



# Licence

## *Environmental Protection Act 1986, Part V*

**Licensee:** Austral Bricks (WA) Pty Ltd

**Licence:** L6408/1967/15

**Registered office:** 738-780 Wallgrove Road  
 HORSLEY PARK NSW 2175

**ACN:** 079 711 603

**Premises address:** Austral Bricks Armadale  
 Lot 12 on Diagram 53506 and Lot 104 on Diagram 65714  
 245 South Western Highway  
 ARMADALE WA 6900  
 As depicted in Schedule 1

**Issue date:** Monday, 29 June 2015

**Commencement date:** Wednesday, 01 July 2015

**Expiry date:** Tuesday, 30 June 2020

**Prescribed premises category**  
 Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
41	Clay bricks or ceramic products manufacturing: premises on which refractory products, tiles, pipes or pottery are manufactured	1000 tonnes or more per year	200 000 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*



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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 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 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

Austral Bricks (WA) Pty Ltd (Austral Bricks) operates several brickworks within Western Australia. This licence is for their premises in Armadale, Austral Bricks Armadale.

The Premises is located on the South Western Highway, Armadale. Armadale Senior High School is located approximately 400 m to the north and the nearest residential areas are approximately 300 m to the east and 150 m to the west. Two minor perennial water courses are located to the east of the premises.

The plant manufactures internal clay bricks for use in the construction industry, using a gas fired tunnel kiln with a maximum capacity of 200,000 tonnes per annual period.

The premises includes:

- raw material stockpile areas;
- primary and secondary crusher and screens;
- extruder;
- dryer;
- gas fired tunnel kiln; and
- kiln exhaust gas abatement plant (cascading lime scrubber).

Manufacture of the bricks involves four main stages:

Clay preparation involves grinding and crushing of clays and shale, blending of different clay types and addition of water. Colorants or materials to improve the mechanical properties of the finished product may also be added.

Product shaping covers shaping the raw material mix into shapes using moulds or by extrusion. During or after shaping, additives may be applied to the surface of the raw clay shapes to achieve desired colour or texture effects.

Drying of the shaped products is undertaken by passing them through a dryer, heated by warm air from the cooling zone of the kiln. Exhaust gases from the dryer are vented to atmosphere.

Firing of the dried shapes is undertaken in a high temperature kiln. As the clay products are heated, fluoride, chloride, sulphur and other elements naturally present in the clays are emitted into the air in the kiln, along with more water vapour. The fluoride release rate varies over the firing cycle and peaks at temperatures of around 800°C, depending on the raw material, product and kiln conditions. Some of the raw material additives are also burnt off during firing.

Kiln exhaust emissions are abated through a cascading lime scrubber before emission to air via a 35 m stack. The principle emissions to air of concerns are acid chloride and fluoride gases, oxides of nitrogen, oxides of sulphur, VOCs and particulates.

The cascading lime scrubber can be by-passed to undertake essential maintenance for critical operational or safety reasons. If the by-pass has not ceased after 30 minutes the kiln throughput is adjusted to ensure the calculated emissions of hydrogen fluoride do not exceed 1g/sec for the remainder of the by-pass event. The



Licensee has informed that bypassing the cascading lime scrubber has not been required over previous reporting year.

Operational procedures and controls are used to minimise dust emissions from raw materials storage and handling operations.

There are no discharges to water or land from the premises (other than stormwater).

The licences and works approvals issued for the Premises since 29/06/2007 are:

Instrument log		
Instrument	Issued	Description
L6408/1967/11	29/06/2007	Licence re-issue
L6408/1967/12	27/06/2008	Licence re-issue
L6408/1967/13	29/6/2009	Licence re-issue
L6408/1967/13	29/10/2010	Licence amendment – Oxygen correction factor for monitoring data changed from 15% to 18%
L6408/1967/14	21/06/2012	Licence re-issue
L6408/1967/14	27/03/2014	Licence amendment – conversion to REFIRE format
L6408/1967/15	29/06/2015	Licence re-issue

### 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 July until 30 June in the following year;

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

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

**'CEMS Code'** means the current version of the Continuous Emission Monitoring System (CEMS) Code for Stationary Source Air Emissions, Department of Environment & Conservation, Government of Western Australia;

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

**'CEO'** for the purpose of correspondence means;

Manager- Licensing (Process Industries)  
Department of Environment Regulation  
Locked Bag 33  
CLOISTERS SQUARE WA 6850  
Telephone: (08) 9333 7510  
Facsimile: (08) 9333 7550  
Email: industry.regulation@der.wa.gov.au;

**'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;

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

**'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 2.2, 2.3;

**'Licence'** means this Licence numbered L6408/1967/15 and issued under the Act;

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



**'NATA'** means the National Association of Testing Authorities, Australia;

**'NATA accredited'** means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

**'normal operating conditions'** means any operation of a particular process (including abatement equipment) excluding start-up, shut-down and upset conditions, in relation to stack sampling or monitoring;

**'PM'** means total particulate matter including both solid fragments of material and miniscule droplets of liquid;

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

**'quarterly'** means the 4 inclusive periods from 1 July to 30 September, 1 October to 31 December and in the following year, 1 January to 31 March, 1 April to 30 June;

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

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

**'shut-down'** means the period when plant or equipment is brought from normal operating conditions to inactivity;

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

**'stack test'** means a discrete set of samples taken over a representative period at normal operating conditions;

**'start-up'** means the period when plant or equipment is brought from inactivity to normal operating conditions;

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

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

**'USEPA Method 5'** means the promulgated Test Method 5 – Determination of Particulate Matter Emissions from Stationary Sources;

**'USEPA Method 7E'** means the promulgated Test Method 7E - Determination of Nitrogen Oxides Emissions From Stationary Sources (Instrumental Analyzer Procedure);

**'USEPA Method 8'** means the promulgated Test Method 8 – Determination of Sulphuric Acid and Sulfur Dioxide Emissions from Stationary Sources;

**'USEPA Method 10'** means the promulgated Test Method 10 – Determination of Carbon Monoxide Emissions from Stationary Sources (Instrumental Analyzer Procedure);

**'USEPA Method 17'** means the promulgated Test Method 17 – Determination of Particulate Matter Emissions from Stationary Sources;

**'USEPA Method 26'** means the promulgated Test Method 26 - Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources Non Isokinetic Method;

**'USEPA Method 26A'** means the promulgated Test Method 26A - Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources Isokinetic Method; 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 current version of the 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.<sup>1</sup>

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 Point source emissions to air

2.2.1 The Licensee shall ensure that where waste is emitted to air from the emission points in Table 2.2.1 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this Licence.

**Table 2.2.1: Emission points to air**

Emission point reference and location on Map of emission points	Emission point reference on Map of emission points	Emission Point	Emission point height (m)	Source, including any abatement
A1	A1	Kiln stack	35	Kiln via cascading lime scrubber

2.2.2 The Licensee shall not cause or allow point source emissions to air greater than the limits listed in Table 2.2.2.

**Table 2.2.2: Point source emission limits to air**

Emission point Reference	Parameter	Limit (including units) <sup>1</sup>	Averaging period
A1	Hydrogen Fluoride	1 g/s	Minimum 60 minute average

Note 1: The reference conditions of substances in releases to air from kiln stacks are:  
Temperature 273.15 K (0°C), pressure 101.3 kPa (1 atmosphere) 18% oxygen measured dry.

2.2.3 The Licensee shall target point source emissions to air at or below the levels specified in Table 2.2.3.

**Table 2.2.3: Point source emission targets to air**

Emission point Reference	Parameter	Target (including units) <sup>1</sup>	Averaging period
A1	Oxides of sulfur (as SO <sub>2</sub> )	200 mg/m <sup>3</sup>	Minimum 30 minute average
	Hydrogen Chloride	200 mg/m <sup>3</sup>	

Note 1: The reference conditions of substances in releases to air from kiln stacks are:  
Temperature 273.15 K (0°C), pressure 101.3 kPa (1 atmosphere) 18% oxygen measured dry.



2.2.4 The Licensee shall take the specified management action in the case of an event in Table 2.2.4.

<b>Table 2.2.4: Management actions</b>			
<b>Emission point reference</b>	<b>Event / action reference</b>	<b>Event</b>	<b>Management action</b>
A1	EA1	Abatement Plant Bypass for essential maintenance, operational or safety reasons.	<p>If the Abatement Plant Bypass is expected to occur for more than 30 minutes, the Licensee shall notify DER in accordance with Condition 5.3.1</p> <p>The Licensee shall take all practical measures to ensure that the HF emissions do not exceed the Limit specified in Condition 2.2.2 and the mass emission rate of 1g/s.</p>
A1	EA2	Failure or malfunction of plant or equipment leading to Abatement Plant Bypass	The Licensee shall take all practical measures to ensure that the HF emissions do not exceed the Limit specified in Condition 2.2.2 and the mass emission rate of 1g/s.
A1	EA3	Abatement Plant Bypass during start-up and shut down	<p>The Licensee shall take all practical measures to minimise emissions during start-up and shut-down</p> <p>The Licensee shall take all practical measures to ensure that the HF emissions do not exceed the Limit specified in Condition 2.2.2 and the mass emission rate of 1g/s.</p>

**2.3 Point source emissions to surface water**

There are no specified conditions relating to point source emissions to surface water in this section.

**2.4 Point source emissions to groundwater**

There are no specified conditions relating to point source emissions to groundwater in this section.

**2.5 Emissions to land**

There are no specified conditions relating to emissions to land in this section.

**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.

**2.7 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 all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.
- 3.1.2 The Licensee shall ensure that quarterly monitoring is undertaken at least 45 days apart.
- 3.1.3 The Licensee shall record production or throughput data and any other process parameters relevant to any non-continuous monitoring undertaken.
- 3.1.4 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,
- 3.1.5 The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

#### 3.2 Monitoring of point source emissions to air

- 3.2.1 The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

<b>Table 3.2.1: Monitoring of point source emissions to air</b>					
<b>Emission point reference</b>	<b>Parameter</b>	<b>Units</b>	<b>Frequency<sup>1</sup></b>	<b>Method</b>	<b>Averaging period</b>
A1	PM	mg/m <sup>3</sup> g/s	Quarterly	Stack test USEPA Method 5 or 17	Minimum 60 minute average
	Oxides of sulfur (as SO <sub>2</sub> )	mg/m <sup>3</sup> g/s		Stack test USEPA Method 8	Minimum 60 minute average
	Oxides of nitrogen (as NO <sub>2</sub> )	mg/m <sup>3</sup> g/s		Stack test USEPA Method 7E	Minimum 30 minute average
	Hydrogen Chloride	mg/m <sup>3</sup> g/s		Stack test USEPA Method 26 or 26A	Minimum 30 minute average
	Hydrogen Fluoride	mg/m <sup>3</sup> g/s		Stack test USEPA Method 26 or 26A	Minimum 30 minute average
	Carbon monoxide	mg/m <sup>3</sup> g/s		Stack test USEPA Method 10	Minimum 30 minute average

Note 1: The reference conditions of substances in releases to air from point sources are:  
Kiln emissions: temperature 273.15 K (0°C), pressure 101.3 kPa (1 atmosphere) 18% oxygen measured dry, and averaged over the firing cycle of the kiln.

- 3.2.2 The Licensee shall ensure that sampling required under Condition 3.2.1 of the Licence is undertaken at sampling locations in accordance with the AS 4323.1 or relevant part of the CEMS Code.
- 3.2.3 The Licensee shall ensure that all non-continuous sampling and analysis undertaken pursuant to condition 3.2.1 is undertaken by a holder of NATA accreditation for the relevant methods of sampling and analysis.



### **3.3 Monitoring of point source emissions to surface water**

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

### **3.4 Monitoring of point source emissions to groundwater**

There are no specified conditions relating to monitoring of point source emissions to groundwater in this section.

### **3.5 Monitoring of emissions to land**

There are no specified conditions relating to monitoring of emissions to land in this section.

### **3.6 Monitoring of inputs and outputs**

There are no specified conditions relating to monitoring of inputs and outputs in this section.

### **3.7 Process monitoring**

There are no specified conditions relating to process monitoring in this section.

### **3.8 Ambient environmental quality monitoring**

There are no specified conditions relating to ambient environmental quality monitoring in this section.

### **3.9 Meteorological monitoring**

There are no specified conditions relating to meteorological monitoring in this section.

## **4 Improvements**

There are no specified improvement conditions 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 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.

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:
- (a) implement a complaints management system that shall record the following information (if known or provided) about complaints received at the Premises concerning any environmental impact of the activities undertaken at the Premises:
    - (i) name and address of the complainants (if consented);
    - (ii) date and time of complaint;
    - (iii) date and time of alleged incident;
    - (iv) alleged source of the incident;
    - (v) general description of the alleged incident, including any environmental or health impacts reported by the complainant;
    - (vi) wind direction, wind speed and temperature at time of alleged incident;
    - (vii) likely source of the alleged incident; and
    - (viii) actions taken by licensee to address complaint, including the outcome of any investigation(s) and action(s) to verify any impacts.
  - (b) complete an annual analysis and review of complaints recorded under 5.1.4(a) to identify any common factors and root cause of complaints and proposals to address these.

## 5.2 Reporting

- 5.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 28 calendar days after the end of the annual period. The report shall contain the information listed in Table 5.2.1 in the format or form specified in that table.

<b>Table 5.2.1: Annual Environmental Report</b>		
<b>Condition or table (if relevant)</b>	<b>Parameter</b>	<b>Format or form<sup>1</sup></b>
-	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
2.2.3	All abatement plant by-pass events including the date, duration and reason for the by-pass	None specified
-	Summary of dust management plan review	None specified
3.2.1	Summary and review of emissions to air monitoring results	Include a graphical presentation of quarterly monitoring data collected over a minimum 3 year period
5.1.3	Compliance	Annual Audit Compliance Report (AACR)
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

- 5.2.2 The Licensee shall ensure that the Annual Environmental Report also contains:
- (a) any relevant process, production or operational data recorded under Condition 3.1.3; and
  - (b) an assessment of the information contained within the report against previous monitoring results and Licence limits and/or targets.



5.2.3 The Licensee shall submit the information in Table 5.2.2 to the CEO according to the specifications in that table.

<b>Table 5.2.2: Non-annual reporting requirements</b>				
<b>Condition or table (if relevant)</b>	<b>Parameter</b>	<b>Reporting period</b>	<b>Reporting date (after end of the reporting period)</b>	<b>Format or form<sup>1</sup></b>
2.2.3	Target exceedance	N/A	As soon as practicable but no later than 5pm of the next usual working day after becoming aware of the exceedance	Non specified
-	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

### 5.3 Notification

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

<b>Table 5.3.1: 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>
2.1.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day after becoming aware of the breach, failure, malfunction or incident.  Part B: As soon as practicable	N1
-	Any failure or malfunction of any pollution control equipment or any incident, which has caused, is causing or may cause pollution		

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 and emission points map

The Premises is shown in the map below. The pink line depicts the Premises boundary. Emission point A1 is also shown in this map.



**LEGEND**

- Local Government Authorities
- Swan River Trust Act, Swan River Trust Management Area
- Road Centrelines
- Perth Metropolitan Central 15cm Orthomosaic - Landgate 2011

Scale 1:6077  
(Approximate when reproduced at Letter)  
Geocentric Datum Australia 1994  
Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.  
Prepared by: Jessical  
Prepared for:  
Date: 11/06/2012 11:52:56 AM

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.

Department of Environment and Conservation  
Our environment, our future  
WA Crown Copyright 2002

\* Project Data. This data has not been quality assured. Please contact map author for details.



## Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.

### ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

#### SECTION A

##### LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name:	ABN:
Trading as:	
Reporting period: _____ to _____	

##### STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

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

Yes  Please proceed to Section C

No  Please proceed to Section B

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

Initial:





## SECTION C

### SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) may only be signed by a person(s) with legal authority to sign it. The ways in which the AACR must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this AACR is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
An individual	<input type="checkbox"/> <input type="checkbox"/>	by the individual licence holder, or by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; or by two directors of the licensee; or by a director and a company secretary of the licensee, or if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	<input type="checkbox"/> <input type="checkbox"/>	by the chief executive officer of the licensee; or by affixing the seal of the local government.

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

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

SIGNATURE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

NAME:  
(printed) \_\_\_\_\_

NAME:  
(printed) \_\_\_\_\_

POSITION: \_\_\_\_\_

POSITION: \_\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

SEAL (if signing under seal)



Licence: L6408/1967/15  
Form: N1

Licensee: Austral Bricks (WA) Pty Ltd  
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	
Name of operator	
Location of Premises	
Time and date of the detection	

<b>Notification requirements for the breach of a limit</b>	
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	

<b>Notification requirements for any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution</b>	
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

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 Austral Bricks (WA) Pty Ltd	
Date	



# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Proponent:** **Austral Bricks (WA) Pty Ltd**

**Licence:** **L6408/1967/15**

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**Registered office:** 738-780 Wallgrove Road  
HORSLEY PARK NSW 2175

**ACN:** 079 711 603

**Premises address:** Austral Bricks Armadale  
Lot 12 on Diagram 53506 and Lot 104 on Diagram 65714  
245 South Western Hwy  
ARMADALE WA 6900

**Issue date:** Monday, 29 June 2015

**Commencement date:** Wednesday, 01 July 2015

**Expiry date:** Tuesday, 30 June 2020

### **Decision**

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue a licence. DER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by: Peter Knol  
Senior Licensing Officer

Decision Document authorised by: Ed Schuller  
Manager Licensing



## Contents

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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.

### **Works approval and licence conditions**

DER has three types of conditions that may be imposed on works approvals and licences. They are as follows;

#### **Standard conditions (SC)**

DER has standard conditions that are imposed on all works approvals and licences regardless of the activities undertaken on the Premises and the information provided in the application. These are included as the following conditions on works approvals and licences:

Works approval conditions: 1.1.1-1.1.4, 1.2.1, 1.2.2, 5.1.1 and 5.1.2.

Licence conditions: 1.1.1-1.1.4, 1.2.1-1.2.4, 5.1.1-5.1.4 and 5.2.1.

For such conditions, justification within the Decision Document is not provided.

#### **Optional standard conditions (OSC)**

In the interests of regulatory consistency DER has a set of optional standard conditions that can be imposed on works approvals and licences. DER will include optional standard conditions as necessary, and are likely to constitute the majority of conditions in any licence. The inclusion of any optional standard conditions is justified in Section 4 of this document.

#### **Non standard conditions (NSC)**

Where the proposed activities require conditions outside the standard conditions suite DER will impose one or more non-standard conditions. These include both premises and sector specific conditions, and are likely to occur within few licences. Where used, justification for the application of these conditions will be included in Section 4.



## 2 Administrative summary

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>
	41 Clay Bricks or ceramic products Manufacturing	200 000 tonnes per annual period
Application verified	Date: 16/04/2015	
Application fee paid	Date: 29/04/2015	
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 type="checkbox"/> No <input checked="" type="checkbox"/> Ministerial statement No: EPA Report No:	
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i> )?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes include details of which EPP(s) here.	
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, include details here, eg Site is subject to SO <sub>2</sub> requirements of Kwinana EPP.	



### 3 Executive summary of proposal and assessment

Austral Bricks (WA) Pty Ltd (Austral Bricks) operates several brickworks within Western Australia. This licence is for their premises in Armadale, Austral Bricks Armadale.

The Premises is located on the South Western Highway, Armadale. Armadale Senior High School is located approximately 400 m to the north and the nearest residential areas are approximately 300 m to the east and 150 m to the west. Two minor perennial water courses are located to the east of the premises.

The plant manufactures internal clay bricks for use in the construction industry, using a gas fired tunnel kiln with a maximum capacity of 200,000 tonnes per annual period.

The premises includes:

- raw material stockpile areas;
- primary and secondary crusher and screens;
- extruder;
- dryer;
- gas fired tunnel kiln; and
- kiln exhaust gas abatement plant (cascading lime scrubber).

Manufacture of the bricks involves four main stages:

Clay preparation involves grinding and crushing of clays and shale, blending of different clay types and addition of water. Colorants or materials to improve the mechanical properties of the finished product may also be added.

Product shaping covers shaping the raw material mix into shapes using moulds or by extrusion. During or after shaping, additives may be applied to the surface of the raw clay shapes to achieve desired colour or texture effects.

Drying of the shaped products is undertaken by passing them through a dryer, heated by warm air from the cooling zone of the kiln. Exhaust gases from the dryer are vented to atmosphere.

Firing of the dried shapes is undertaken in a high temperature kiln. As the clay products are heated, fluoride, chloride, sulphur and other elements naturally present in the clays are emitted into the air in the kiln, along with more water vapour. The fluoride release rate varies over the firing cycle and peaks at temperatures of around 800°C, depending on the raw material, product and kiln conditions. Some of the raw material additives are also burnt off during firing.

Kiln exhaust emissions are abated through a cascading lime scrubber before emission to air via a 35 m stack. The principle emissions to air of concerns are acid chloride and fluoride gases, oxides of nitrogen, oxides of sulphur, VOCs and particulates.

The cascading lime scrubber can be by-passed to undertake essential maintenance for critical operational or safety reasons. If the by-pass has not ceased after 30 minutes the kiln throughput is adjusted to ensure the calculated emissions of hydrogen fluoride do not exceed 1g/sec for the remainder of the by-pass event. The Licensee has informed that bypassing the cascading lime scrubber has not been required over previous reporting year.

Operational procedures and controls are used to minimise dust emissions from raw materials storage and handling operations.

There are no discharges to water or land from the premises (other than stormwater).



The licences and works approvals issued for the Premises since 29/06/2007 are:

<b>Instrument</b>	<b>Issued</b>	<b>Description</b>
L6408/1967/11	29/06/2007	Licence re-issue
L6408/1967/12	27/06/2008	Licence re-issue
L6408/1967/13	29/6/2009	Licence re-issue
L6408/1967/13	29/10/2010	Licence amendment – Oxygen correction factor for monitoring data changed from 15% to 18%
L6408/1967/14	21/06/2012	Licence re-issue
L6408/1967/14	27/03/2014	Licence amendment – conversion to REFIRE format
L6408/1967/15	29/06/2015	Licence re-issue

DER has a template licence for Brickworks and this has been used as a basis for the licence reissue, together with a review of the current licence. The licence was converted to a REFIRE licence in March 2014 and Austral Bricks has requested some minor amendments which have been assessed in this document.



## 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.

<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L = Licence</b>	<b>OSC or NSC</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
<b>General conditions</b>	No change	N/A	No changes proposed to this set of conditions.	Application supporting documentation
<b>Premises operation</b>	N/A	N/A	Current licence does not have any conditions under this section and no changes are proposed.	
<b>Emissions general</b>	N/A	N/A	Descriptive limits will be set through condition 2.2.2 of the licence and therefore OSC regarding recording and investigation of exceedances of limits or targets has been included.	N/A
<b>Point source emissions to air including monitoring</b>	L2.2.4	N/A	Condition L2.2.4 on previous licence specified management action to manage emissions during these abatement plant bypass events and required the Licensee to adjust the kiln throughput to avoid exceedance of HF limit specified on the licence if a bypass event had not ceased within 30 minutes. This text did not clarify actions the Licensee must undertake within first 30 minutes of the bypass events and that the Licensee does not provide exemption from complying with limits specified during these by-pass events. This management action has been revised to clarify that the Licensee must take all appropriate actions to minimise emissions.	Application supporting documentation
<b>Point source emissions to surface water including monitoring</b>	N/A	N/A	No changes proposed to this set of conditions.	



<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L= Licence</b>	<b>OSC or NSC</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
<b>Point source emissions to groundwater including monitoring</b>	N/A	N/A	No changes proposed to this set of conditions.	
<b>Emissions to land including monitoring</b>	N/A	N/A	No changes proposed to this set of conditions.	
<b>Fugitive emissions</b>	L2.6.1	OSC	<p>OSC 2.6.1 included on previous licence stated that upon completion of the improvement requirement requiring submission of dust management plan, the licensee shall use all reasonable and practicable measures to prevent or minimise dust emissions from the Premises. The licensee has submitted the dust management plan which is considered internal control strategy. OSC 2.6.1 has been updated to reflect this and does not include any other change to condition text or intent.</p> <p>OSC 2.6.2 included on previous licence required the Licensee to implement the dust management plan and to review it annually. This requirement has been retained through Annual Environmental Reporting requirement.</p>	
<b>Odour</b>	N/A	N/A	No changes proposed to this set of conditions.	
<b>Noise</b>	N/A	N/A	No changes proposed to this set of conditions.	
<b>Monitoring general</b>	N/A	N/A	Minor textual changes made to reflect the fact that there is no CEMS on site and to reflect latest wording of the conditions.	
<b>Monitoring of inputs and outputs</b>	N/A	N/A	No changes proposed to this set of conditions.	
<b>Process monitoring</b>	N/A	N/A	No changes proposed to this set of conditions.	



<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L= Licence</b>	<b>OSC or NSC</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
<b>Ambient quality monitoring</b>	N/A	N/A	No changes proposed to this set of conditions.	
<b>Meteorological monitoring</b>	N/A	N/A	No changes proposed to this set of conditions.	
<b>Improvements</b>	N/A	N/A	No changes proposed to this set of conditions.	
<b>Information</b>	L5.2.1	OSC	Reporting requirements have been updated to reflect that air emissions monitoring data, ambient monitoring data and complaints summary is required through Annual Environmental report only instead of quarterly basis as prescribed by previous licence conditions. The requirement for the graphical representation has been extended to cover a minimum period of 3 years so that trends can be analysed.  The reporting period for a target exceedances has been adjusted to reflect the time it takes for stack testing results to become known. Also the format or form as been changed and the Licensee can now report in any way.	
	L5.3.1	OSC	The requirement for a calibration report has been removed, as this is only required if calibration of the monitoring equipment is not possible.	
<b>Licence Duration</b>	N/A	N/A	The premises is of low complexity and is managed well. It has been ranked as a Moderate risk premises. It is proposed to issue the licence for a period of 5 years.	



## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
11/05/2015	Application advertised in West Australian (or other relevant newspaper)	No comments received	N/A
17/06/2015	Proponent sent a copy of draft instrument	Comments received on 17 June 2015	DER has considered comments provided and made changes where appropriate. For those changes requested by the licensee not incorporated, justification has been provided in the Decision Document.



## 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