



# Licence

## *Environmental Protection Act 1986, Part V*

**Licensee:** Hanson Construction Materials Pty Ltd

**Licence:** L8432/2010/3

**Registered office:** Level 10, 35 Clarence Street  
 SYDNEY NSW 2000

**ACN:** 009 679 734

**Premises address:** Byford Hard Rock Quarry  
 Lot 202 South Western Hwy  
 WHITBY WA 6213  
 Being Lot 202 on Plan 37006, as depicted in Schedule 1.

**Issue date:** Thursday, 1 October 2015

**Commencement date:** Sunday, 4 October 2015

**Expiry date:** Sunday, 3 October 2027

**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
12	Screening, etc. of material: premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	50,000 tonnes or more per year	700,000 tonnes per annual period

**Conditions**

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

Date signed: 01 October 2015

.....  
 Alana Kidd  
 Manager Licensing (Resource 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**

The Byford quarry is a hard rock quarry located near Mundijong, approximately 45 km south of Perth. The quarry is located on freehold land adjacent to a regional landfill and another hard rock quarry. The nearest sensitive receptors not associated with the activity are located 0.8 km north and south-west of the active face, with operations otherwise well buffered by farming land and State Forest.

The quarry has been active since the early 1970s, supplying hard rock products for the expanding Perth metropolitan area. The extraction activity is subject to Ministerial Statement 227 and planning approval issued by WAPC and the Shire of Serpentine-Jarrahdale. The life of the quarry is estimated at 80 years at current extraction rates (300,000 – 700,000 tpa). The primary emissions and discharges from operations are noise and vibration during blasting, noise and fugitive dust during crushing and the off-site discharge of excess stormwater.

This Licence is the successor to L8432/2010/2 and has been reviewed and converted to the new licence format.

The licences and works approvals issued for the Premises since 06/09/2000 are:

Instrument log		
Instrument	Issued	Description
L4415/5	06/09/2000	Licence reissued.
L4415/6	19/09/2001	Licence reissued.
L4415/7	18/09/2002	Licence reissued.
L4415/8	24/09/2003	Licence reissued.
L4415/9	13/10/2004	Licence reissued.
L4415/10	27/09/2005	Licence reissued.
L8043/1979/1	27/09/2005	New licence issued following previous licence ceasing to have effect.
W4324/1	22/03/2007	Works approval for construction of a concrete batching plant, capacity 75,000 tpa.
L8432/2010/1	29/04/2010	New (short-term) licence issued following previous licence ceasing to have effect.
L8432/2010/2	01/10/2010	New licence issued.
L8432/2010/3	01/10/2015	Licence reissued in current licence format.
W5841/2015/1	TBC	Works approval for a concrete batching plant (under assessment).

**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 2187.2'** means the Australian Standard AS 2187.2 *Explosives – Storage and use, Part 2 – Use of explosives*;

**'AS 2922-1987'** means the Australian Standard AS 2922-1987 *Ambient air – Guide for the siting of sampling units*;

**'AS 3580.10.1'** means the Australian Standard AS 3580.10.1 *Methods for sampling and analysis of ambient air – Determination of particulate matter – deposited matter – gravimetric method*;

**'AS/NZS 5667.1'** means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples*;

**'AS/NZS 5667.6'** means the Australian Standard AS/NZS 5667.6 *Water Quality – Sampling – Guidance on sampling of rivers and streams*;

**'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 Environmental Protection Act 1986  
Locked Bag 33  
CLOISTERS SQUARE WA 6850  
Email: [info@der.wa.gov.au](mailto:info@der.wa.gov.au);

**'dB (Lin Peak)'** means a noise level reading in decibels (dB) obtained using the "P" time-weighting characteristic as specified in AS 1259.1-1990 with all frequency-weighting networks inoperative and with sound level measuring equipment that complies with the requirements of Schedule 4 of the *Environmental Protection (Noise) Regulations 1997*;

**'Environmental Management Plan'** means the document titled "Byford Quarry, Excavation and Rehabilitation Management Plan, Lot 2, South Western Highway, Whitby" prepared by Hanson Construction Materials Pty Ltd and dated 1 August 2011;

**'g/m<sup>2</sup>'** means grams per square metre;

**'Licence'** means this Licence numbered L8432/2010/3 and issued under the Act;

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



'**mm/s**' means millimetres per second;

'**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;

'**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; and

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

1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the 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.

1.1.5 Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the Licence, where the emission amounts to:

- (a) pollution;
- (b) unreasonable emission;
- (c) discharge of waste in circumstances likely to cause pollution; or
- (d) being contrary to any written law.

## **1.2 General conditions**

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

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

1.2.3 The Licensee shall:

- (a) implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the Premises; and
- (b) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the Premises.<sup>1</sup>

Note 1: The *Environmental Protection (Unauthorised Discharges) Regulations 2004* make it an offence to discharge certain materials into the environment.



## 2 Emissions

### 2.1 Point source emissions to surface water

2.1.1 The Licensee shall ensure that where waste is emitted to surface water from the emission points in Table 2.1.1 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this Licence.

<b>Emission point reference and location on Map of emission points</b>	<b>Description</b>	<b>Source including abatement</b>
W1	Discharge off the premises from the piped stormwater system under the stockpile and processing area	Stormwater drainage from the stockpile and processing area, passing through filtering stone and rock

### 2.2 Fugitive emissions

2.2.1 The Licensee must ensure fugitive emissions are managed in accordance with the parts of documents, specified in Table 2.2.1.

<b>Management plan reference</b>	<b>Parts</b>	<b>Date of document</b>
Environmental Management Plan	5.2 Noise management 5.3 Dust management	1 January 2011

## 3 Monitoring

### 3.1 General monitoring

3.1.1 The Licensee shall ensure that:

- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- (b) all surface water sampling is conducted in accordance with AS/NZS 5667.6; and
- (c) 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:

- (a) monthly monitoring is undertaken at least 15 days apart; and
- (b) annual monitoring is undertaken at least 9 months apart.

3.1.3 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.

3.1.4 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 surface water

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 surface water				
Monitoring point reference	Parameter	Units	Frequency	Method
W1	Total suspended solids	mg/L	Annual <sup>1</sup>	Spot sample

Note 1: Sampling under normal discharging conditions during the first flush of the season.

### 3.3 Ambient environmental quality monitoring

3.3.1 The Licensee shall undertake the monitoring in Table 3.3.1 according to the specifications in that table and record and investigate results that do not comply with Regulation 11 of the *Environmental Protection (Noise) Regulations 1997*.

Table 3.3.1: Monitoring of airblast levels				
Monitoring point reference and location	Parameter	Units	Frequency	Method
Tumbulgum Farm	Airblast overpressure <sup>1</sup>	dB (Lin Peak)	During every blast	AS2187.2
	Peak particle velocity <sup>2</sup>	mm/s		

Note 1: Measurements to be not more than 3.5 m from a building or structure.

Note 2: Measurements to be not more than 30 m from a building or structure.

3.3.2 The Licensee shall undertake the monitoring in Table 3.3.2 according to the specifications in that table.

Table 3.3.2: Monitoring of ambient air quality					
Monitoring point reference and location	Parameter	Units <sup>1</sup>	Frequency	Averaging period	Method
AQ1 – AQ3	Total insoluble solids	g/m <sup>2</sup>	Continuous, between 1 October and 30 April inclusive	Monthly	AS 2922-1987
					AS 3580.10.1

Note 1: To be sampled using a dust deposition gauge.

## 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 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
- (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
  - (i) off-site environmental effects; or
  - (ii) matters which affect the condition of the land or waters.



- 4.1.2 The Licensee shall ensure that:
- (a) any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and
  - (b) any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.
- 4.1.3 The Licensee shall complete an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.
- 4.1.4 The Licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

## 4.2 Reporting

- 4.2.1 The Licensee shall submit to the CEO an Annual Environmental Report by 1 February in each year. 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 <sup>1</sup>
-	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
-	Volume of material processed (tpa)	
Table 3.2.1	Monitoring of point source emissions to surface water	
Table 3.3.1	Monitoring of airblast levels	
Table 3.3.2	Monitoring of ambient air quality	
4.1.3	Compliance	Annual Audit Compliance Report (AACR)
4.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2.

- 4.2.2 The Licensee shall ensure that the Annual Environmental Report also contains an assessment of the information contained within the report against previous monitoring results.
- 4.2.3 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 <sup>1</sup>
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 14 days of the CEOs request	As received by the Licensee from third parties

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.

<b>Table 4.3.1: Notification requirements</b>			
<b>Condition or table (if relevant)</b>	<b>Parameter</b>	<b>Notification requirement<sup>1</sup></b>	<b>Format or form<sup>2</sup></b>
3.1.4	Calibration report	As soon as practicable.	None specified
3.3.1	Exceedance of any air blast level specified in Regulation 11 of the <i>Environmental Protection (Noise) Regulations 1997</i>	Part A: As soon as practicable but no later than 5pm of the next usual working day.	N1
		Part B: As soon as practicable	

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act.

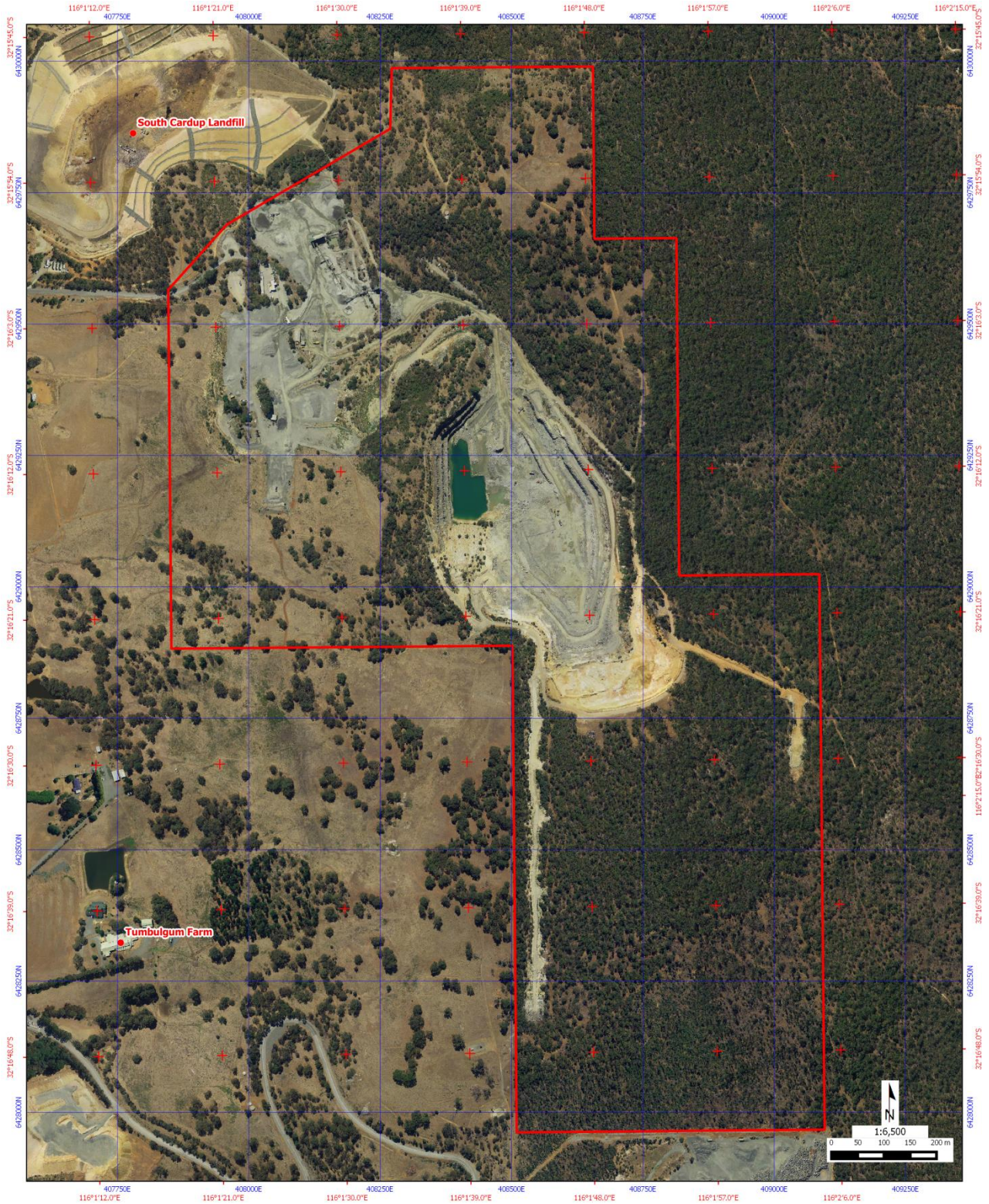
Note 2: Forms are in Schedule 2



# Schedule 1: Maps

## Premises map

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





### Map of monitoring locations

The location of the monitoring points defined in Tables 3.2.1 and 3.3.2 are shown below.





## 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 B DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

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

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

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

Initial:



## SECTION C

### SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) must 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)



# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Licensee:** **Hanson Construction Materials Pty Ltd**

**Licence:** **L8432/2010/3**

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**Registered office:** Level 10, 35 Clarence Street  
SYDNEY NSW 2000

**ACN:** 009 679 734

**Premises address:** Byford Hard Rock Quarry  
Lot 202 South Western Hwy  
WHITBY WA 6213  
Being Lot 202 on Plan 37006

**Issue date:** Thursday, 1 October 2015

**Commencement date:** Sunday, 4 October 2015

**Expiry date:** Sunday, 3 October 2027

### **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 that the Licence and its conditions will ensure that an appropriate level of environmental protection is provided.

Decision Document prepared by:

Daniel Hartnup  
Licensing Officer

Decision Document authorised by:

Alana Kidd  
Manager Licensing



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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	<b>Category number(s)</b>	<b>Assessed design capacity</b>
	12: Screening, etc. of material	700,000 tpa
Application verified	Date: 24/08/2015	
Application fee paid	Date: 25/08/2015	
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		
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 checked="" type="checkbox"/>	No <input type="checkbox"/>
		Ministerial statement No: 227 EPA Bulletin No: 602
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 checked="" type="checkbox"/>	



### **3 Executive summary of proposal and assessment**

Hanson Construction Materials Pty Ltd (Hanson) operates the Byford Hard Rock Quarry under Licence L8432/2010/2. The quarry was established in the early 1970s by the Pioneer Construction group and has operated continuously since this time, supplying hard rock products for the expanding Perth metropolitan area. It was first licensed in the late 1980s by the EPA following promulgation of the EP Act in 1986.

The quarry is located on privately owned land 4 km east of Mundijong and is one of two quarries located on this granite deposit (the adjoining WA Bluemetal quarry was established in 1993). The Cardup South regional landfill, established in 1999, abuts the premises to the north; State Forest to the east; and farming land to the west. The nearest sensitive receptors are located 0.8 km north and south-west of the active face, being a private dwelling to the north and a rural tourist entertainment complex (Tumbulgum Farm) to the south-west, respectively.

Operations at the quarry involve the extraction of rock via drilling and blasting, and the crushing of extracted material into various size aggregates using fixed crushing plant. Crushed product is stockpiled on the premises, prior to transport off-site. A nominal throughput of 400,000 tonnes per annum (tpa) is processed; however the site has the capacity to process up to 700,000 tpa from time to time during high demand (e.g. construction of the Perth-Bunbury highway). The estimated quarry reserve is in the order of 35 million tonnes, or approximately 80 years at current extraction rates.

The primary emissions and discharges associated with the crushing and screening operation are fugitive dust and noise emissions, and to a lesser extent the off-site release of stormwater. DER has received minimal community complaints about site operations to date. Hanson is aware of its obligations to comply with the *Environmental Protection (Noise) Regulations 1997* and the general provisions of the Act during operations.

The excavation, management and rehabilitation of the quarry is also subject to Ministerial Statement 227 of 1992. Planning consent was granted in 2012 by the Western Australian Planning Commission under the Metropolitan Region Scheme and by the Shire of Serpentine-Jarrahdale under their Town Planning Scheme. Both planning approvals expire on 31 December 2027. This new licence has been issued consistent with the planning approvals and has been converted to the current licence format. The licence has been reviewed and additional conditions have been added to formalise the existing monitoring of air blast levels, fugitive dust and stormwater being discharged from the premises.



## 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	L1.2.3	<p><b>Normal operation</b> There are no specified general conditions for normal operating conditions.</p> <p><b>Abnormal operation</b> <u>Emission Description</u> <i>Emission:</i> Contamination of stormwater with hydrocarbons and quarry fines and sediment from product stockpiles and operational areas. <i>Impact:</i> The discharge of contaminated stormwater into the environment can result in a reduction of fresh groundwater quality and surface water quality. <i>Controls:</i> The granite basement is of very low permeability. All stormwater falling within operational areas is contained on-site and treated through a system of sediment settlement dams, from which it is used as the on-site water supply for processing and dust suppression.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor. <i>Likelihood:</i> Possible. <i>Risk Rating:</i> Moderate.</p> <p><u>Regulatory Controls</u> L1.2.3 is an existing condition on the licence that requires the operator to prevent stormwater contamination in the first instance, and to treat contaminated stormwater prior to any discharge if required. This condition is considered adequate for managing the risk of impacts from contaminated stormwater; therefore no additional or changes to existing conditions are required on the licence.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Minor. <i>Likelihood:</i> Unlikely.</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<i>Risk Rating: Moderate.</i>	
Premises operation	L – no conditions	There are no specified premises operation conditions for normal operating conditions.	
Emissions general	L – no conditions	There are no specified emissions general conditions for normal operating conditions.	
Point source emissions to air including monitoring	L – no conditions	There are no point source emissions to air expected or authorised during operation of the quarry. No specified conditions relating to point source emissions to air or the monitoring of these emissions are required on the licence.	
Point source emissions to surface water including monitoring	L2.1.1 & L3.2.1	<p><b>Operation</b></p> <p><u>Emission Description</u>  <i>Emission:</i> Stormwater drainage from the stockpile and processing area, may be contaminated with quarry fines and sediment.  <i>Impact:</i> The discharge of contaminated stormwater into the environment can result in a reduction of fresh groundwater quality and surface water quality.  <i>Controls:</i> An underground pipe system is in place under the processing and stockpile area. This system incorporates a series of sumps and 750mm concrete pipes with a pipe outfall to a small dam on a creek line located north west of the processing area, where the water and creek enter land occupied by the landfill. Prior to the commencement of the landfill in 1999, this dam was located on Hanson land and provided the sediment settlement trapping facilities for the quarry. With the development of the landfill, portion of that land that included the sump at the edge of the stockpiles was sold to the landfill operator. A working arrangement is in place between Hanson and the landfill operator with respect the outlet from the pipe system. All water leaving the quarry site travels to this dam where it is used by the landfill, and any overflow travels around the landfill before being detained in sediment and nutrient trapping basins, prior to eventual release to the environment. Therefore, no water is directly released to the environment from quarry operations. The landfill operator monitors water entering its facility on behalf of Hanson.</p> <p><u>Risk Assessment</u>  <i>Consequence:</i> Minor.  <i>Likelihood:</i> Possible.</p>	Hanson Byford Quarry – Environmental Management Plan (2011)



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Risk Rating: Moderate.</i></p> <p><u>Regulatory Controls</u> L2.2.1 has been added to formalise the approved discharge location of stormwater off the premises. L3.2.1 has been added to formalise the requirement to sample at least once per year the quality of water being discharged off the premises from this pipe.</p> <p><u>Residual Risk</u> <i>Consequence: Minor.</i> <i>Likelihood: Unlikely.</i> <i>Risk Rating: Moderate.</i></p>	
<b>Point source emissions to groundwater including monitoring</b>	L – no conditions	There are no point source emissions to groundwater expected or authorised during operation of the quarry. No specified conditions relating to point source emissions to groundwater or the monitoring of these emissions are required on the licence.	
<b>Emissions to land including monitoring</b>	L – no conditions	There are no emissions to land expected or authorised during operation of the quarry. No specified conditions relating to emissions to land or the monitoring of these emissions are required on the licence.	
<b>Fugitive emissions</b>	L2.2.1	<p><u>Emission Description</u> <i>Emission:</i> Fugitive dust has the potential to be generated during most phases of the quarrying and crushing operation, particularly during summer. Occasional one-off dust is generated from blasting approximately once per month. <i>Impact:</i> Dust emissions can be harmful to human health and the environment. Elevated TSP levels can impact ambient environmental quality resulting in amenity impacts and can smother vegetation. The chemical and physical properties of the particles, the size of the particles and the duration of exposure are all factors which may affect human health impacts. There are 2 receptors within 0.8 km of the active pit face. Strong easterly winds on summer mornings present the time of most risk. <i>Controls:</i> The quarry is well protected by a buffer of 0.7 km to the nearest receptors. A number of management actions are taken to minimise dust and are outlined in the site's Environmental Management Plan, including:</p> <ul style="list-style-type: none"> <li>• Strategic use of landscape screening, wind breaks and tree belts;</li> </ul>	<p><i>DER Guidance Statement – Separation Distances (August 2015)</i></p> <p>Hanson Byford Quarry – Environmental Management Plan (2011)</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<ul style="list-style-type: none"> <li>• Use of a water truck for wetting down roads;</li> <li>• The drill used on site has efficient skirts around the drill bits and installed with dust extraction systems;</li> <li>• Dust suppression sprays installed throughout the crushing and screening plants, including dust covers;</li> <li>• Product stockpiles are kept moist with portable sprinklers; and</li> <li>• Conducting blasting at times when atmospheric conditions are favourable (i.e. not during adverse weather, such as strong winds).</li> </ul> <p><u>Risk Assessment</u>  <i>Consequence:</i> Moderate.  <i>Likelihood:</i> Possible.  <i>Risk Rating:</i> Moderate.</p> <p><u>Regulatory Controls</u>            The risk of fugitive dust emissions impacting on nearby receptors causing amenity impacts and smothering vegetation is deemed to be moderate in consideration of the distance to receptors being less than the recommended separation of 1 km. However, the risk is reduced if the management practices specified in the site's Environmental Management Plan to control dust are implemented. As such, L2.2.1 has been added to the licence to formalise this requirement.</p> <p><u>Residual Risk</u>  <i>Consequence:</i> Moderate.  <i>Likelihood:</i> Unlikely.  <i>Risk Rating:</i> Moderate.</p>	
<b>Odour</b>	L – no conditions	Odour is not expected from crushing and screening operations. No specified conditions relating to odour are required on the licence.	
<b>Noise</b>	L3.3.1	<p><u>Emission Description</u>  <i>Emission:</i> Air blast overpressure and ground vibration during blasting events; noise from crushing operations. Blast monitoring undertaken by the Licensee during 2014 indicates the majority of results were 10 dB below the limit (120 dB) at the nearest receptor; and the majority of ground vibration results were recorded below the limit of 5.0 mm/sec.  <i>Impact:</i> Noise emissions can cause nuisance and a reduced quality of life and health for human</p>	<i>Environmental Protection (Noise) Regulations 1997</i> (Noise Regulations)



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>populations, particularly when the source is located near sensitive receptors. Noise can affect the psychological status of human population nearby in terms of emotional stress, anger and physical symptoms. Frequency, intensity, duration, meteorological conditions and distance to receptor are all factors which may affect the impact of noise emissions on sensitive receptors.</p> <p><i>Controls:</i> The quarry is well protected by a buffer of 0.7 km to the nearest receptors. Each blast is designed by consultants in conjunction with the proponent to minimise noise impacts. Site operations are designed to maximise separation and protection from receptors. A number of management actions are taken to minimise noise and are outlined in the site's Environmental Management Plan, including:</p> <ul style="list-style-type: none"> <li>• Maintain adequate buffers to sensitive receptors;</li> <li>• Locate exposed features behind natural barriers and landform;</li> <li>• Operate from the floor of the pit below natural ground level;</li> <li>• Maintaining plant in good condition with efficient mufflers and noise shielding;</li> <li>• Shut down equipment when not in use;</li> <li>• Consideration of weather conditions during blasting;</li> <li>• Firing of shots around midday when temperature inversions have broken up;</li> <li>• Operating during daylight hours only; and</li> <li>• Scheduling activities to minimise the likelihood of noise nuisance.</li> </ul> <p><u>Risk Assessment</u>  <i>Consequence:</i> Minor.  <i>Likelihood:</i> Possible.  <i>Risk Rating:</i> Moderate.</p> <p><u>Regulatory Controls</u>            The risk of noise emissions impacting on nearby receptors causing amenity impacts is deemed to be moderate in consideration of the distance to receptors being less than the recommended separation of 1,000 m. However, the Noise Regulations specify the statutory limit for blasting noise and noise from crushing and screening activities in order to protect the impacts to receptors. As such, noise emissions can be adequately regulated through the provisions of the Noise Regulations and no specific conditions are required on the licence.</p> <p><u>Residual Risk</u></p>	



<b>DECISION TABLE</b>			
<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L = Licence</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
		<i>Consequence:</i> Minor. <i>Likelihood:</i> Unlikely. <i>Risk Rating:</i> Moderate.	
<b>Monitoring general</b>	L3.1.1 – 3.1.4	No additional general monitoring conditions are required on the licence other than the standard NATA accreditation, monitoring timeframes and calibration requirements.	
<b>Monitoring of inputs and outputs</b>	L – no conditions	Monitoring of inputs and outputs is not required to adequately manage emissions during screening operations. No specified conditions relating to process monitoring are required to be added to the licence.	
<b>Process monitoring</b>	L – no conditions	Process monitoring is not required to adequately manage emissions during screening operations. No specified conditions relating to process monitoring are required to be added to the licence.	
<b>Ambient quality monitoring</b>	L3.3.1 – L3.3.2	Monitoring of air blast levels during each blasting event is required in order to demonstrate compliance with the Noise Regulations and to provide assurance over the effectiveness of blast noise and vibration management. L3.3.1 has been added to formalise the requirement to monitor levels at the nearest receptor (Tumbulgum Farm) during every blast. Monitoring of ambient air (dust) levels is required to provide assurance over the effectiveness of site dust management. L3.3.2 has been added to formalise the requirement for continuous monitoring at the existing three locations, for the continuity of data.	
<b>Meteorological monitoring</b>	L – no conditions	Monitoring of meteorological conditions is not required.	
<b>Improvements</b>	L – no conditions	No improvements are required.	
<b>Information</b>	L4.3.1	No additional reporting conditions are required on the licence other than the minimum record keeping and annual reporting requirements. A notification requirement has been added for instances where air blast levels exceed the levels specified in Regulation 11 of the Noise Regulations during blasting activities.	
<b>Licence Duration</b>	N/A	The expiry of this new licence has been determined in accordance with the DER guidance statement: Licence duration (May 2015). As such the licence expiry has been set to align with the duration of planning approvals issued by WAPC and the Shire of Serpentine-Jarrahdale (expiry 31 December 2027). The small gap between the two timeframes is based on the alignment of DER annual fees.	Guidance Statement: Licence Duration (DER, May 2015)





## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
1/09/2015	Proponent sent a copy of draft instrument	Minor comments.	Changes made where necessary.



## 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