Government of Western Australia
Department of Water and Environmental Regulation

Amended Licence

Licence number	L6341/1988/10
Licence holder	Simcoa Operations Pty Ltd
ACN	009 064 653
Registered business address	Level 7 250 St Georges Terrace PERTH WA 6000
DWER file number	DER2014/001534-1
Duration	13/10/2014 to 12/10/2026
Date of amendment	5 May 2020
Premises details	Kemerton Silicon Smelter 973 Marriott Road WELLESLEY WA 6233 Legal description - Lot 5548 on Plan 188561 and Lot 5549 on Plan 188562

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)		**Assessed production capacity**
Category 37:	Char manufacturing: premises on which wood, carbon material or coal is charred to produce a fuel or material of carbonaceous nature or of enriched carbon content.	26,000 tonnes per year
Category 44:	Metal smelting or refining: premises on which metal ore, metal ore concentrate, or metal waste is smelted, fused, roasted, refined or processed	53 000 tonnes per year

This licence is granted to the licence holder, subject to the attached conditions, on Day Month Year, by:

Chris Malley
Digitally signed by Chris Malley
Date: 2020.05.05 09:54:47 +08'00'

A/Manager, Process Industries
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Licence history

Date	Reference number	Summary of changes
09/10/2014	L6341/1988/10	Reissue. Converted to REFIRE format.
31/12/2015	L6341/1988/10	Amendment to Licence
12/6/2017	L6341/1988/10	Amendment Notice 1 amendment to change production capacity for Category 44 and to amend ambient SO_2 limit
05/05/2020	L6341/1988/10	This amendment to amalgamate the licence with Amendment Notice 1 and to amend Conditions 3.2.1 and 3.3.1

Interpretation

In this licence:

(a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;

(b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;

(c) where tables are used in a condition, each row in a table constitutes a separate condition;

(d) any reference to an Australian or other standard, guideline, or code of practice means the version of the standard, guideline, or code of practice in force at the time of granting of this licence and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the licence;

(e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and

(f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

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;*

'AHD' means the Australian height datum;

'annual period' means the inclusive period from 1 January until 31 December in the same year;

'AS 3580.9.3' means the Australian Standard AS 3580.9.3 *Methods for sampling and analysis of ambient air - Determination of suspended particulate matter –Total suspended particulate matter (TSP) – High volume sampler gravimetric method;*

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

'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;*

'AS/NZS 5667.11' means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters;*

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

'CEMS' means continuous emissions monitoring system;

'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.

"submit to / notify the CEO" (or similar), means either:

Director General
Department administering the *Environmental Protection Act 1986*
Locked Bag 10
Joondalup DC WA 6919

or:

info@dwer.wa.gov.au

'code of practice for the storage and handling of dangerous goods' means the 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*;

'Department' means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.

'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;

'Licence' means this Licence numbered L6341/1988/10 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;

'NOx' means oxides of nitrogen, calculated as the sum of nitric oxide and nitrogen dioxide and expressed as nitrogen dioxide;

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

'PM_{10}' means particles with an aerodynamic diameter of less or equal to 10 µm;

'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;

six monthly' means the 2 inclusive periods from 1 January to 30 June and 1 July to 31 December in the same year;

'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;

'STP dry' means standard temperature and pressure (0^{o}Celsius and 101.325 kilopascals respectively), dry;

'triennial' means once every three years;

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

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

'USEPA Method 2' means the USEPA Method 2 *Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)*;

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

'USEPA Method 6' means the USEPA Method 6 *Determination of Sulfur Dioxide Emissions from Stationary Sources*;

'USEPA Method 7E' means the USEPA Method 7E *Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrument Analyser Procedure)*;

'USEPA Method 10' means the USEPA Method 10 *Determination of Carbon Monoxide Emissions from Stationary Sources*; and

'µS/cm' means microsiemens per centimetre.

1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the the standard in force from time to time during the term of this Licence.

1.1.4 Any reference to a guideline or code of practice in the Licence means the version of that guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.

Premises operation

1.2.1 The Licensee shall ensure that waste material is only stored and/or treated within areas or compounds provided with the infrastructure detailed in Table 1.2.1.

Table 1.2.1: Containment infrastructure

Storage vessel or compound	Material	Infrastructure requirements
Settling pond	Brackish wastewater from the RO plant, laboratory and retort sump and treated water from an oil/water separator	Synthetic lined with design capacity of 1000m^3

2 Emissions

2.1 Point source emissions to air

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

Table 2.1.1: Emission points to air

Emission point reference	Emission Point	Source, including any abatement
A1	Furnace 1 & 2 roof vent	Furnace 1 & 2 via baghouse
A2	Furnace 3 stack	Furnace 3 via baghouse
A3	Charcoal retort stack	Charcoal retort 1 & 2 via incinerator
A4	Emergency venting stacks	Furnace 1 & 2
A5	Emergency venting stacks	Furance 3

2.1.2 The Licensee shall not allow the direct venting of furnace off gases to the atmosphere (bypassing the baghouse), unless necessary for the safe operation of the Premises.

2.2 Emissions to land

2.2.1 The Licensee shall ensure that where waste is emitted to land 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: Emissions to land

Emission point reference	Description	Source including abatement
L1	Settling pond overflow point that discharges directly onto the ground during overflow events.	Brackish wastewater from the RO plant, laboratory and retort sump and treated water from an oil/water separator.
L2	Infiltration drain and pond that facilitates infiltration of stormwater runoff.	Stormwater runoff from the wood block drying pad and underground drains.
L3	Settling pond contingency discharge point to be used when disposal to Kemerton Titanium Dioxide Processing Plant is unavailable	Brackish wastewater from the RO plant, laboratory and retort sump and treated water from an oil/water separator.

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 sampling is conducted in accordance with AS/NZS 5667.10;
(c) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
(d) 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:
(a) weekly monitoring is undertaken at least 5 days apart;
(b) six monthly monitoring is undertaken at least 5 months apart;
(c) annual monitoring is undertaken at least 9 months apart; and
(d) triennial monitoring is undertaken at least 2 years and 9 months apart.

3.1.3 The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.

3.1.4 The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

3.2 Monitoring of point source emissions to air

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

Table 3.2.1: Monitoring of point source emissions to air

Emission point reference	Parameter	Units[1]	Averaging period	Frequency[2]	Method
A2 – A3	Volumetric flow rate	m^3/s	As per method	Annually	USEPA Method 2
	PM	mg/m^3 and g/s	Stack test (Minimum 60 minutes)		USEPA Method 5
	PM_{10}				
	Sulfur dioxide		Stack test (Minimum 30 minutes)		USEPA Method 6 or 6C
	NOx				USEPA Method 7E
	Carbon monoxide				USEPA Method 10

Note 1: All units are referenced to STP dry.
Note 2: Monitoring shall be undertaken to reflect normal operating conditions and any limits or conditions on inputs or production.

3.2.2 The Licensee shall ensure that sampling required under Condition 3.2.1 of the Licence is undertaken at sampling locations in accordance with the AS 4323.1.

3.2.3 The Licensee shall ensure that all non-continuous sampling and analysis undertaken pursuant to condition 3.2.1 is undertaken by a holder of NATA accreditation for the relevant methods of sampling and analysis.

3.5 Monitoring of emissions to land

3.5.1 The Licensee shall undertake the monitoring in Table 3.3.1 according to the specifications in that table.

Table 3.3.1: Monitoring of emissions to land

Emission point reference	Parameter	Units	Averaging Period	Frequency
L2	pH[1]	pH unit	Spot sample	Weekly when flowing
	Total dissolved solids[2]	mg/L		
	Total suspended solids[2]			
L1 & L3	pH[1]	pH unit		Weekly when flowing
	Total dissolved solids[2]	mg/L		
	Total suspended solids[2]			
L3	Volumetric flow rate	m^3	Hourly	Continuous

Note 1: In-field measurement permitted.
Note: 2: Testing in Simcoa laboratory permitted.

3.6 Monitoring of inputs and outputs

3.6.1 The Licensee shall undertake the monitoring in Table 3.4.1 according to the specifications in that table.

Table 3.4.1: Monitoring of inputs and outputs

Input/Output	Process Description	Parameter	Units	Averaging period	Frequency
Coal	N/A	Sulfur	% by weight	Monthly weighted average of samples	Quarterly
W1	Wastewater discharged to Kemerton Titanium Dioxide Processing Plant	Volumetric flow rate	m^3	Hourly	Continuous

3.5 Ambient environmental quality monitoring

3.5.1 The Licensee shall undertake the monitoring in Tables 3.5.1 and 3.5.2 according to the specifications in those tables and record and investigate results that do not meet any limit specified.

Table 3.5.1: Monitoring of ambient air quality

Monitoring point reference	Parameter	Limit	Units[1]	Averaging period	Frequency	Method
AQ1 & AQ2[2]	TSP[1]	None specified	µg/m^3	24 hours	Annual, with a minimum of 2 samples between 1 October and 31 May.	AS 3580.9.3
AQ1	Sulfur dioxide	None specified		24 hours	Triennial	AS 3580.4.1
AQ3[3]		229		1 hour		
		572				

Note 1: To be sampled using a High Volume Air Sampler.
Note 2: Sampling location is Leschenault Parklands, Leschenault.
Note 3: Sampling location is Leschenault.

3.5.2 The Licensee shall ensure that the siting of ambient air monitoring equipment is in accordance with AS 3580.1.1.

Table 3.5.2: Monitoring of ambient groundwater quality

Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
GQ1 – GQ3	Standing water level	m (AHD)	Spot sample	Six monthly
	pH[1]	-		
	Electrical conductivity	µS/cm		
	Total dissolved solids, total organic carbon	mg/L		

Note 1: In-field measurement permitted.

4 Information

4.1 Records

4.1.1 All information and records required by the Licence shall:

(a) be legible;
(b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
(c) except for records listed in 4.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
(d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
    (i) off-site environmental effects; or
    (ii) matters which affect the condition of the land or waters.

4.1.2 The Licensee shall complete an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.

4.1.3 The Licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

4.2 Reporting

4.2.1 The Licensee shall submit to the CEO an Annual Environmental Report by 31 March in each year. The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table.

Table 4.2.1: Annual Environmental Report		
Condition or table (if relevant)	**Parameter**	**Format or form[1]**
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
Table 3.2.1	Monitoring of point source emissions to air	
Table 3.3.1	Monitoring of emissions to land	
Table 3.4.1	Monitoring of inputs and outputs	
Table 3.5.1	Monitoring of ambient air quality	
Table 3.5.2	Monitoring of ambient groundwater quality	
4.1.3	Compliance	Annual Audit Compliance Report (AACR)
4.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

4.2.2 The Licensee shall ensure that the Annual Environmental Report also contains an assessment of the information contained within the report against previous monitoring results.

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

Table 4.2.2: Non-annual reporting requirements				
Condition or table (if relevant)	**Parameter**	**Reporting period**	**Reporting date (after end of the reporting period)**	**Format or form**
-	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
2.2.2	Date, time, duration and explanation for periods of direct venting of furnace off gases	Monthly	28 calendar days	None specified

4.3 Notification

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

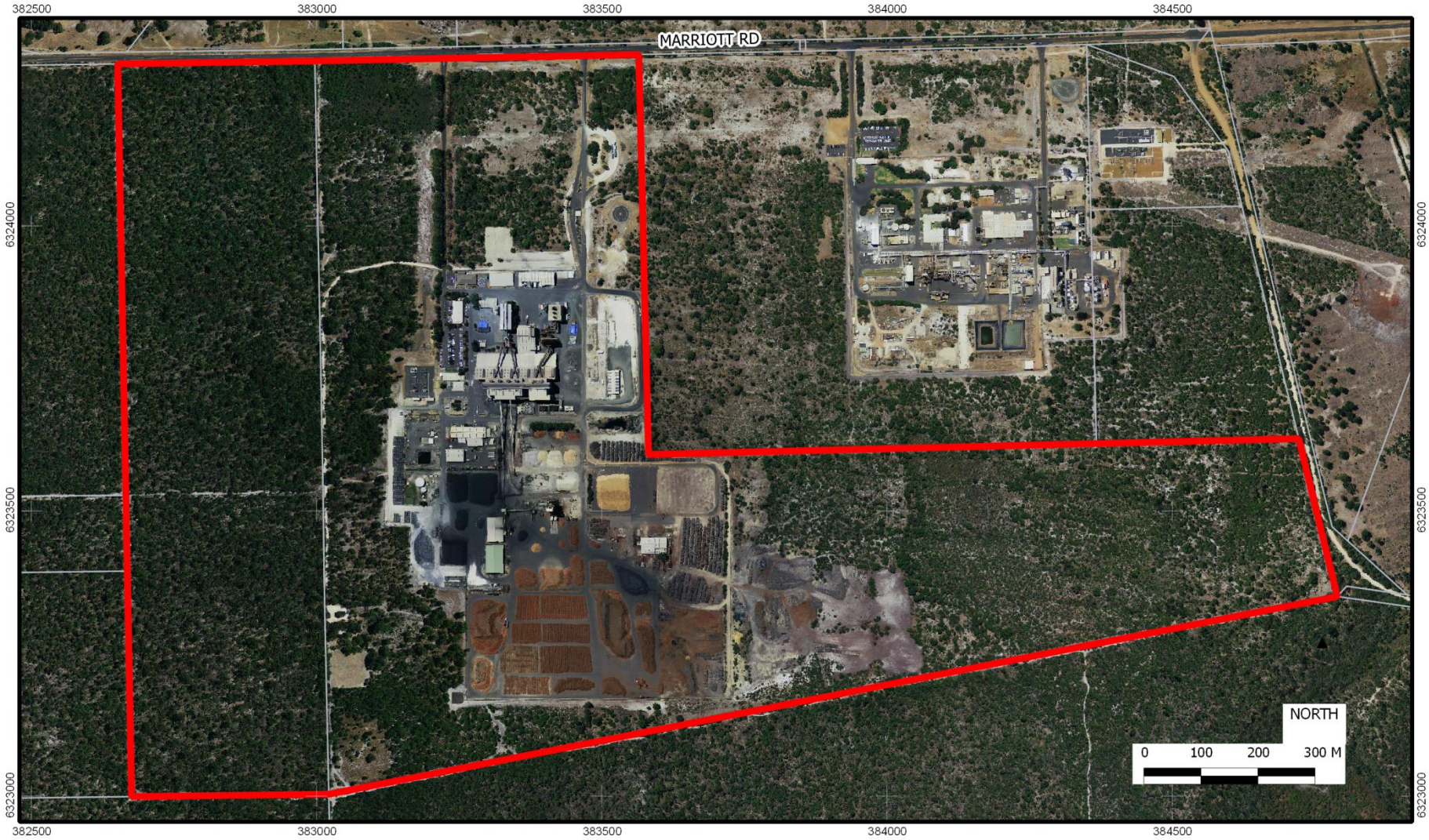
Table 4.3.1: Notification requirements

Condition or table (if relevant)	Parameter	Notification requirement[1]	Format or form[2]
3.5.1	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. Part B: As soon as practicable	N1
3.1.4	Calibration report	As soon as practicable.	None specified

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act.
Note 2: Forms are in Schedule 2.

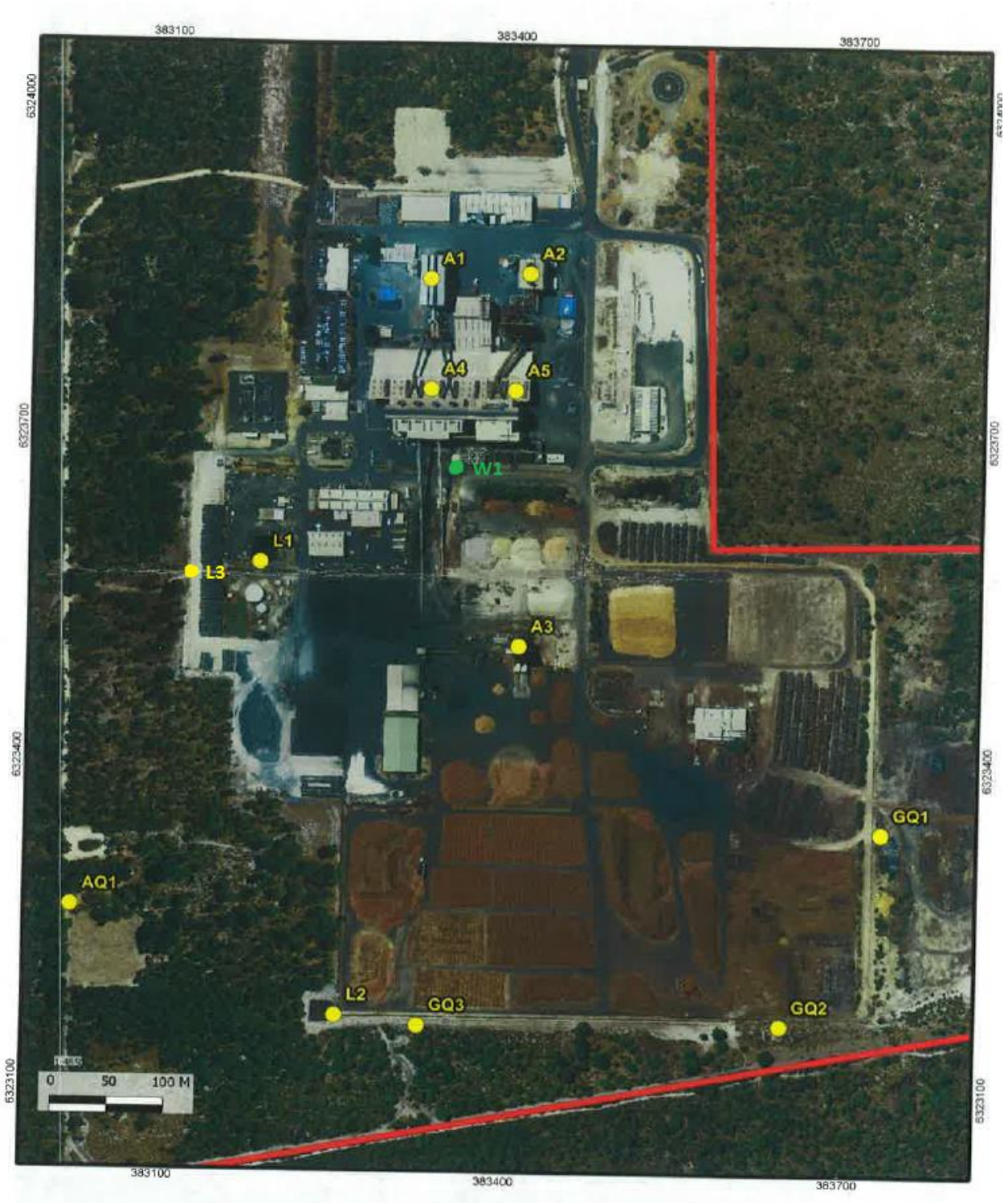
Schedule 1: Maps

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



Map of emission points and Map of monitoring locations

The locations of the emission points defined in Tables 2.1.1 and 2.2.1 are shown below. The locations of the monitoring points defined in Tables 3.3.1, 3.4.1, 3.5.1 and 3.5.2 are shown below.



Schedule 2: Reporting & notification forms

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

Licence: L6341/1988/10 Licensee: Simcoa Operations Pty Ltd

Form: N1 Date of breach:

Notification of detection of the breach of a limit

These pages outline the information that the operator must provide. Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of Simcoa Operations Pty Ltd	
Date	