Government of **Western Australia**
Department of **Environment Regulation**

Your ref: L4549/1982/12
Our ref: DER2013/000854
Enquiries: Teresa Wilkie
Phone: 9182 2033
Fax: 9144 1118
Email: teresa.wilkie@der.wa.gov.au

Ms Lisa Honan
Senior Planning and Approvals Coordinator
Holcim (Australia) Pty Ltd
18 Brodie Hall Drive
BENTLEY WA 6102

Dear Ms Honan

***ENVIRONMENTAL PROTECTION ACT 1986* – AMENDMENT TO LICENCE**

Licence Number: L4549/1982/12
Premises: Turner River Quarry
Location: Tenements M45/666, M45/5, M45/530, M45/277, L45/84 and L45/92

Further to my letter dated 6 February 2014, please find enclosed your amended *Environmental Protection Act 1986* licence.

If you have any questions or objections relating to the licence, please do not hesitate to contact the enquiries officer above on 9182 2033 for clarification or discussion of any grievances you have.

If you are concerned about, or object to any aspect of the amendment, you may lodge an appeal with the Minister for the Environment within 21 days from the date on which this licence is received. The Office of the Appeals Convenor can be contacted on 6467 5190 to find out the procedure and fee.

Members of the public may also appeal the amendments. The Appeals Registrar at the Office of the Appeals Convenor can be contacted after the closing date of appeals to check whether any appeals were received.

Yours sincerely

Kerry Laszig
Officer delegated under Section 20
of the *Environmental Protection Act 1986*

Thursday, 20 February 2014

enc: *Environmental Protection Act 1986* Licence L4549/1982/12 EAR
copy to: Local Government Authority: Town of Port Hedland

Government of Western Australia
Department of Environment Regulation

Amended Licence

Environmental Protection Act 1986, Part V

Licensee: Holcim (Australia) Pty Ltd

Licence: L4549/1982/12

Registered office: 799 Pacific Highway
CHATSWOOD NSW 2067

ACN: 099 732 297

Premises address: Turner River Quarry
Tenements M45/666, M45/5, M45/530, M45/277, L45/84 and L45/92
excluding within coordinates:
E658338, N7716116; E658375, N7716049;
E658240, N7716070; E658291, N7715993
BOODARIE WA 6722
as depicted in Schedule 1.

Issue date: Thursday, 19 September 2013

Commencement date: Tuesday, 1 October 2013

Expiry date: Sunday, 30 September 2018

Amendment date: Thursday, 20 February 2014

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	1 000 000 tonnes per annual period

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

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

Contents

Introduction

This Introduction is not part of the Licence conditions.

DER's industry licensing role
The Department of Environment Regulation (DER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DER's purpose is to protect and conserve the state's environment on behalf of the people of Western Australia.

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER works with the business owners, community, consultants, industry and other representatives to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitor and audit compliance with works approvals and licence conditions, take enforcement action as appropriate and develop and implement 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
Holcim (Australia) Pty Ltd (Holcim) is an international buildings material company with a long history of operations in Australia. The company provides premixed concrete, aggregates, gravel and sand to the construction industry and has been operating in Australia since 1939.

Prior to 2 October 2009 Holcim was known as CEMEX Australia Pty Ltd (CEMEX) and prior to 29 February 2008, CEMEX was known as Rinker Australia Pty Limited (trading as Readymix).

The Turner River quarry is an existing quarry that has been operational since the 1970s and is located approximately 38 kilometres south-east of Port Hedland.

It is located on mining leases M45/5, M45/666, M45/530 and M45/277 and general purpose leases L45/84 and L45/92. These tenements cover an area of approximately 412.85 hectares and are located on Boodarie Pastoral Station.

The premises is situated close to the west side of the Turner River which flows north-west to the Indian Ocean. The Turner River is an ephemeral watercourse with flows occurring in February and March in response to major rainfall events associated with cyclone activity. The quarry is located within the Turner River Water Reserve identified by the Department of Water (DoW) as a Proclaimed Public Drinking Water Reserve Source Area (PDWSA).

The Turner River quarry supplies crushed aggregate products and sand to the local market for use in the construction industry. Activities at the quarry include drilling, blasting and extraction of hard rock, extraction of river sand, crushing screening and stockpiling of extracted material, loading of material onto trucks and transportation to various destinations predominately within the Pilbara Region. This site has been assessed to process up to 1 000 000 tonnes per annual period of rock at the site.

The main concern at the site is the dust emissions produced from the activities, which are managed on site with the use of water carts on unsealed surfaces and sprays and covers fitted to the crushing and screening equipment.

This Licence is the result of an amendment sought by the Licensee to change the premises boundary to remove the portion of the lease which is subleased to Downer EDI Works Pty Ltd for an asphalt plant.

The licences and works approvals issued for the Premises since 01/10/2000 are:

Instrument log		
Instrument	**Issued**	**Description**
L4549/1982/5	01/10/2000	Licence re-issue
L4549/1982/6	08/10/2001	Licence re-issue
L4549/1982/7	01/10/2002	Licence re-issue
L4549/1982/8	01/10/2003	Licence re-issue
L4549/1982/9	01/10/2004	Licence re-issue
L4549/1982/10	01/10/2006	Licence re-issue
L4549/1982/11	18/09/2008	Licence re-issue
W4698/2010/1	30/08/2010	Works Approval
L4549/1982/11	30/09/2010	Licence amendment
L4549/1982/12	19/09/2013	Licence re-issue (converted to REFIRE format)
L4549/1982/12	20/02/2014	Licence amendment

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 period from 1 July until 30 June in the following year;

'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 5667.10' means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters;*

'blasting' means the act of quarrying rock from the ground by the use of explosives, and excludes subsequent screening;

'code of practice for the storage and handling of dangerous goods' means document titled "Storage and handling of dangerous goods: Code of Practice" published by the Department of Mines and Petroleum, as amended from time to time;

'controlled waste' has the definition in Regulation 2 of the Environmental Protection (Controlled Waste) Regulations 2004;

'dangerous goods' has the meaning defined in the Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007;

'Director' means Director, Environmental Regulation Division of the Department of Environment Regulation for and on behalf of the Chief Executive Officer as delegated under Section 20 of the Act;

'Director' for the purpose of correspondence means;

Regional Leader, Industry Regulation, Pilbara Regional
Department of Environment Regulation
PO Box 835
KARRATHA WA 6714
Telephone: (08) 9182 2000
Facsimile: (08) 9144 1118
Email: industryregpilbara@dec.wa.gov.au;

'environmentally hazardous material' means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm. Note: Environmentally hazardous materials include dangerous

goods where they are stored in quantities below placard quantities. The storage of dangerous goods above placard quantities is regulated by the Department of Mines and Petroleum;

'fugitive emissions' means all emissions not arising from point sources identified in sections 2.6;

'Licence' means this licence numbered L4549/1982/12 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;

'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;

'screening' means the activity under which the premises is prescribed, and includes the screening, washing, crushing, grinding, milling, sizing and separation or material extracted from the ground, dust suppression activities and screen cleaning activities;

'six monthly period' means the 2 inclusive periods from 1 April to 30 September and 1 October to 31 March in the following year;

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

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

1.2.2 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.

1.2.3 The Licensee, except where storage is prescribed in section 1.3, shall ensure that environmentally hazardous materials are stored in accordance with the code of practice for the storage and handling of dangerous goods.

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

1.2.5 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.[1]

Note1: The Environmental Protection (Unauthorised Discharges) Regulations 2004 make it an offence to discharge certain materials into the environment.

1.3 Premises operation

There are no specified conditions relating to Premises operation in this section.

2 Emissions

2.1 General

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

2.2-2.4 Point source emissions to air, surface water and groundwater

There are no specified conditions relating to point source emissions to air, surface water or groundwater in these sections.

2.5 Emissions to land

2.5.1 The Licensee is permitted, subject to conditions in the Licence, to emit waste to land through the emissions points listed in Table 2.5.1 and identified in the Map of emission points in Schedule 1.

Table 2.5.1: Emission points to land

Emission point reference and location on map of emission points	Description	Source
L1	Wastewater stored in fourth bay and overflow from the bay is treated by an oily water separator prior to discharge. Discharge occurs monthly or during high rainfall events.	Treated wastewater from workshop and wash down area.

2.5.2 The Licensee shall not cause or allow emissions to land greater than the limits listed in Table 2.5.2.

Table 2.5.2: Emission limits to land

Emission point	Parameter	Limit (including units)	Reference period
L1	Total petroleum hydrocarbon (TPH)	15 mg/L	Spot sample

2.6 Fugitive emissions

2.6.1 The Licensee shall use all reasonable and practical measures to prevent and where that is not practicable to minimise dust emissions from the Premises.

2.6.2 The Licensee shall ensure that no visible dust generated by, all materials handling operation including the crushing plant and associated activities, stockpiles, open areas and transport activities, (except blasting operations), on the Premises crosses the boundary of the Premises.

2.7 Odour

There are no specified conditions relating to odour in this section.

2.8 Noise

There are no specified conditions relating to noise in this section.

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 wastewater samples are collected in accordance with AS/NZS 5667.10; 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 the six monthly monitoring is undertaken at least 5 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 Director accompanied with a report comprising details of any modifications to the methods.

3.2-3.4 Monitoring of point source emissions to air, surface water and groundwater

There are no specified conditions relating to monitoring of point source emissions to air, surface water or groundwater in this section.

3.5 Monitoring of emissions to land

3.5.1 The Licensee shall undertake the monitoring in Table 3.5.1 according to the specifications in that table.

Table 3.5.1: Monitoring of emissions to land

Emission point reference	Parameter	Units	Frequency
L1	Total petroleum hydrocarbon	mg/L	Six monthly

4 Improvements

There are no specified conditions relating to improvements in this section.

5 Information

5.1 Records

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

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

5.1.3 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.

5.1.4 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.

5.2 Reporting

5.2.1 The Licensee shall submit to the Director Annual Environmental Report by 30 July each year. The report shall contain the information listed in Table 5.2.1in the format or form specified in that table.

Table 5.2.1: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form[1]
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the year and any action taken	None specified
-	Measures taken to suppress dust	
Table 3.5.1	Total Petroleum Hydrocarbons	LR1
5.1.3	Compliance	Annual Audit Compliance Report (AACR)
5.1.4	Complaints summary	None specified
	Annual quantity of raw material mined (in tonnes)	

Note 1: Forms are in Schedule 2

5.3 Notification

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

Table 5.3.1: Notification requirements

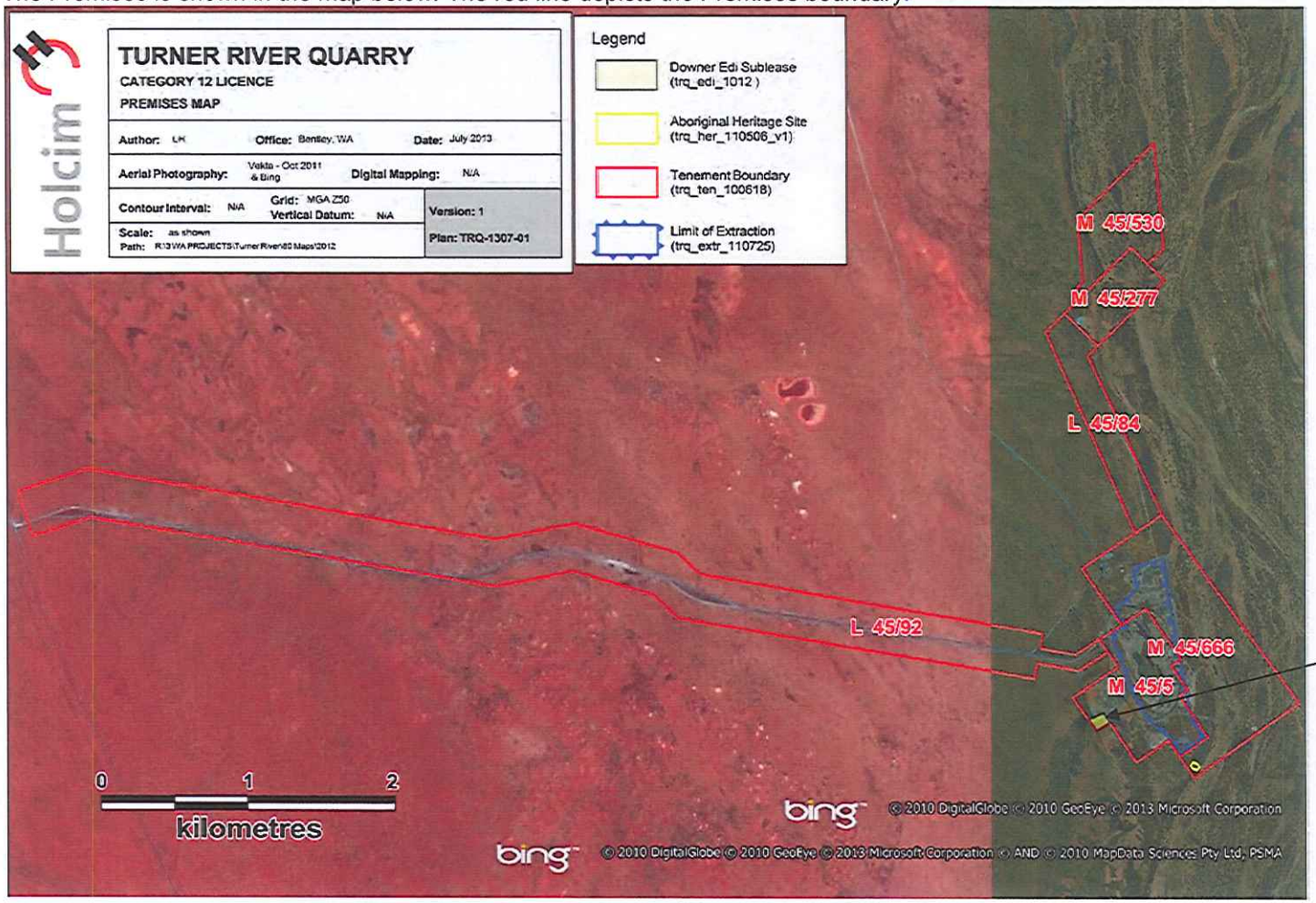
Condition or table (if relevant)	Parameter	Notification requirement[1]	Format or form[2]
-	Any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution	Part A: As soon as practicable but no later than 5pm of the next usual working day.	N1
2.1.1	Breach of any limit specified in the Licence	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.

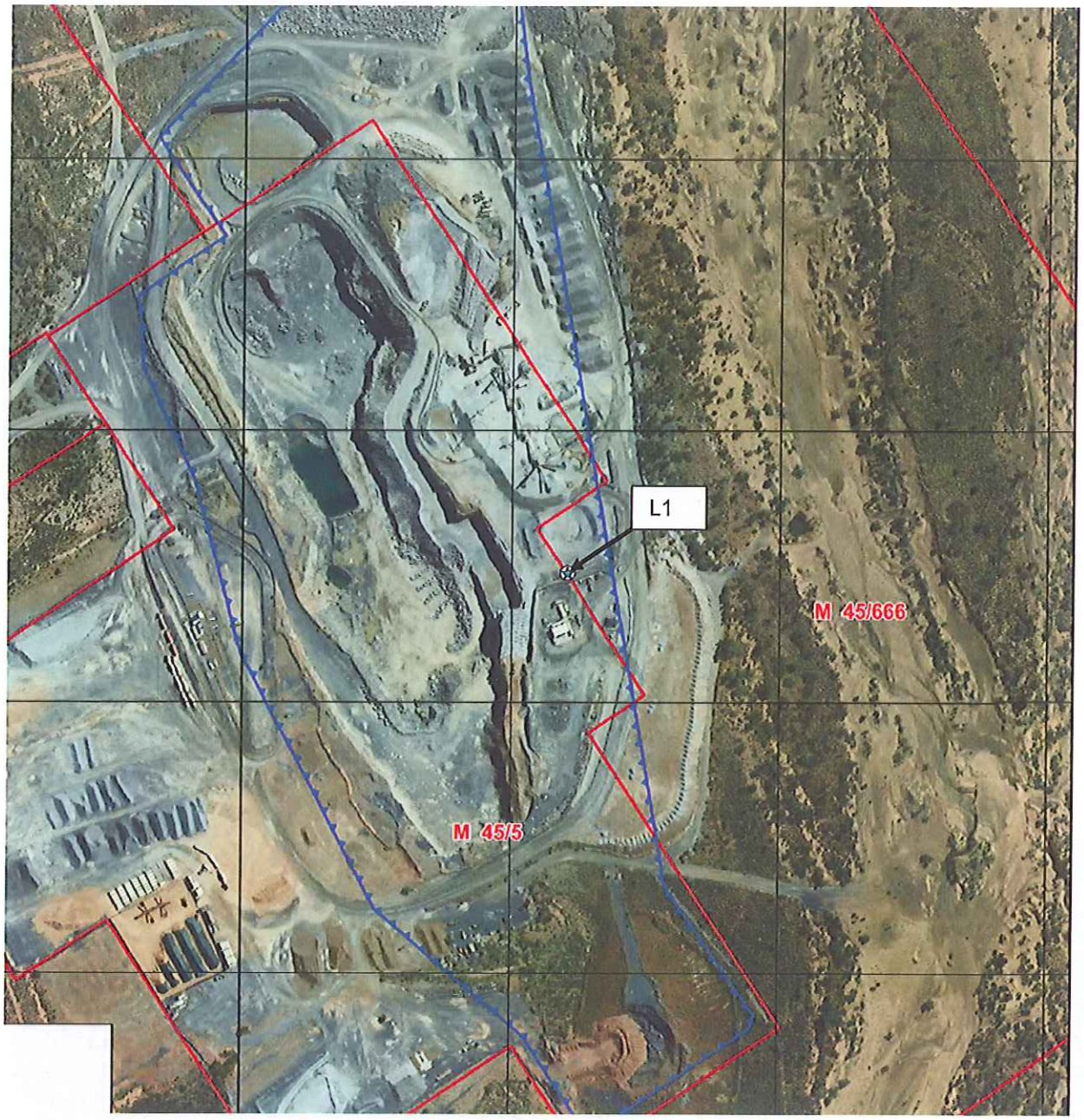


Within coordinates below excluded from prescribed premises.

Pt_ID	Easting	Northing
1	658,338	7,716,116
2	658,375	7,716,049
3	658,240	7,716,070
4	658,291	7,715,993

Map of emission point

The location of the emission point defined in Table 2.5.1 is 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: Trading as:	ABN:
Reporting period: _____ to _____	

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

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

Yes ☐ Please proceed to Section C

No ☐ Please proceed to Section B

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

Initial:

SECTION B

DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

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

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

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

Initial:

SECTION C

SIGNATURE AND CERTIFICATION

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

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

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

SIGNATURE: _____

NAME:
(printed) _____

POSITION: _____

DATE: _____/_____/_____

SIGNATURE: _____

NAME:
(printed) _____

POSITION: _____

DATE: _____/_____/_____

Licence: L4549/1982/12
Form: LR1
Name: Monitoring of emissions to land

Licensee: Holcim (Australia) Pty Ltd
Period :

Form LR1: Monitoring of emissions to land						
Emission point	**Parameter**	**Limit**	**Result**	**Averaging period**	**Method**	**Sample date & times**
L1	Total Petroleum Hydrocarbon	15 mg/L	mg/L	Spot Sample		

Signed on behalf of Holcim (Australia) Pty Ltd: ..... Date: .....

Licence: L4549/1982/12 Licensee:Holcim (Australia) Pty Ltd
Form: N1 Date of breach:

Notification of detection of the breach of a limit or any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution.

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	L4549/1982/12
Name of operator	Holcim (Australia) Pty Ltd
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	

Notification requirements for any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution	
Date and time of event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken , or intended to be taken, to stop any emission	
Description of the failure or accident	

Part B - to be submitted as soon as practicable

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 Holcim (Australia) Pty Ltd	
Date	

Government of Western Australia
Department of Environment Regulation

ENVIRONMENTAL ASSESSMENT REPORT

LICENCE NUMBER: L4549/1982/12
APPROVAL FILE: DER2013/000854
APPLICATION DATE: 14 June 2013
EXPIRY DATE: 30 September 2018
AMENDMENT DATE: 20 February 2014

PREMISES DETAILS

LICENSEE AND OCCUPIER
Holcim (Australia) Pty Ltd
799 Pacific Highway
CHATSWOOD NSW 2067

ACN: 099 732 297

PREMISES
Turner River Quarry
M45/666, M45/5, M45/530, M45/277, L45/84 and L45/92 excluding within coordinates:
E658338, N7716116; E658375, N7716049; E658240, N7716070; E658291, N7715993
BOODARIE WA 6722

PRESCRIBED PREMISES CATEGORY

Table 1: Prescribed Premises Category from Schedule 1 of the Environmental Protection Regulations 1987

Category number*	Category Description*	Category Production or Design Capacity*	Nominated Premises Throughput#	Premises Capacity#
12	Screening, etc. of material	More than 500,000 but not more than 5 000 000 tonnes per year	1 000 000 tonnes per year	1 000 000 tonnes per year

* From Schedule 4 of the Environmental Protection Regulations 1987
# From application

This Environmental Assessment Report (EAR) has been drafted for the purposes of detailing information on the management and mitigation of emissions and discharges from the prescribed premises. The objective of the EAR is to provide a risk assessment of emissions and discharges, and information on the management of other activities occurring onsite which are not related to the control of emissions and discharges from the prescribed premises activity. This does not restrict the Department of Environment Regulation (DER) to assessing only those emissions and discharges generated from the activities that cause the premises to become prescribed premises.

Basis of Assessment
The Turner River Quarry, has been assessed as "prescribed premises" category number 12, within Schedule 1 of the Environmental Protection Regulations 1987.

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.

The Turner River quarry is in operation on a continuous basis and currently extracts approximately 700,000 tonnes of hard rock per annum.

This amendment changes the premises boundary to remove the portion of the lease held by Downer EDI Works Pty Ltd for the operation of an asphalt plant.

1.0 BACKGROUND

1.1 GENERAL COMPANY DESCRIPTION

Holcim (Australia) Pty Ltd (Holcim) is an international buildings material company with a long history of operations in Australia. The company provides premixed concrete, aggregates, gravel and sand to the construction industry and have been operating in Australia since 1939.

Prior to 2 October 2009 Holcim was known as CEMEX Australia Pty Ltd (CEMEX) and prior to 29 February 2008, CEMEX was known as Rinker Australia Pty Limited (trading as Readymix).

1.2 LOCATION OF PREMISES

The Turner River quarry is an existing quarry that has been operational since the 1970s and is located approximately 38 kilometres south-east of Port Hedland (Figure 1).

It is located on mining leases M45/5, M45/666, M45/530 and M45/277 and general purpose leases L45/84 and L45/92. These tenements cover an area of approximately 412.85 hectares and are located on Boodarie Pastoral Station.

1.2.1 Existing Environment

Climate:

The Turner River area experiences an arid climate characterised by hot summers with periodic heavy rain and mild winters with occasional rainfall. The average annual rainfall is 324.66mm, with a maximum recorded annual rainfall of 700.4mm. On average 72 percent of the recorded precipitation is received during the wet season (December to March) as a result of tropical cyclones and local thunderstorms. The winter months (June to August) form the dry season with an average of 12 percent of the annual rainfall received. The highest temperatures are experienced during the summer months with an average maximum of 43°C and an average minimum of 22°C. The winter months have an average between 29°C and 17°C (JDA 2009).

Topography:

The Turner River quarry is located in the Roebourne subregion of the Pilbara Interim Biogeographic Region of Australia and is composed of basic rock belonging to the Archaean greenstone layered succession, dominated by Actinolite-Tremolite schist (Param 1991). The low ridges are approximately 150m wide and running north/south contain the most economically mineable rock which is where the quarry is located (CSR 1991).

The Turner River quarry is located on a low ridge and the surrounding area is generally flat grazing country with gradients sloping gently towards the river bed (JDA 2009).

Ground and surface water:

The Turner River quarry is situated close to the west side of the Turner River which flows north-west to the Indian Ocean. The Turner River is an ephemeral watercourse with flows occurring in February and March in response to major rainfall events associated with cyclone

activity (JDA 2009). The quarry is located within the Turner River Water Reserve identified by the Department of Water (DoW) as a Proclaimed Public Drinking Water Source Area (PDWSA). Although the area has not yet been classified as Priority 1 (P1), DoW recommends that is should be treated as if it has been assigned P1 status, as future plans include this area within a P1 area.

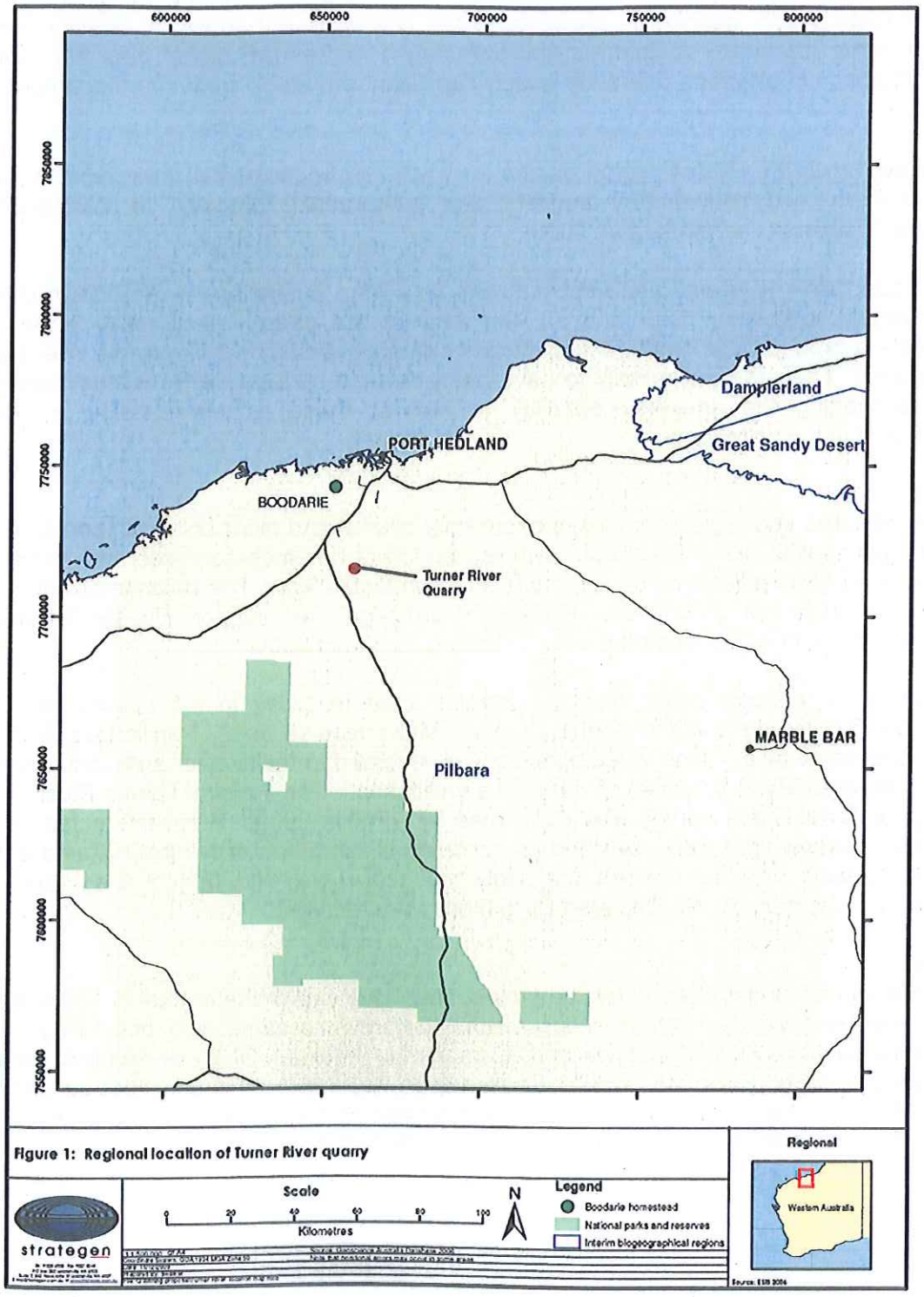


Figure 1: Regional location of Turner River Quarry.

DoW indicated that the Turner River quarry would be classified as an extractive industry activity under the DoW's land use compatibility table. This classification is compatible with land use types allowed for P1 areas (JDA 2009).

Surface water appears on the tenement only during and after heavy rain and/or cyclone events. There are no permanent surface water flows or creeks within the project area. The Turner River which, despite its proximity to the quarry, is not known to directly flood the quarry, since the quarry footprint is approximately 5 metres (m) higher than the river bed. The difference in elevation offers the quarry significant protection from river flood flows (JDA 2009).

Groundwater in the Pilbara region occurs in various hydrogeological environments ranging from surficial and sedimentary aquifers with intergranular porosity, to weathered and fractured aquifers (Vreeswyk et al. 2004).

The groundwater level has been estimated to be 41.3m Australian Height Datum (AHD) in the riverbed excavation area and 20.79m AHD at the quarry sump (JDA 2009). This suggests a groundwater gradient sloping approximately east to west from the river towards the quarry. This gradient is likely to have been induced by evaporative losses from the pit area exceeding the aquifers capability to recover those losses, causing a localised depression in the watertable.

Flora:
The Roebourne sub-region comprises quaternary alluvial and older colluvial coastal and sub coastal plains with grass savannah of mixed bunch of hummock grasses and dwarf shrub steppe of *Acacia stellaticeps* or *A.pyrifolia* and *A.inaequilatera*. The uplands are dominated by *Triodia* hummock grasslands. Ephemeral drainage lines support *Eucalyptus victrix* or *Corymbia hamersleyana* woodlands (Environment Australia 2000).

A total of 53 vascular plants from 21 families were recorded in the project area. The dominant families were Mimosaceae (9 taxa), Malvaceae (6 taxa), Papilionaceae (5 taxa) and Poaceae (4 taxa). One weed species was recorded in the project area, this species is not a Declared Plant or weed of national significance. The Holcim Turner River Level 2 Biological Assessment survey was completed by APM in 2009. From this survey sixteen species of priority flora were recorded as occurring within 50km of the project area of these sixteen species only six species are likely to occur within the project area due to the suitability of the habitat. No Declared Rare Flora were recorded.

Fauna:
Previous studies undertaken within the project area have shown that a total of 139 vertebrate fauna species have the potential to occur within the project area this includes 7 frog species, 58 reptile species, 49 bird species and 25 mammal species. Of these species, six fauna species are listed under the *Wildlife Conservation Act 1950*, 14 fauna species under the DPaW Priority Fauna List and four fauna species listed as Migratory under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act).

1.3 PROPOSAL DESCRIPTION

The Turner River quarry supplies crushed aggregate products and sand to the local market for use in the construction industry. Activities at the quarry include drilling, blasting and extraction of hard rock, extraction of river sand, crushing, screening and stockpiling of extracted material, loading of material onto trucks and transportation to various destinations predominately within the Pilbara region.

The mining process includes the extraction of hard rock by topsoil removal, blasting, drilling and excavation (using an excavator and front end loader). The extracted material is fed through a primary crusher and stockpiled. Overburden is stockpiled for use in rehabilitation. Screening of the crushed aggregate occurs according to market demand and is screened into various particle sizes and stockpiled awaiting transportation to the market (Figure 2).

In addition, infrastructures including access roads, a weighbridge and office, crushing and screening plants, stockpiles, site camp, workshop, water dam, laboratory and diesel fuel storage are all located onsite (Figure 3).

The Port Hedland aggregate market is essentially driven by mining projects in the area, therefore, production at the site varies depending on the mining industry development rate. The capacity of the site has been assessed at 1 000 000 tonnes per annum.

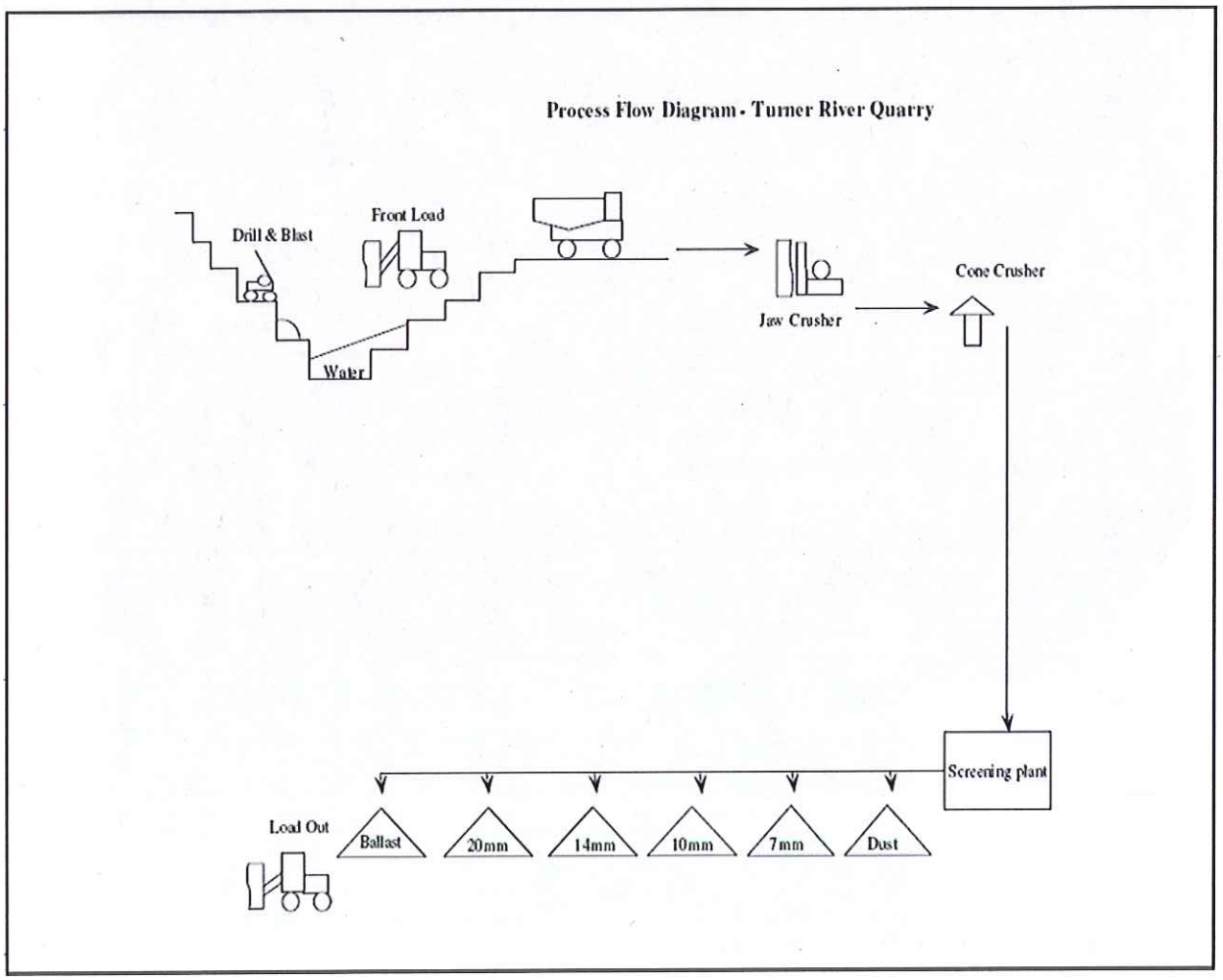


Figure 2: Process Flow Diagram for the Turner River Quarry.

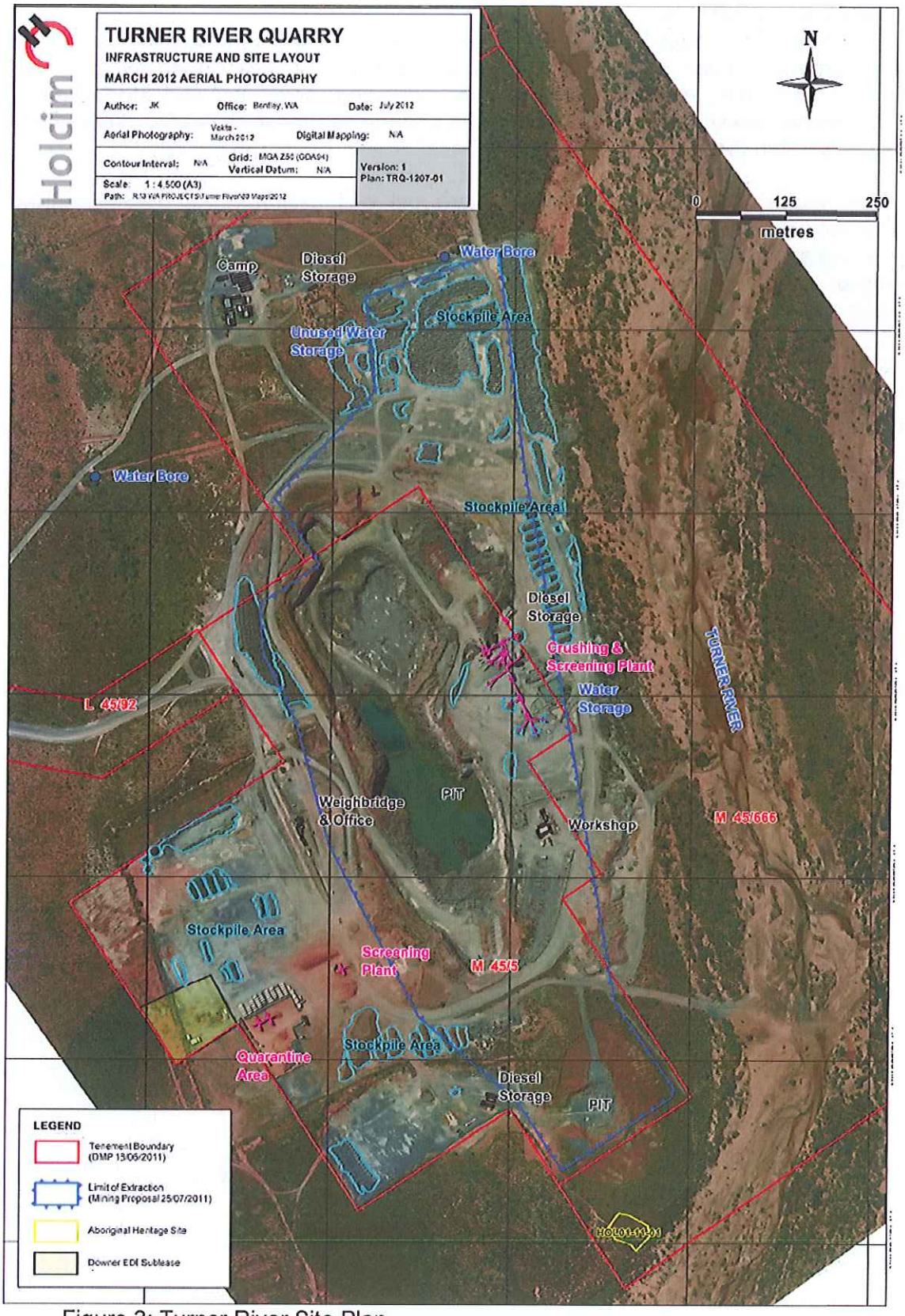


Figure 3: Turner River Site Plan

1.4 REGULATORY CONTEXT

1.4.1 Part IV Environmental Protection Act 1986, Environmental Impact Assessment

The Turner River quarry has not been assessed under Part IV of the *Environmental Protection Act 1986*.

1.4.2 Part V Environmental Protection Act 1986, Environmental Management

The Turner River quarry has been assessed as a "prescribed premises" under the Environmental Protection Regulations 1987 and has been operating under licence L4549/1982/11 previously owned by CEMEX and now owned and operated by Holcim.

The site was inspected in June 2012 by DER officers and there were no non compliances associated with the site.

This Licence amendment changes the premises boundary to remove a portion of the lease for which Downer EDI Works Pty Ltd (Downer) hold the licence for an asphalt plant. During the licence reissue in 2013 it was identified that there were two licences over this portion of the lease, however, Downer did not have any formal agreement with Holcim to occupy the site. A lease agreement is now in place between Downer and Holcim, therefore, this portion of the lease has been removed from the Holcim licence.

1.4.3 Other Decision Making Authorities' Legislation which applies

The on site storage of hydrocarbons and dangerous goods will be regulated by the following legislation:

- *Occupational Safety and Health Act 1984*;
- Occupational Safety and Health Regulations 1996;
- *Dangerous Goods Safety Act 2004*;
- Dangerous Goods Safety (Storage and Handling of Non-Explosives) Regulations 2007;
- Dangerous Goods Safety (General) Regulations 2007;
- Dangerous Goods Safety (Explosives) Regulations 2007; and
- AS 1940 - The storage and handling of flammable and combustible liquids.

1.4.4 Rights in Water Irrigation Act 1914

Holcim hold a Groundwater Licence (GWL) to Take Water under Section 5C of the *Rights in Water Irrigation Act 1914*. Licence GWL84876(6) is for dewatering for mining, mining camp purposes and water for industrial purposes and has an allocation entitlement of 150 000 kilolitres per year.

1.4.5 Local Government Authority

The premises is located within the Town of Port Hedland.

2.0 STAKEHOLDER AND COMMUNITY CONSULTATION

SUBMISSIONS RECEIVED DURING 21 DAY PUBLIC COMMENT PERIOD

The application for licence reissue details for this facility were advertised in The West Australian newspaper on 5 August 2013 as a means of advising stakeholders and to seek public comments. No submissions were received.

The licence amendment conducted in February 2014 was not required to be advertised.

3.0 EMISSIONS AND DISCHARGES RISK ASSESSMENT

DER considers that conditions should focus on regulating emissions and discharges of significance. Where appropriate, emissions and discharges which are not significant should be managed and regulated by other legislative tools or management mechanisms.

The following section assesses the environmental risk of potential emissions from the Turner River quarry. In order to determine the site's appropriate environmental regulation, an emissions and discharges risk assessment was conducted of this facility using the environmental risk matrix outlined in Appendix A. The results of this are summarized in Table 2.

Table 2: Risk assessment and regulatory response summary table

Risk factor	Significance of emissions	Socio-Political Context of Each Regulated Emission	Risk Assessment	DER Regulation (EP Act - Part V)	EAR Reference	Other management (legislation,tools,agencies)
Air emissions (point source)	**Operation – 1** Air emissions are not significant during the operation of the process plant.	No – Level of socio-political concern.	E – No regulation, other management mechanisms.	LIC – No conditions.	N/A	General provisions of the *Environmental Protection Act 1986.*
Dust emissions	**Operation – 1** Dust is generated at the site during the crushing and screening process. Dust is minimised at the quarry through: • use of water carts to wet down dust-prone unsealed surfaces such as haul and access roads and the mining area (including areas used for crushing, screening and stockpiling); • crusher and screener being fitted with appropriate dust control equipment, including water sprays on the crushing plant before the jaw crusher; • sprays on stockpiling conveyor; and • sprays on final product screens.	No – Level of socio-political concern due to nearest sensitive receptor – Boodarie Station being approximately 26km away.	E – No regulation, other management mechanisms.	LIC – REFIRE dust conditions.	N/A	General provisions of the *Environmental Protection Act 1986.* Environmental Protection (Unauthorised Discharges) 2004.
Odour emissions	**Operation - 1** Odour emissions are not expected during the operation of the process plant.	No – Level of socio-political concern.	E – No regulation, other management mechanisms.	LIC – No conditions.	N/A	General provisions of the *Environmental Protection Act 1986.*
Noise emissions	**Operation - 1** Noise emission are generated at the quarry by the machinery, vehicles and equipment (crushing and screening plant). Holcim use low-noise equipment where practicable. Due to the remoteness of the quarry noise impacts are restricted to the health and safety of the workforce. Holcim comply with the Environmental Protection (Noise) Regulations 1997.	No – Level of socio-political concern.	E – No regulation, other management mechanisms.	LIC– No conditions.	N/A	General provisions of the *Environmental Protection* Act *1986.* Environmental Protection (Noise) Regulations 1997.
Light emissions	**Operation – 1** Lit areas are restricted to accommodation and plant facilities. Holcim minimise the impact of light spill by reducing the light broadcast and installing sodium lights.	No – Level of socio-political concern.	E – No regulation, other management mechanisms.	LIC – No conditions	N/A	General provisions of the *Environmental Protection Act 1986.*

Risk factor	Significance of emissions	Socio-Political Context of Each Regulated Emission	Risk Assessment	DER Regulation (EP Act - Part V)	EAR Reference	Other management (legislation,tools,agencies)
Discharges to land and water	**Operation – 2** Mining activities are conducted adjacent to and in close proximity to the Turner River and have the potential to impact on the water quality of the Turner River through contamination from hydrocarbons and sediment. As such appropriate management measures and controls in accordance with DoW policy and guidance have been implemented to meet the DoW objectives for the protection of water quality. Mining activities have intercepted groundwater at two locations within the quarry pit (pit sumps). The quarry pit drains internally to two sumps within the quarry floor. During cyclonic periods the quarry pit fills with stormwater and before quarrying activities can commence the stormwater is pumped out of the pit. The quarry is located on a low ridge and rainfall runoff external to the actual quarry is directed naturally away by the topography so that no artificially constructed drainage is necessary. The depth of the quarry floor extends below the water table at the two pit sumps which are approximately 80 metres apart. Water is pumped from the sumps into water trucks which distribute the water for dust suppression and other operational requirements across the quarry. Surface water flow is managed through the implementation of measures outlined in the Surface Water Management Plan and includes: • sediment traps where appropriate to reduce sediment loads in runoff from disturbed areas; • workshop and chemical storage are roofed and maintained to prevent rainfall mixing with waste products and are located where practicable above the level of extreme flood events; and • drainage channels do not cross areas of active mining, or any locations where there is potential for hydrocarbon contamination. *Wash plant* Aggregate runs over a screen and water is pumped from the lined pond and passes through the wash screen. All water is directed into concrete wedge pit where the fines settle and water	Low – Level of socio-political concern.	D – EIP's, other management mechanisms/ licence conditions.	LIC – Standard REFIREE stormwater conditions. Standard hydrocarbon conditions. Monitoring condition for discharge from workshop and refuelling area and limit for TPH.		General provisions of the *Environmental Protection Act 1986.* Environmental Protection (Unauthorised Discharges) Regulations 2004. ANZECC Water Quality Guidelines. Department of Water – Water Quality Protection Notes and Guidelines. Holcim's Surface Water Management Plan. Holcim's Environmental Management Plan.

Risk factor	Significance of emissions	Socio-Political Context of Each Regulated Emission	Risk Assessment	DER Regulation (EP Act - Part V)	EAR Reference	Other management (legislation,tools,agencies)
	evaporates and the fines are removed by front end loader. Excess water is directed to a second settlement section for further settlement and then into the lined storage pond for reuse into the system. There is no discharge from this facility. *Fuel farm* The fuel farm and refuelling area are located on bunded concrete hardstand. Any spills are contained within the hardstand and cleaned immediately using the spill kits located at the facility. Contaminated materials are stored in a sealed hydrocarbon bin and collected by a licensed contractor for disposal at a licensed facility. *Workshop/wash down area* The workshop has both undercover and open areas for service and maintenance of equipment. All drainage is directed to the froth bay where generally water evaporates. Discharge occurs periodically (average monthly) depending on washing down of vehicles and may occur during high rainfall events. Prior to discharge wastewater is treated by an oily water separator located off the froth bay prior to discharge to land. Monitoring for total petroleum hydrocarbon (TPH) is undertaken six monthly. Hydrocarbons removed from wastewater are collected by licensed contractor for disposal at a licensed facility.					
Solid / liquid wastes	**Operation – 1** Waste generated by the Turner River Quarry and which requires some level of management includes food scraps, sewage, scrap metal, drums, tyres, batteries, general office waste, waste oils and lubricants. Holcim have implemented the following waste management measures: • putrescible and non-putrescible waste streams are managed in accordance with Part V of the EP Act; • scrap metal, batteries and rubber waste are collected and removed offsite by a licensed contractor for recycling/disposal; • waste hydrocarbons (oils/lubricants) are stored in bunded, marked drums near the workshop area; and	No – Level of socio-political concern.	E – No regulations, other management mechanisms.	LIC – Standard REFIRE hydrocarbon conditions.	N/A	General provisions of the *Environmental Protection Act 1986.* Environmental Protection (Unauthorised Discharges) Regulations 2004. Environmental Protection (Controlled Waste) Regulations 2004. Holcim Environmental Management Plan – Waste Management Plan. Dangerous Goods Safety (Storage and Handling of Non-Explosives) Regulations 2007.

Risk factor	Significance of emissions	Socio-Political Context of Each Regulated Emission	Risk Assessment	DER Regulation (EP Act - Part V)	EAR Reference	Other management (legislation,tools,agencies)
	• marked drums containing waste hydrocarbons are collected and disposed of by licensed contractors.					
Hydrocarbon/ chemical storage	**Operation - 1** The spillage of hydrocarbons is most likely to occur during re-fuelling and maintenance of trucks and other machinery. These risks are managed through the application of the following: • potential spill sources are located on fully bunded platforms to contain any spills/leaks; • bunded areas are routinely maintained so that all spilled material and contaminated water is removed; • re-fuelling areas are located on concrete hardstands or within appropriately lined areas; • run-off from workshop are routed through an oil-water separator prior to discharge to the environment; and • appropriate spill response equipment are located such that it is available for immediate use in all hydrocarbon storage and re-fuelling and maintenance areas.	No – Level of socio-political concern.	E – No regulation, other management mechanisms.	LIC – Standard REFIRE hydrocarbon conditions.	N/A	General provision of the *Environmental Protection Act 1986.* Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007 Explosive & Dangerous Goods (Dangerous Goods Handling & Storage) Regulations 1992. Australian Standard 1940-1993 (The storage and handling of flammable and combustible liquids). Environmental Protection (Controlled Waste) Regulations 2004. Holcim Hydrocarbon Management Plan Environmental Protection (Unauthorised Discharges) Regulations 2004.
Native vegetation clearing	**Operation – 1** Holcim have implemented the following management objectives: • restrict vegetation clearing to a practical minimum; • carry out vegetation clearing in an appropriate manner to maximise success of rehabilitation; • monitor health of vegetation that could be impacted by quarry activities; and • rehabilitate areas that have been cleared outside of tenement areas and within the riparian vegetation buffer adjacent to Turner River in accordance with the rehabilitation measures outlined within the EMP.	No – Level of socio-political concern.	E – No regulation, other management mechanisms.	LIC – No conditions.	N/A	Flora and Vegetation Management Plan. Holcim Environmental Management Plan.

4.0 GENERAL SUMMARY AND COMMENTS

The Holcim Turner River Quarry is an existing quarry that has been in operation since the 1970's. It was previously owed by Readymix and CEMEX, which are now trading as Holcim.

As shown in Table 2, emissions and discharges associated with the operation of this facility are a low risk to the environment is managed as per Holcim commitments and should not result in significant impacts to the environment.

The licence has been reissued in the new REFIRE format.

The facility is also subject to the general provisions of the *Environmental Protection Act 1986* relating to the causing and reporting of pollution and will be subject to inspections by DER officers.

OFFICER AMENDING REPORT

Teresa Wilkie

Position: Environmental Officer
Pilbara Regional Office
Department of Environment Regulation
9182 2000

February 2014

ENDORSEMENT

Alana Kidd

Position: Regional Leader - Industry Regulation
Pilbara Regional Office
Department of Environment Regulation
9182 2000

February 2014

OFFICER UPDATING REPORT

Teresa Wilkie

Position: Environmental Officer
Pilbara Regional Office
Department of Environment Regulation
9182 2000

August 2013

ENDORSEMENT

Alana Kidd

Position: Regional Leader - Industry Regulation
Pilbara Regional Office
Department of Environment Regulation
9182 2000

August 2013

OFFICER PREPARING REPORT

Sonya Poor

Position: Environmental Officer
Pilbara Regional Office
Department of Environment and Conservation
9182 2035

September 2010

ENDORSEMENT

Suzy Roworth

Position: Regional Leader - Industry Regulation
Pilbara Regional Office
Department of Environment and Conservation
9182 2038

September 2010

APPENDIX A: EMISSIONS AND DISCHARGES RISK ASSESSMENT MATRIX

Table 3: Measures of Significance of Emissions

Emissions as a percentage of the relevant emission or ambient standard		Worst Case Operating Conditions (95th Percentile)			
		>100%	50 – 100%	20 – 50%	<20%*
Normal Operating Conditions (50th Percentile)	>100%	5	N/A	N/A	N/A
	50 – 100%	4	3	N/A	N/A
	20 – 50%	4	3	2	N/A
	<20%*	3	3	2	1

*For reliable technology, this figure could increase to 30%

Table 4: Socio-Political Context of Each Regulated Emission

		Relative proximity of the interested party with regards to the emission				
		Immediately Adjacent	Adjacent	Nearby	Distant	Isolated
Level of Community Interest or Concern*	5	High	High	Medium High	Medium	Low
	4	High	High	Medium High	Medium	Low
	3	Medium High	Medium High	Medium	Low	No
	2	Low	Low	Low	Low	No
	1	No	No	No	No	No

Note: These examples are not exclusive and professional judgement is needed to evaluate each specific case

*This is determined by the DER using the DER "Officer's Guide to Emissions and Discharges Risk Assessment" May 2006.

Table 5: Emissions Risk Reduction Matrix

		Significance of Emissions				
		5	4	3	2	1
Socio-Political Context	High	A	A	B	C	D
	Medium High	A	A	B	C	D
	Medium	A	B	B	D	E
	Low	A	B	C	D	E
	No	B	C	D	E	E

PRIORITY MATRIX ACTION DESCRIPTORS
A = Do not allow (fix)
B = licence condition (setting limits + EMPs - short timeframes)(setting targets optional)
C = licence condition (setting targets + EMPs - longer timeframes)
D= EIPs, other management mechanisms/licence conditions (monitoring/reporting)/other regulatory tools
E = No regulation, other management mechanisms