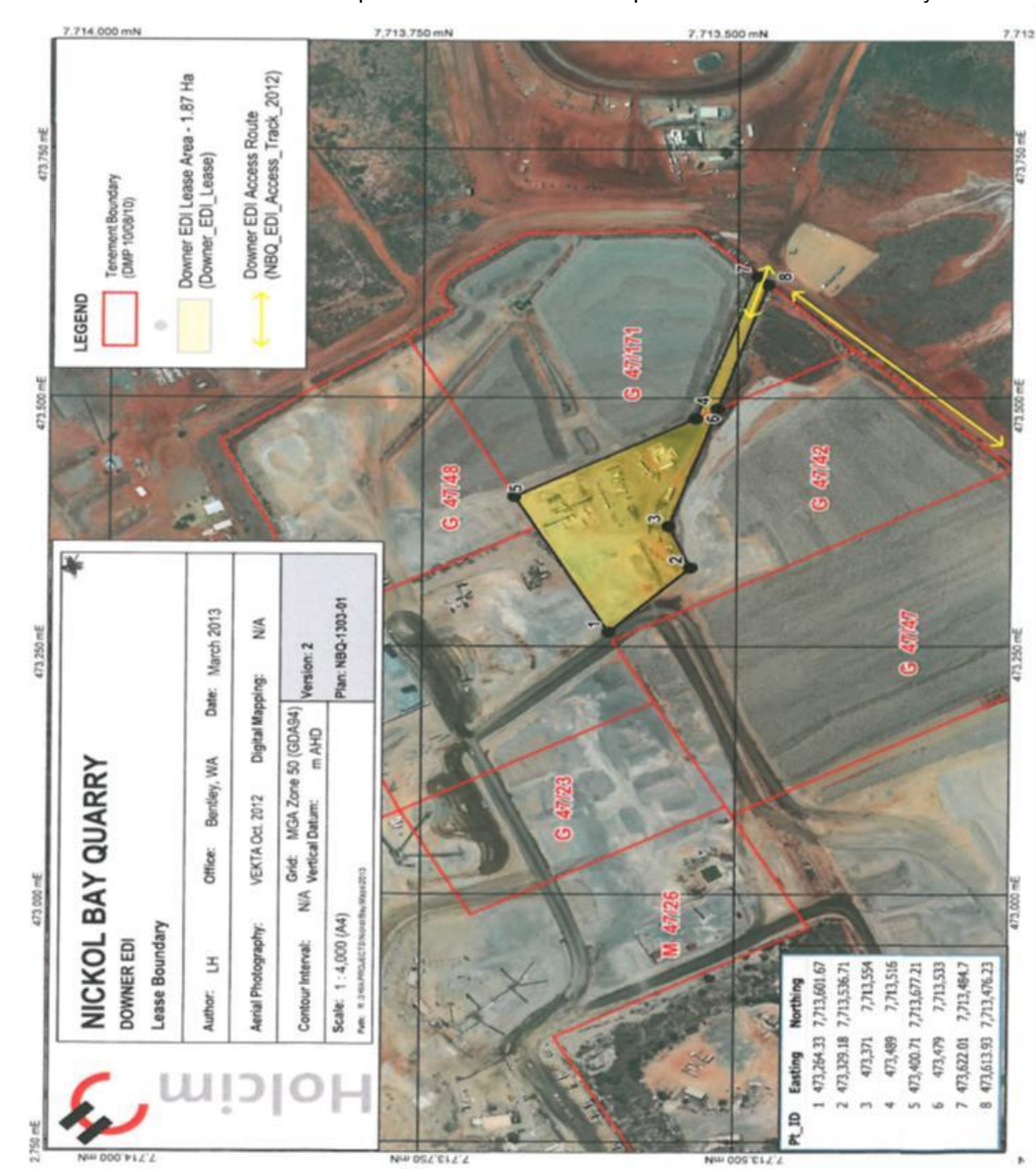
Note 2: Forms are in Schedule 2



Schedule 1: Maps

Premises map

The Premises is shown in the map below. The black line depicts the Premises boundary.





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:	ABN:
Trading as:	
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 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	<input type="checkbox"/> <input type="checkbox"/>	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	<input type="checkbox"/> <input type="checkbox"/>	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	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; 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)	<input type="checkbox"/> <input type="checkbox"/>	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	<input type="checkbox"/> <input type="checkbox"/>	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: _____

SIGNATURE: _____

NAME:
(printed) _____

NAME:
(printed) _____

POSITION: _____

POSITION: _____

DATE: ____/____/____

DATE: ____/____/____

SEAL (if signing under seal)



Licence: L8498/2010/2
Form: AR1
Name: Monitoring of point source emissions to air

Licensee: Downer EDi Works Pty Ltd
Period :

Form AR1: Monitoring of point source emissions to air						
Emission point	Parameter	Limit	Result¹	Averaging period		Sample date & times
A1	TSP	50mg/m ³	mg/m ³		USEPA Method 5	
	Stack velocity	N/A	m/s		USEPA Method 2	

Note 1: All units are referenced to STP dry and relevant Oxygen Correction in Table 2.2.2

Signed on behalf of Downer EDi Works Pty Ltd: Date:



Licence: L8498/2010/2
Form: N1

Licensee: Downer EDi Works Pty Ltd
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 Downer EDi Works Pty Ltd	
Date	



Decision Document

Environmental Protection Act 1986, Part V

Proponent: Downer EDi Works Pty Ltd

Licence: L8498/2010/2

Registered office: 39 Delhi Road
NORTH RYDE NSW 2113

ACN: 008 709 608

Premises address: Works-Emoleum-Karratha Nickol Bay Asphalt Plant
Part of General Purpose Lease G47/42
BURRUP WA 6714

Issue date: Thursday, 3 December 2015

Commencement date: Sunday, 6 December 2015

Expiry date: Tuesday, 5 December 2020

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER) has decided to issue a licence. DER considers that in reaching this decision, it has taken into account all relevant considerations and legal requirements and that the Licence and its conditions will ensure that an appropriate level of environmental protection is provided.

Decision Document prepared by: Carmen Standing
Licensing Officer

Decision Document authorised by: Jonathan Bailes
Delegated Officer



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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 <input type="checkbox"/> New Licence <input checked="" type="checkbox"/> Licence amendment <input type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	35	50,000 tonnes per year
Application verified	Date: 14/09/2015	
Application fee paid	Date: 30/09/2015	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome	N/A	
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	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 <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input type="checkbox"/>		



3 Executive summary of proposal and assessment

Downer EDi Works Pty Ltd (Downer EDi) operate an Ammann Contimix ACM140 Quick asphalt batch plant at their existing Nickol Bay site, located within the Holcim quarry site, approximately 3 kilometres (km) south-east of Dampier and approximately 15 km west of Karratha. The land is zoned for heavy industrial use. Construction of the Ammann asphalt plant was authorised under works approval W5766/2014/1.

The asphalt plant is semi-mobile and a skid mounted design that will produce up to 140 tonnes of asphalt per hour through a continuous mixing process. The plant consists of:

- six cold feeders with belt scales;
- drum dryer;
- baghouse;
- two 20m³ reclaimer filler silos;
- two 55m³ bitumen tanks; and
- a loading silo.

The key emissions associated with the asphalt plant are point source emissions to air. Air emissions are directed from the drum dryer through a baghouse filtration system and out a stack. The premises has been assessed as a low-risk site.



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			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	N/A	There are no general conditions required to be included on the licence.	N/A
Emissions general	L2.1.1	Operation Emission limits are set through condition 2.2.2 of the licence. Condition 2.1.1 regarding recording and investigation of exceedances of limits has been included.	N/A
Point source emissions to air including monitoring	L2.2.1 and L2.2.2	DER's assessment and decision making are detailed in Appendix A.	Ambient Air Assessment Criteria, National Environmental Protection Measure (Ambient Air Quality) Application supporting documentation



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Fugitive emissions	N/A	<p>Operation</p> <p><u>Emission Description</u> <i>Emission:</i> Dust emissions generated from aggregate handling and transfer, aggregate stockpiles, the operation of the asphalt plant, and movement of vehicles around the site. <i>Impact:</i> Dust emissions (particulate matter) can be harmful to human health, reduce amenity and smother flora. The nearest residence is located in the township of Dampier approximately 3km to the north-west of the premises. <i>Controls:</i> Separation distance. The Licensee manages dust emissions with the following strategies:</p> <ul style="list-style-type: none"> • All operations are conducted on a bitumen hardstand; • Any aggregate spills to the hardstand are removed on a daily basis; • Stockpiles are kept damp using a water spray during loading operations; and • Operating areas are damped down during dry and windy conditions. <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> The risk of fugitive dust impacts has been assessed as low and, therefore, can be sufficiently regulated under section 49 of the <i>Environmental Protection Act 1986</i>. No specific conditions for dust emissions have been included on this licence.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p>	<i>Environmental Protection Act 1986</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Odour	L1.2.1	<p>Operation</p> <p><u>Emission Description</u> <i>Emission:</i> Odour from bituminous products due to drum over-heating and while decanting of bitumen. <i>Impact:</i> Nuisance odours can result in decreased ambient air quality and possibly human health concerns. The nearest residence is 3km to the north-west of the premises. <i>Controls:</i> Separation distance. The temperature of the asphalt plant is computer controlled so as to maintain an optimum operating temperature reducing the odour levels associated with production. Temperature alarms are fitted to ensure safe operation and minimise risks of drum overheating. In the instance of an overheating event, the burner will shut down and the heating process ceased.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> General provisions of the <i>Environmental Protection Act 1986</i> will apply. Condition 1.2.1 remains on the licence requiring the automatic temperature safeguards to be in place.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p>Application supporting documentation.</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Noise	N/A	<p>Operation</p> <p><u>Emission Description</u> <i>Emission:</i> Cumulative noise emissions associated with the operation of the asphalt plant and adjacent extractive industry activities. <i>Impact:</i> Noise emissions resulting in amenity impacts and a nuisance to persons not on the Premises. The nearest residence is 3km to the north-west of the premises. <i>Controls:</i> Separation distance. The Premises is required to comply with the <i>Environmental Protection (Noise) Regulations 1997</i>.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> No conditions relating to noise emissions are required to be added to the Licence. The <i>Environmental Protection (Noise) Regulations 1997</i> apply.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p>	<p>Application supporting documentation.</p> <p><i>Environmental Protection (Noise) Regulations 1997.</i></p> <p><i>Environmental Protection Act 1986.</i></p>
Monitoring general	L3.1.1 - L3.1.3	<p>Operation</p> <p>The Licence contains some conditions for general monitoring including the use of NATA accredited laboratories, calibration and reporting.</p>	N/A



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Information	L4.1.1 – L4.1.3 L4.2.1 – L4.2.2 L5.3.1	Operation Conditions relating to records keeping, complaints management, annual reporting and notification remain on the licence. Reporting and notification conditions relating to monitoring of emissions to air remain on the licence.	N/A
Licence Duration	N/A	The licence has been assessed as presenting a low risk to the environment. The licence will be issued for 5 years.	N/A



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
5/10/2015	Application advertised in West Australian (or other relevant newspaper)	No comments received	N/A
27/11/2015	Proponent sent a copy of draft instrument	Proponent response provided 2/12/2015. No comments made.	N/A



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

The primary emissions of concern associated with asphalt manufacturing are emissions to air. Point source emissions to air from asphalt manufacturing are produced predominantly through the drying and heating process and emitted through a stack. The key emissions include particulates and gaseous emissions (SO₂, NO_x, CO, VOC).

The applicant has provided technical specifications for the asphalt plant that have been used in undertaking this risk assessment along with results from emissions verification testing carried out during commissioning and operation of the plant.

Operation

Emission Description

Emission: Particulates produced from the drying and heating of raw material (normal operation).

Impact: Particulate emissions can be harmful to human health and the environment. Elevated total suspended particulates (PM) can impact ambient environmental quality resulting in amenity impacts and can smother vegetation. Particulate matter that is less than 10 (PM₁₀) or 2.5 (PM_{2.5}) micrometres in diameter can be drawn deep into the lungs causing human health impacts. The chemical and physical properties of the particles, the size of the particles and the duration of exposure are all factors that may affect human health impacts. The premises is located within an industrial estate and approximately 3km south-east of Dampier.

Controls: Particulates produced from the drying and heating of aggregate are filtered through a baghouse filtration system. Baghouse systems are considered to be the best dust collection system for the asphalt industry. The applicant has provided specifications for the filter system that includes a maximum particulate emission of <50mg/Nm³. Emissions verification testing during the commissioning of the plant confirmed very low particulate emissions with an average result of 0.5mg/Nm³ emitted from the stack of the Ammann Contimix ACM140 Quick asphalt batch plant.

Risk Assessment

Consequence: Insignificant

Likelihood: Unlikely

Risk Rating: Low

Regulatory Controls

The primary control for particulate emissions is the bag filter. Licence condition 1.2.2 requires the baghouse to be operational when the drum dryer is in use and to be maintained to ensure consistent performance. Licence conditions 2.2.1 – 2.2.3 detailing the approved emission point and emission limit for particulate emissions remain on the licence. The particulate limit of 50mg/Nm³ continues to be applied to reflect the technology of the Ammann Contimix ACM140 Quick asphalt batch plant. Biennial monitoring of emissions to air is required under condition 3.2.1 to ensure emission limits continue to be achieved.

Residual Risk

Consequence: Insignificant

Likelihood: Rare

Residual Risk Rating: Low

Emission Description

Emission: Gaseous emissions including SO_x, NO_x, CO and VOC produced from the drying and heating of raw material through the use of fossil fuels (normal operation).

Impact: Studies link short-term exposure of gaseous emissions to adverse health impacts including respiratory illness and asthma. The premises is located within an industrial estate and approximately 3km south-east of Dampier

Controls: The asphalt plant is new and the drum design and burning system utilise current technology. The technical specifications for the gaseous emissions from the plant are detailed through Table 1.



Table 1: Anticipated gaseous emissions

Emission	Anticipated concentration (mg/Nm ³)		Guideline limits ¹ (mg/Nm ³)
	Min	Max	
CO	100	500	350 – 1000
NO _x	10	350	350 – 500
SO _x	10	350	350 – 500
VOC	10	50	50 –150

¹Environmental Guidelines on Best Available Techniques (BAT) for the Production of Asphalt Paving Mixes, June 2007

As shown, the anticipated maximum gaseous emissions from the asphalt plant are below the guideline upper guideline limits for CO, NO_x and SO_x. Emissions verification testing performed during the commissioning of the asphalt plant show very low levels of gaseous emissions, as shown below in Table 2. Commissioning and verification testing was performed in accordance with the conditions of Works Approval W5766/2014/1 and the relevant Australian Standard test methods, overseen by an expert test engineer and utilising a NATA accredited laboratory to determine results.

Table 2: Gaseous emissions during verification testing of the Amman Contimix ACM140

Emission	Anticipated concentration in mg/Nm ³		Verification Test Result (mg/Nm ³)
	Min	Max	
CO	100	500	140
NO _x	10	350	34
SO _x	10	350	<2.9
VOC	10	50	0.29

Risk Assessment

Consequence: Insignificant

Likelihood: Rare

Risk Rating: Low

Regulatory Controls

Licence condition 2.2.1 detailing the location and emission point for point source emissions to air is stipulated in the licence. Gaseous limits are not required for the operation of Ammann Contimix ACM140 Quick asphalt batch plant as contemporary technologies are being utilised and emissions have been demonstrated to be low.

Residual Risk

Consequence: Insignificant

Likelihood: Rare

Residual Risk Rating: Low