Licence

Licence Number	L8861/2014/1
Licence Holder	Karratha Recycling Pty Ltd
ACN	163 991 106
Registered Business Address	Lakeside Corporate Unit 16, 24 Parkland Road OSBORNE PARK WA6017
DWER File Number	DER2014/002439-1
Duration	09/02/2015 to 08/02/2034
Date of Amendment	07/02/2020
Premises Details	Karratha Recycling Liquid Waste Facility Lot 111 and 112 Exploration Drive GAP RIDGE WA 6714 Legal description - Being Lot 111 and 112 on Plan 75061 As defined in Schedule 1

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed premises production or design capacity**
Category 35: Asphalt manufacturing - premises on which hot or cold mix asphalt is produced using crushed or ground rock aggregates mixed with bituminous or asphaltic materials for use at a place or premises other than those premises.	40,000 tonnes per annual period
Category 61: Liquid waste facility: premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed, treated or irrigated.	100,000 tonnes per annual period
Category 61A: Solid Waste Facility: premises (other than premises within category 67A) on which solid waste produced on other premises is stored, reprocessed, treated or discharged onto land	20,000 tonnes per annual period

This Licence is granted to the Licence Holder, subject to the attached conditions, on 7 February 2020 by:

Stephen Checker
Digitally signed by Stephen Checker
Date: 2020.02.07 17:53:55 +08'00'

Stephen Checker
MANAGER WASTE INDUSTRIES
REGULATORY SERVICES

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

Licence history

Issue Date	Instrument Reference	Summary of changes
20/02/2014	W5538/2013/1	New Works Approval for construction of a liquid waste facility.
29/01/2015	L8861/2014/1	New Licence issued to operate liquid waste facility.
06/03/2015	W5579/2014/1	New Works Approval for construction of an asphalt plant.
19/03/2015	W5806/2015/1	New Works Approval for expansion of the liquid waste facility.
30/07/2015	L8861/2014/1	Licence Amendment to include Category 35 asphalt manufacturing plant.
07/02/2018	L8861/2014/1	Amendment Notice 1 to permit acceptance of controlled waste type D300 - high saline industrial wash waters.
18/05/2018	L8861/2014/1	Amendment Notice 2 to permit use of an additional evaporation pond under W5806/2015/1 and to increase design capacity for Category 61 liquid waste from 20,000 tonnes to 70,000 tonnes per annum.
06/09/2018	L8861/2014/1	Amendment Notice 3 to enable the acceptance of additional Controlled Wastes types K130 sewage waste from reticulated sewerage systems; L100 car and truck wash waters; and L150 industrial wash water contaminated with a controlled waste.
7/02/2020	L8861/2014/1	Licence amendment to permit the use of an additional evaporation pond constructed under W5806/2015/1 and to increase design capacity for the Category 61 liquid waste facility from 70,000 to 100,000 tonnes per annum. Also, the amalgamation of all previous amendments into this Licence.

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

General

General Conditions

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

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

3. The Licence Holder 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]

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

Premises operation

4. The Licence Holder shall record and investigate the exceedance of any descriptive or numerical limit in this section.

5. The Licence Holder shall only allow waste to be accepted on to the Premises if:

   (a) it is of a type listed in Table 1; and
   (b) the quantity accepted is below any limit listed in Table 1; and
   (c) it meets any specification listed in Table 1

Table 1: Waste Acceptance			
Waste type	**Waste Code**	**Quantity limit**	**Specification[1]**
Sewage	N/A	100,000 tonnes per annual period (combined).	Liquid waste receipt in tankers. Discharged to primary treatment pond.
Septage waste (Sewage) – domestic wastes from apparatus for the treatment of sewage	K210		
Waste from grease traps	K110		
Sewage waste from reticulated sewerage system	K130		
High-saline industrial wash waters	D300		Liquid waste receipt in tankers. Discharged to evaporation pond only.
Car and truck wash waters	L100		• L150 limited to wastes contaminated only with D300, K110, K130, K210, L100, J100, J120, J130, J180 controlled wastes. • Liquid waste receipt in tankers. Discharged to evaporation pond only.
Industrial wash water contaminated with a controlled waste	L150		
Processed RAP	N/A	20,000 tonnes per annual period.	The Licence Holder shall ensure that Processed RAP does not contain any of the following materials: • Granular pavement materials, clay, soil or organic matter; • Bricks, concrete, glass or building materials; or • Laterite asphalt, tar based products, geotextile fabrics, raised pavement markers or surface treatments such as high friction surfacings or green or red pavement markings.

Note 1: Additional requirements for the acceptance of controlled waste are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

6. The Licence Holder shall ensure that the wastes accepted onto the Premises are only subjected to the processes set out in Table 2 and in accordance with any process requirements described in that table.

7. The Licence Holder shall ensure that waste material is only stored and/or treated within vessels or compounds provided with the infrastructure detailed in Table 3.

8. The Licence Holder shall manage all wastewater treatment, receiving, facultative and storage evaporation ponds such that:

   (a) overtopping of the ponds does not occur; and
   (b) a freeboard equal to, or greater than, 500mm is maintained;
   (c) the integrity of the containment infrastructure is maintained;
   (d) trapped overflows are maintained on the outlet of ponds to prevent carry-over of surface floating matter; and
   (e) vegetation is prevented from encroaching onto pond surfaces or inner pond embankments.

9. The Licence Holder shall ensure that automatic safeguards are incorporated within the asphalt manufacturing process to prevent the ignition of bitumen within the drum.

10. The Licence Holder shall ensure that:

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

11. The Licence Holder shall ensure that bulk materials are stored in a manner which minimises the generation of airborne dust.

Table 2: Waste processing		
Waste type	**Process**	**Process limits**
Sewage	Receipt in tankers; Physical, biological and chemical treatment	Primary treatment (Pond 1 and 2): - Water depth to sludge shall be greater than 0.4 m or equivalent and sludge depth on ponds to be less than 1m or equivalent; - pH of wastewater to be maintained at 6.5 to 9; and - Scum/rags to have less than 5% coverage across pond surfaces. Secondary treatment (Pond 3, 4, 5 and 6): - Water depth to sludge shall be greater than 0.4 m or equivalent and sludge depth on ponds to be less than 1m or equivalent; - pH of wastewater to be maintained at 6.5 to 9; Treatment of waste shall be at or below the treatment capacity of 100,000 tonnes per annual period.
Septage wastes (Sewage) – domestic wastes from apparatus for the treatment of sewage		
Waste from grease traps		
Sewage waste from reticulated sewerage system		
High saline industrial wash waters	Receipt in tankers for direct disposal to Pond 4, 5 or 6 for evaporation	
Car and truck wash waters		
Industrial wash water contaminated with a controlled waste		
Sewage sludge resulting from onsite liquid waste treatment	Drying out of ponds; Storage prior to landfill disposal	300 m^3 at any one time prior to landfill disposal off-site.
Processed RAP	Asphalt manufacturing	500 tonnes at any time

Table 3: Containment infrastructure		
Vessel or compound	**Material**	**Requirements**
Receiving pit	Wastewater	Impermeable receptacle or storage chamber.
Pond 1 - receiving anaerobic pond – 18m x 27m x 4.5m	Wastewater	Lined with a geosynthetic clay liner in accordance with WQPN 27.
Pond 2 - receiving anaerobic pond – 18m x 27m x 4.5m	Wastewater	Lined with a geosynthetic clay liner in accordance with WQPN 27.
Pond 3 - facultative aerobic pond – 33m x 58m x 2.2m	Treated wastewater	Lined with a geosynthetic clay liner in accordance with WQPN 26.
Pond 4 - evaporation pond – 77m x 58m x 2m	Treated wastewater	Lined in accordance WQPN 26 with a synthetic membrane.
Pond 5 - evaporation pond - 80m x 80m x 3.5m	Treated wastewater	Lined in accordance with WQPN 26 with a HDPE liner.
Pond 6 - evaporation pond – 80m x 70m x 3.5m	Treated wastewater	Lined in accordance with WQPN 26 with a HDPE liner.
Sewage sludge compound	Sewage sludge	Temporary or permanent infrastructure to consist of a bunded hardstand or lined area (lined to achieve a permeability of less than 10^{-9} m/s or equivalent), capable of preventing surface run-off of leachate and sludge and which includes a leachate collection system

Emissions

General

12. The Licence Holder shall record and investigate the exceedance of any descriptive or numerical limit specified in any part of the 'Emissions' section of this Licence.

Point source emissions to air

13. The Licence Holder shall ensure that where waste is emitted to air from the emission points in Table 4 it is done so in accordance with the conditions of this Licence.

Table 4: Emission points to air

Emission point reference	Emission Point	Emission point height (m)	Source, including any abatement
A1	Asphalt Plant Stack	6	Drum drier via baghouse

14. The Licence Holder shall not cause or allow point source emissions to air greater than the limits listed in Table 5.

Table 5: Point source emission limits to air

Emission point reference	Parameter	Limit (including units)[1,2]	Averaging period
A1	PM	50 mg/m^3	Stack Test (Minimum 60 minute tests)

Note 1: All units are referenced to STP dry
Note 2: Concentration units are referenced to 17% O_2

Monitoring

General monitoring

15. The Licence Holder shall ensure that:

    (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1 unless otherwise indicated in the relevant table;
    (b) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
    (c) 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.

16. The Licence Holder shall ensure that:

    (a) six monthly monitoring is undertaken at least 5 months apart; and
    (b) annual monitoring is undertaken at least 9 months apart.

17. The Licence Holder shall record production or throughput data and any other process parameters relevant to any non-continuous monitoring undertaken.

18. The Licence Holder 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.

19. The Licence Holder 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.

Monitoring of point source emissions to air

20. The Licence Holder shall undertake the monitoring in Table 6 according to the specifications in that table.

Table 6: Monitoring of point source emissions to air

Emission point reference	Parameter	Units[1,3]	Averaging period	Frequency [2]	Method
A1	Volumetric flow rate	m^3/s	n/a	Annual	USEPA Method 2
	PM	mg/m^3 g/s	60 minute minimum		USEPA Method 5 or 17
	Sulphur dioxide		30 minute minimum		USEPA Method 6C
	Nitrogen oxides				USEPA Method 7E
	Carbon monoxide				USEPA Method 10
	Total Volatile Organic Compounds (TOC)				USEPA Method 18

Note 1: All concentration 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.
Note 3: Concentration units are referenced to 17% O_2.

21. The Licence Holder shall ensure that sampling required under condition 20 of the Licence is undertaken at sampling locations in accordance with the AS 4323.1.

22. The Licence Holder shall ensure that all non-continuous sampling and analysis undertaken pursuant to condition 20 is undertaken by a holder of NATA accreditation for the relevant methods of sampling and analysis.

Monitoring of inputs and outputs

23. The Licence Holder shall undertake the monitoring in Table 7 according to the specifications in that table.

Table 7: Monitoring of inputs and outputs					
Input/output	**Monitoring point reference**	**Parameter**	**Units**	**Averaging period**	**Frequency**
Waste Inputs	None specified	Waste received	tonnes	N/A	Each load arriving at the Premises

Ambient environmental quality monitoring

24. The Licence Holder shall undertake the monitoring in Table 8 according to the specifications in that table.

Table 8: Monitoring of ambient groundwater quality				
Monitoring point reference and location as shown on Map of monitoring locations and premises infrastructure in Schedule 1	**Parameter**	**Units**	**Averaging period**	**Frequency**
Monitoring Bore 1 Monitoring Bore 2	pH[1]	pH units	Spot sample	Six monthly
	Electrical conductivity[1]	µS/cm		
	Standing Water Level (SWL)	m AHD		
	Total Phosphorus	mg/L		
	Total Nitrogen	mg/L		

Note 1: In-field non-NATA accredited analysis permitted.

Information

Records

25. 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 25(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.

26. The Licence Holder shall complete an Annual Audit Compliance Report indicating the extent to which the Licence Holder 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.

27. The Licence Holder 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.

Reporting

28. The Licence Holder shall submit to the CEO an Annual Environmental Report by 31 March in each year after the end of the annual period. The report shall contain the information listed in Table 9 in the format or form specified in that table.

Table 9: 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 1	Summary of any treatment capacity exceedances and any action taken.	None specified
Condition 8	Summary of any freeboard exceedances and any action taken.	None specified
Table 5	Limit exceedances	AACR
Table 6	Volumetric flow rate, particulate matter, sulphur dioxide, nitrogen oxides, volatile organic compounds, and carbon monoxide	None specified
Table 7	Total waste received	None specified
Condition 24	Monitoring of ambient groundwater quality	None specified
Condition 26	Compliance	AACR
Condition 27	Complaints summary	None specified

29. The Licence Holder shall ensure that the Annual Environmental Report also contains:
    (a) any relevant process, production or operational data recorded under condition 17; and
    (b) an assessment of the information contained within the report against previous monitoring results and Licence limits.

Notification

30. The Licence Holder shall ensure that the parameters listed in Table 11 are notified to the CEO and in accordance with the notification requirements of the table.

Table 10: Notification requirements		
Condition or table (if relevant)	**Parameter**	**Notification requirement[1]**
-	Removal of sewage sludge from a treatment pond, wastewater treatment vessel, sewage sludge storage pond or Geobag	No less than 14 days in advance of works
Condition 19	Calibration report	As soon as practicable.

Note 1: No notification requirement in the Licence shall negate the requirement to comply with s72 of the EP Act.

Definitions

For the purposes of this Licence, terms are defined in Table 12 unless the contrary intention appears:

Table 11: Definitions

Term	Definition
AACR	means Annual Audit Compliance Report, a report in a format approved by the CEO as presented by the Licence Holder or as specified by the CEO from time to time and published on the Department's website and a copy of the AACR form is accessible from the DWER website.
ACN	means Australian Company Number.
annual period	means the inclusive period from 1 January until 31 December in the same year.
AS 4323.1	means the Australian Standard AS4323.1 *Stationary Source Emissions Method 1: Selection of sampling positions.*
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 5667.11	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 is measured or a monitoring result is obtained.
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
controlled waste	has the definition in *Environmental Protection (Controlled Waste) Regulations 2004*;.
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.
DWER	means Department of Water and Environmental Regulation.
discharge	has the same meaning given to that term under the *EP Act*.

Term	Definition
emission	has the same meaning given to that term under the *EP Act*.
EP Act	*Environmental Protection Act 1986* (WA).
freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point.
HDPE	High Density Polyethylene
leachate	means liquid released by or water that has percolated through waste and which contains some of its constituents.
Licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the *EP Act*, subject to the specified conditions contained within.
Licence Holder	Karratha Recycling Pty Ltd.
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;
PM	means total particulate matter including both solid fragments of material and miniscule droplets of liquid;
Premises	refers to the premises to which this Licence applies, as specified at the front of this Licence and as shown on the premises maps (Figure 1 in Schedule 1 to this Licence.
prescribed premises	has the same meaning given to that term under the EP Act.
processed RAP	means RAP which has been crushed and/or screened to size for recycling into new asphalt;
RAP	means Reclaimed Asphalt Pavement which consists of surplus plant mix or the material reclaimed from an asphalt wearing or intermediate course by cold planing;
Schedule 1	means Schedule 1 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 each 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;

Term	Definition
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^{o}Celsius and 101.325 kilopascals respectively), dry;
USEPA	means United States (of America) Environmental Protection Agency;
USEPA Method 2	means United States (of America) Environmental Protection Agency Method for Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pilot Tube);
USEPA Method 5	means United States (of America) Environmental Protection Agency Method for Determination of Particulate Matter Emission From Stationary Sources;
USEPA Method 6C	means United States (of America) Environmental Protection Agency Method for Determination of Sulfur Dioxide Emissions From Stationary Sources (Instrumental Analyzer Procedure);
USEPA Method 7E	means United States (of America) Environmental Protection Agency Method for Determination of Nitrogen Oxides Emissions From Stationary Sources (Instrumental analyser Procedure);
USEPA Method 10	means United States (of America) Environmental Protection Agency Method for Determination of Carbon Monoxide Emissions From Stationary Sources (Instrumental Analyzer Procedure);
USEPA Method 17	means United States (of America) Environmental Protection Agency Method for Determination of Particulate Matter Emission From Stationary Sources;
USEPA Method 18	means the USEPA Method 18 - Measurement of Gaseous Organic Compound Emissions By Gas Chromatography;
waste code	means the Waste Code assigned to a type of controlled waste for purposes of waste tracking and reporting as specified in the Department of Water and Environmental Regulation “Controlled Waste Category List” (May 2018), as amended from time to time;
WQPN 26	means the Department of Water, *Water Quality Protection Notes 26 – Liners for containing pollutants, using synthetic liners*; and
WQPN 27	means the Department of Water, *Water Quality Protection Notes 27 – Liners for containing pollutants, using engineered soils*.

END OF CONDITIONS

Schedule 1: Maps

Figure 1. Premises map

The Premises is shown in the map below. The pink line depicts the Premises boundary. Coordinates for A – D are defined in Table 13.

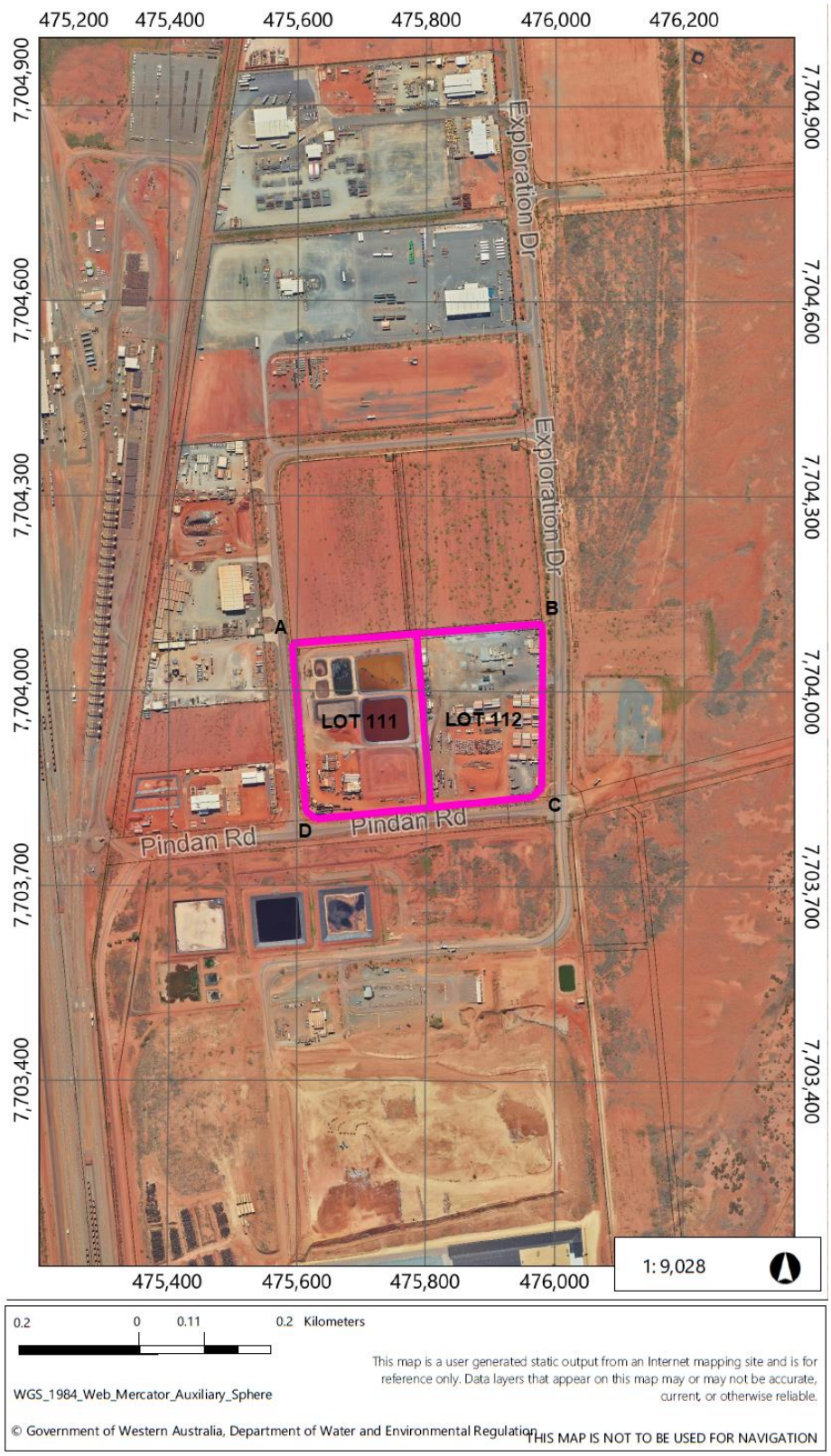
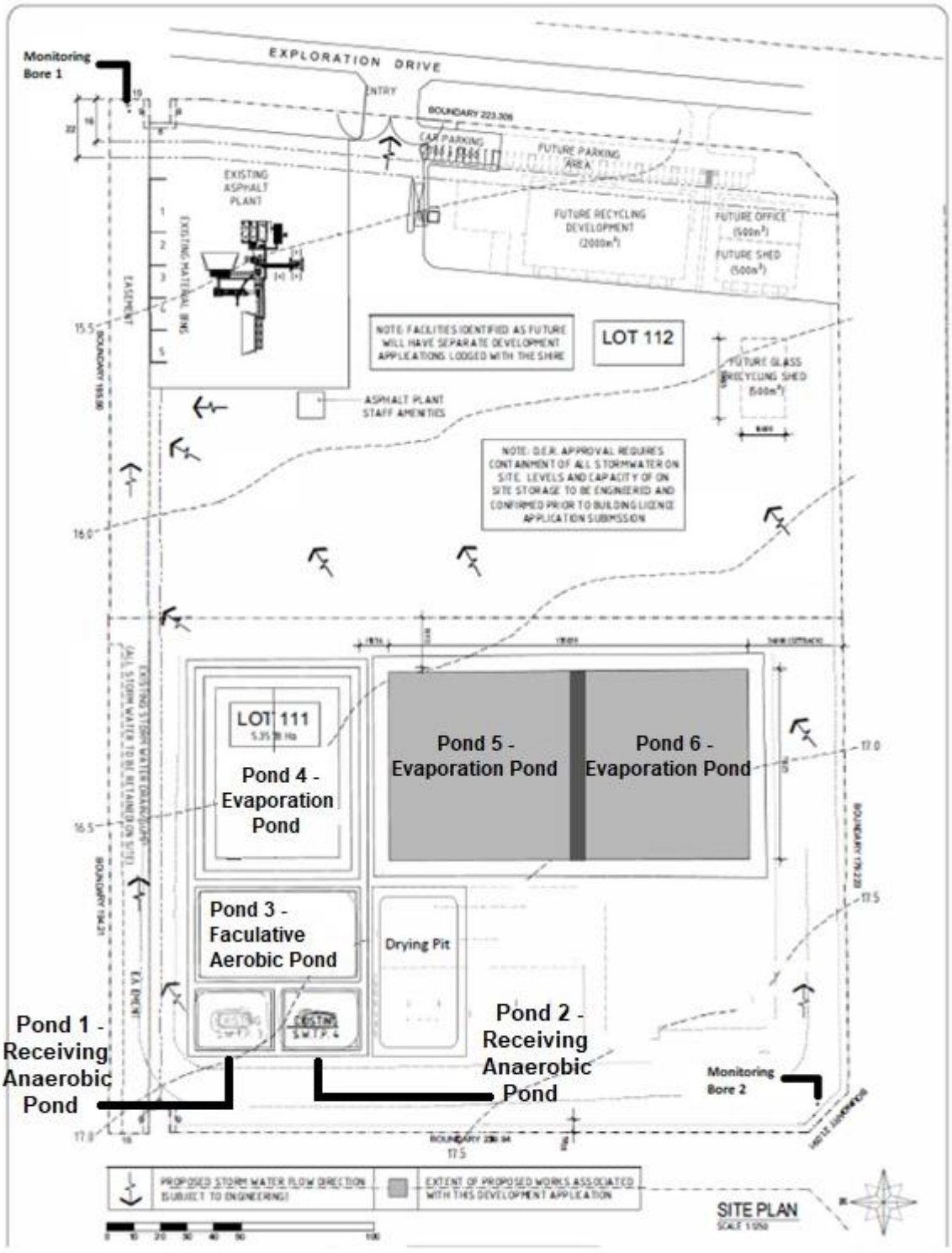


Figure 2. Map of monitoring locations and Premises infrastructure

The locations of the monitoring points defined in Table 8 are shown below.
The locations of containment infrastructure defined in Table 3 are shown below.



Premises boundary

The premises boundary is defined by the approximate coordinates in Table 13.

Table 13: Premises boundary coordinates (GDA94)

Coordinate Points (Figure 1)	Easting	Northing	Zone
A	*475590*	*7704079*	*50*
B	*475977*	*7704111*	*50*
C	*475972*	*7703844*	*50*
D	*475619*	*7703810*	*50*