



<b>Licence Number</b>	L5425/1989/12
<b>Licence Holder</b>	Iluka Resources Limited
<b>ACN</b>	008 675 018
<b>Registered business address</b>	Level 23 140 St Georges Terrace PERTH WA 6000
<b>File Number</b>	DER2016/001500-1
<b>Duration</b>	04/12/2020 to 03/12/2040
<b>Prescribed Premises</b>	Category 8: Mineral sands mining and processing As defined in Schedule 2
<b>Premises</b>	Narngulu Operations 249 Goulds Road NARNGULU WA 6532  Legal description - Lot 2 on Plan 11238, Lot 202 on Plan 59617, Lot 9 on Diagram 64009, Lot 151 on Diagram 78655, Lot 34 on Diagram 66647 As defined in Schedule 1

This licence is granted to the licence holder, subject to the attached conditions, on 5 November 2020 by:

**Lauren Fox**

**A/MANAGER RESOURCE INDUSTRIES**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

## Contents

Contents.....	2
Introduction .....	2
Amendment September 2020 .....	3
Licence history .....	4
Interpretations .....	4
Interpretation .....	7
Licence Conditions .....	7
Infrastructure and equipment .....	7
Emissions (general).....	8
Schedule 1: Maps and premises .....	15
Schedule 2: Prescribed premises category and boundary .....	23

## Introduction

This Introduction is not part of the licence conditions.

### DWER's industry licensing role

The Department of Water and Environmental Regulation (DWER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DWER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DWER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DWER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DWER 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/licence holder 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.

## **Amendment September 2020**

### **Licence holder proposed amendment**

On 22 June 2020 the licence holder submitted a licence renewal application including an amendment to extent the premises boundary to the adjoint premises (formerly L6129/1987/13).

### **Amalgamation**

The CEO initiated an amendment to the type and style of the licence during September 2020 and has issued a revised licence incorporating all of the recent amendment notices. The obligations of the licence holder have not changed in making this amendment. During the consolidation of amendment notices, DWER has not undertaken any additional risk assessment of the premises.

The CEO has:

- incorporated the amendment notices #1, 2, 3, 4 and 5 issued in 2017, 2018 and 2019 respectively as listed below in the instrument log table;
- updated that style and appearance of the licence;
- deleted the redundant AACR form set out in schedule 1 and directed the licence holder to obtain the form from the Department's website; and
- corrected clerical mistakes and unintentional errors.

## Licence history

The licences and works approvals issued for the premises prior to issue of this licence are:

Instrument log		
Instrument	Issued	Description
L5425/1989/10	23/08/2007	Licence renewed – issued for 5 years
L5425/1989/11	31/08/2012	Licence renewed – issued for 5 years
L5425/1989/11	20/06/2017	Amendment Notice 1 – extend expiry date by 12 months
L5425/1989/11	19/03/2018	Amendment Notice 2 – approval to dispose asbestos-contaminated material and NORM in the historic Jennings landfill area
L5425/1989/11	17/07/2018	Amendment Notice 3 – extend expiry date by 12 months
W6215/2019/1	12/03/2019	Works approval to construct a barite removal circuit
L5425/1989/11	23/08/2019	Amendment Notice 4 – extend expiry date by 12 months
L5425/1989/11	02/10/2019	Amendment Notice 5 – approval to operate the barite removal circuit
L5425/1989/11	12/08/2020	DWER initiated amendment to extend licence for 3 months
L5425/1989/12	5/11/2020	Licence renewed, premises boundary extended to include adjoint premises and DWER initiated amalgamation of previous Amendment Notices 2 and 5.

### END OF INTRODUCTION

## Interpretations

In these Conditions of Licence, unless inconsistent with the text or subject matter:

**‘AACR’** Annual Audit Compliance Report means 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.

**‘Act’** means the *Environmental Protection Act 1986*;

**‘AHD’** means the Australian height datum;

**‘Annual Period’** means the inclusive period from 1 July until 30 June in the following year;

**‘Approved’ or ‘approval’** means approved or approval in writing from time to time

**AS 3580.1.1’** means the Australian Standard AS 3580.1.1 *Methods for sampling and analysis of ambient air – Guide to siting air monitoring equipment*;

**‘AS 3580.9.6’** means the Australian Standard AS 3580.9.6 *Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM<sub>10</sub> high volume sampler with size - selective inlet – Gravimetric method*;

**‘AS 3580.10.1’** means the Australian Standard AS 3580.10.1 *Methods for sampling and*

*analysis of ambient air Determination of particulate matter - Deposited matter - Gravimetric method;*

**‘AS 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/NZS 2031’** means the Australian Standard AS/NZS 2031 *Selection of containers and preservation of water samples for microbiological analysis;*

**‘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 5667.4’** means the Australian Standard AS/NZS 5667.4 *Water Quality – Sampling – Guidance on sampling from lakes, natural and man-made;*

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

**‘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;*

**‘AS/NZS 5667.12’** means the Australian Standard AS/NZS 5667.12 *Water Quality – Sampling – Guidance on sampling of bottom sediments;*

**‘averaging period’** means the time over which a limit is measured, or a monitoring result is obtained;

**‘Cataby NHMC’** means non-magnetic heavy mineral concentrate (NHMC) sourced from the Cataby Mineral Sands Mine, and includes NHMC by-product from the North Capel Mineral Separation Plant

**‘CEMS’** means continuous emissions monitoring system;

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

**‘CEO’** for the purpose of correspondence means;

Chief Executive Officer  
Department Administering the *Environmental Protection Act 1986*  
Locked Bag 10  
JOONDALUP DC WA 6027  
Telephone: (08) 6367 7000  
Facsimile: (08) 6367 7001  
Email: [info@dwer.wa.gov.au](mailto:info@dwer.wa.gov.au)

**‘Discharge’** has the same meaning given to that term under the EP Act

**‘DWER’** means Department of Water and Environmental Regulation;

**‘Emission’** has the same meaning given to that term under the EP Act;

**‘Environmental Harm’** has the same meaning given to that term under the EP Act;

**‘Extreme rainfall event’** means an event having rainfall equivalent to a 1% annual exceedance probability (AEP) over a period of at least 3 hours as defined by the Bureau of Meteorology’s 2016 Rainfall IFD (Intensity– Frequency–Duration) System;

**‘Freeboard’** means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;

**‘Implementation Agreement or Decision’** has the same meaning given to that term under the EP Act;

**‘Inert Waste Type 1’** has the meaning defined in Landfill Definitions;

**‘Inert Waste Type 2’** has the meaning defined in Landfill Definitions;

**‘Landfill Definitions’** means the document titled “Landfill Waste Classification and Waste Definition 1996” published by the Chief Executive Officer of the Department of Environment as amended from time to time;

**‘Licence’** means this licence numbered L4247/1991/13 and issued under the Act;

**‘Licence holder’** means the occupier of the premises, being the person to whom this licence has been granted, as identified on the front of this licence;

**‘Material Environmental Harm’** has the same meaning given to that term under the EP Act;

**‘mbgl’** means metres below ground level;

**‘MSP’** means Mineral Separation Plant

**‘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<sub>10</sub>’** means particles with an aerodynamic diameter of less or equal to 10 µm;

**‘Pollution’** has the same meaning given to that term under the EP Act;

**‘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;

**‘RL’** means Reduced Level and refers to height or elevation above the point adopted as the site datum for the purpose of establishing levels

**‘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 July to 31 December and 1 January to 30 June in the following year;

**‘Serious Environmental Harm’** has the same meaning given to that term under the EP Act;

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

**‘TSF’** means Tailings Storage Facility

**‘Unreasonable Emission’** has the same meaning given to that term under the EP Act;

**‘Waste’** has the same meaning given to that term under the EP Act

**‘µS/cm’** means microsiemens per centimeter

## 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 in this licence:
  - (i) if dated, refers to that particular version; and
  - (ii) if not dated, refers to the latest version and therefore may be subject to change over time;
- (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

### Infrastructure and equipment

1. The licence holder must ensure the infrastructure and equipment specified in Column 1 of Table 1 is maintained in good working order and operated in accordance with the requirements specified in Column 2 of Table 1

**Table 1 Infrastructure and equipment controls table**

Column 1	Column 2
Infrastructure/ Equipment	Description and operational requirements
Barite wet circuit	<ul style="list-style-type: none"><li>Design capacity: 20.8 tonnes per hour</li></ul>
Cataby NHMC storage pad	<ul style="list-style-type: none"><li>Constructed with compacted soil or similar;</li><li>Pad must be sloped to allow the collection of surface water runoff</li></ul>
JA-HMC storage pad	<ul style="list-style-type: none"><li>Lined with HDPE liner</li><li>Leachate collected and pumped to lined TSFs</li></ul>
Collector storage and mixing area	<ul style="list-style-type: none"><li>None specified</li></ul>
MSP Plant 1	<ul style="list-style-type: none"><li>005 Dryer equipped with baghouse dust collector</li><li>001 Dryer equipped with cyclone dust collector</li></ul>

Column 1	Column 2
Infrastructure/ Equipment	Description and operational requirements
MSP Plant 2	<ul style="list-style-type: none"> <li>• 206 Dryer equipped with baghouse and cyclone dust collector</li> <li>• 207 Dryer equipped with cyclone dust collector</li> </ul>
MSP Washplant	<ul style="list-style-type: none"> <li>• 605 Dryer equipped with cyclone dust collector</li> <li>• Continuous particulate monitor on 605 Dryer</li> <li>• Bunded/sleeved pipeline to lined TSFs; automatic pump cut offs when leak is detected</li> </ul>
ZFP	<ul style="list-style-type: none"> <li>• ZFP Stack equipped with wet scrubber</li> <li>• ZFP Dryer equipped with baghouse and cyclone dust collector</li> <li>• Continuous particulate monitor on ZFP Dryer</li> </ul> <p><u>ZFP pipeline</u></p> <ul style="list-style-type: none"> <li>• Bunded/sleeved pipeline to lined TSFs; automatic pump cut offs when leak is detected</li> <li>• inspected and maintained regularly including condition of sleeves and leak detection boxes;</li> </ul>
Process water dams	Lined with HDPE liner with the exception of slimes settling dams.
Pipeline delivering waste streams to TSFs (Figure 7)	<ul style="list-style-type: none"> <li>• Pipeline sleeved with HDPE, and equipped with inspection boxes every 100 m for spill recovery</li> </ul>
TSFs (Figure 8)	<ul style="list-style-type: none"> <li>• None specified<sup>1</sup></li> </ul>

Note 1: Emissions and discharges covered under Ministerial Statement 88

## Emissions (general)

2. The licence holder must not cause any emissions except for specified emissions and general emissions described in Column 1 of Table 2, and subject to the exclusions, limitations or requirements specified in Column 2 of Table 2.

**Table 2 Authorised emissions table**

Column 1	Column 2
Emissions type	Exclusions/Limitations/Requirements
<b>Specified emissions</b>	
Washplant wastewater (from washing HMC)	<p>Must be:</p> <ul style="list-style-type: none"> <li>• Recycled within the MSP process; or</li> <li>• Discharged into the existing TSFs at the adjacent synthetic rutile plant site (JA-HMC)</li> </ul>
Process water bleed from flotation circuit (Stream 17)	<ul style="list-style-type: none"> <li>• Must be discharged to existing MSP process water dams</li> </ul>
Barite by-product (Stream 13)	<ul style="list-style-type: none"> <li>• Storage permitted within the existing tails stockpile area, pending future processing or off-site disposal</li> </ul>



Column 1	Column 2
Emissions type	Exclusions/Limitations/Requirements
<b>Specified emissions</b>	
Used acid (neutralised) from the ZFP	<ul style="list-style-type: none"> <li>Discharged into TSFs (Figure 8)</li> <li>Recovered process water recycled within ZFP</li> </ul>
Particulates from MSP Plant 1	<ul style="list-style-type: none"> <li>001 Dyer and 005 Dryer for controlled release of gases formed from the drying of wet mineral (primarily steam) during normal operating conditions</li> <li>From 005 Dryer (0.44 m diameter) and 001 Dryer (0.92 m diameter) (both 28 m above ground level) as shown in Figure 4</li> </ul>
Particulates from MSP Plant 2	<ul style="list-style-type: none"> <li>206 Dryer and 207 Dryer for controlled release of gases formed from the drying of wet mineral (primarily steam) during normal operating conditions</li> <li>From 206 Dryer (28.7 m above ground level, 0.485 m diameter) and 207 Dryer (28 m above ground level, 0.8 m diameter) as shown in Figure 4</li> </ul>
Particulates from MSP Washplant	<ul style="list-style-type: none"> <li>Dryer 605 for controlled release of gases formed from the drying of wet mineral (primarily steam) during normal operating conditions</li> <li>From 605 Dryer (28 m above ground level, 1.44 m diameter) as shown in Figure 4</li> </ul>
Particulates from ZFP	<ul style="list-style-type: none"> <li>ZFP Dryer for controlled release of gases formed from the drying of wet mineral (primarily steam) during normal operating conditions</li> <li>From ZFP Dryer (32 m above ground level, 1.2 m diameter) as shown in Figure 4</li> </ul>
SOx as Sulphuric acid mist from ZFP	<ul style="list-style-type: none"> <li>For controlled release of scrubbed waste gases from the ZFP leach circuit during normal operating conditions</li> <li>From ZFP Stack (19 m above ground level, 1.2 m diameter) as shown in Figure 4</li> </ul>
<b>General emissions</b>	
Emissions which arise from the Primary Activities set out in Schedule 1	<p>Emissions excluded from General Emissions are:</p> <ul style="list-style-type: none"> <li>Unreasonable Emissions; or</li> <li>Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or</li> <li>Discharges of Waste in circumstances likely to cause Pollution; or</li> <li>Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or</li> <li>Emissions or Discharges which do not comply with an Approved Policy, a prescribed standard, or the conditions in an Implementation Agreement or Decision; or</li> <li>Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</li> </ul>

## Air pollution control conditions

### Dust general requirement

- The licence holder shall take all reasonable and practicable measures to prevent the generation of visible dust across the boundary of the premises from all material handling operations, open areas, transport activities, storage sheds, plants and associated equipment.

4. The licence holder shall employ routine maintenance and housekeeping practices to ensure that there is no accumulation of waste materials in or around the premises so that no visible dust crosses the boundary of the premises
5. The licence holder shall use appropriate dust suppression techniques to prevent visible dust lift-off from non-working faces and working faces of stockpiles

### **Sulphuric acid vapour**

6. The licence holder shall ensure that the installed water spray scrubber system in the zircon finishing plant is maintained to prevent the emission of sulphuric acid vapour

### **Air quality and emissions monitoring**

7. The licence holder must monitor the air for concentrations of the parameter listed in Table 3
  - (a) at the corresponding monitoring location;
  - (b) in the corresponding unit;
  - (c) at no less than the corresponding frequency;
  - (d) for the corresponding averaging period; and
  - (e) using the corresponding method,
 as set out in Table 3

**Table 3 Monitoring of ambient concentrations**

Parameter	Monitoring location	Unit	Frequency	Method
TSP (Dust gauge)	Figure 6	µg/m <sup>3</sup>	Continuous, collected monthly	AS/NZS 3580.10.1 NATA accredited

8. The licence holder must monitor emissions in accordance with the requirements specified in Table 4 and record the results of all such monitoring

**Table 4 Emissions and discharge monitoring**

Discharge point	Parameter	Frequency	Unit	Method
001 Dryer, 005 Dryer, 206 Dryer, 207 Dryer, 605 Dryer, ZFP Dryer, ZFP Stack	Moisture content	quarterly	%	Stack testing conducted by independent, external contractor adhering to relevant USEPA sampling and equipment methodologies
	Volume flow		dscm/min	
	Velocity		m/sec	
	Temperature		°C	
	Particulates*	annually	mg/dscm	
	Trace metals*			
	Particle sizing*			
ZFP Stack	SO <sub>x</sub> as sulphuric acid mist	quarterly	mg/dscm	

\*excluding ZFP Stack

9. The licence holder must implement the controls specified in Column 1 of Table 5 in accordance with the actions/requirements specified in Column 2 of Table 5

**Table 5 Fugitive dust controls table**

Column 1	Column 2
Control	Actions/requirements
Water as a dust suppressant on active stockpiles	<ul style="list-style-type: none"><li>• Must operate the following when there are discernible levels of dust lift-off from HMC stockpiles:<ul style="list-style-type: none"><li>(i) Sprinklers/sprays where mains water is available; and</li><li>(ii) Water cart where mains water is not available;</li></ul></li><li>• Must apply proactively subject to weather forecasting over a 24-hour period.</li></ul>
Dust suppressant (other than water)	<ul style="list-style-type: none"><li>• Must apply proactively to stockpiles;</li><li>• Must apply proactively, subject to visual inspection and weather forecasting over a 24-hour period.</li></ul>

### Water pollution control conditions

#### Discharges of contaminated water

10. The licence holder shall ensure that any discharge of contaminated water from the premises, other than directly to sewer or septic systems shall be via fuel/oil traps and silt traps

#### Liquid chemical storage

11. The licence holder shall store environmentally hazardous chemicals including fuel, oil or other hydrocarbons where the total volume of each substance stored on the premises exceeds 1000 litres, within low permeability ( $10^{-9}$  metres per second or less) compound(s) designed to contain not less than 110% of the volume of the largest storage vessel or inter-connected system, and at least 25% of the total volume of substances stored in the compound
12. The licence holder shall ensure that the compound(s) described in part (a) of this condition
- be graded or include a sump to allow recovery of liquid;
  - be chemically resistant to the substances stored;
  - include valves, pumps and meters associated with transfer operations wherever practical. Otherwise the equipment shall be adequately protected (eg. bollards) and contained in an area designed to permit recovery of chemicals released following accidents or vandalism
  - be designed such that jetting from any storage vessel or fitting will be captured within the bunded area [see for example Australian Standard 1940-2004 Section 5.8.3 (h)]
  - be designed such that chemicals which may react dangerously if they come into contact, are in separate bunds in the same compound or in different compounds; and
  - be controlled such that the capacity of the bund is maintained at all times (eg. regular inspection and pumping of trapped uncontaminated rain water)

13. The licence holder shall immediately recover, or remove and dispose of off-site to a licensed landfill, any liquid resulting from spills or leaks of chemicals including fuel, oil or other hydrocarbons, whether inside or outside low permeability compound(s)
14. The licence holder shall keep a record of any incident that included the loss of chemicals including fuel, oil or other hydrocarbons and provide a summary of each incident in the annual report required in condition 23.

### Waste management

15. The licence holder shall maintain protective bunding, skimmers, silt traps, neutralisation pits, fuel and oil traps, drains and sealed collection sumps around the process plant, maintenance workshops, laboratory and wash down bays to enable recovery of spillages and protection of surrounding soils and groundwater.
16. The licence holder shall collect any spillages and waste material, as required by part (a) of this condition, and ensure that this material is either used in on-site processes or stored in a bunded area prior to disposal by export off-site.
17. The licence holder must only dispose waste on the premises if
  - (a) be chemically resistant to the substances stored
  - (b) it is of a type listed in Table 6
  - (c) the quantity is below any quantity limit listed in Table 6;
  - (d) it meets any specification listed in Table 6

**Table 6 Authorised waste types**

Column 1	Column 2	Column 3
Waste type	Quantity limit (t/yr)	Specifications
Soil contaminated with ACM and/or NORM only, generated from decommissioning and/or remediation works on the premises	500 (combined)	<ul style="list-style-type: none"> <li>• Disposal of ACM must be separate to, and not disturb, any previously disposed waste;</li> <li>• ACM must be wrapped or otherwise contained in a manner that prevents asbestos fibres entering the atmosphere during transportation;</li> <li>• Disposal must be by burial within the “Jennings landfill area”, as depicted by the yellow circled area on the Waste Disposal Map in Schedule 1;</li> <li>• ACM must be immediately covered with a minimum 2 m of clean fill following disposal;</li> <li>• Must not be disposed within 2 m of the final landform surface;</li> <li>• Permanent records must be kept of all disposed material, including the nature and amount of material disposed.</li> </ul>

### Water monitoring program and reporting

18. The licence holder shall, at the frequencies stated, take representative water samples from the following monitoring sites (as per Figure 2), and have the samples analysed as set out in Table 7:

**Table 7 Ambient groundwater monitoring**

Monitoring sites	Sampling Frequency	Parameters to be measured
Monitoring bores: B11, B12, B13, B14, B15, B16, B22, B24*, B43, B44, B65, B66, B80*, B81, B82, B83	Quarterly	<u>Groundwater quality:</u> pH, Electrical Conductivity (EC), Total Dissolved Solids (TDS), Standing Water Level (SWL)**; <u>Major ions:</u> Calcium (Ca); Chloride (Cl); potassium (K); magnesium (Mg); Sodium (Na); Ammonium (NH <sub>4</sub> -N), Bicarbonate (HCO <sub>3</sub> ); Sulphate (SO <sub>4</sub> ); Nitrate (NO <sub>3</sub> ) <u>Metals:</u> Boron (B); Cobalt (Co); Iron (Fe); Manganese (Mn);
Monitoring bores: B1, B2, B3, B4(s), B4(D), B5, B6, B7, B8, B9, B18, B19, B20, B21, B23, B25, B26, B27, B28, B29, B30, B31, B34, B35, B36, B37, B38, B39, B40, B41, B42, B45, B46, B47, B48, B49, B50, B51, B52, B53, B58, B59, B60, B61, B62, B63, B64, B67, B68, B69, B84, B85		
Surface water locations: stormwater dams SWD2, SWD3 and SWD4	At least once per year when surface water is present	Hydrocarbon analysis suite

\* background location

\*\* the SWL shall be determined prior to collection of other water samples

19. The licence holder shall collect all water samples in accordance with the relevant part of Australian Standard 5667:1998, or other approved standard.
20. The licence holder shall submit all water samples to a laboratory with current NATA accreditation for the analysis specified and ensure that the samples are analysed in accordance with the current 'Standard Methods for Examination of Water and Wastewater-APHA-AWWA-WEF'.

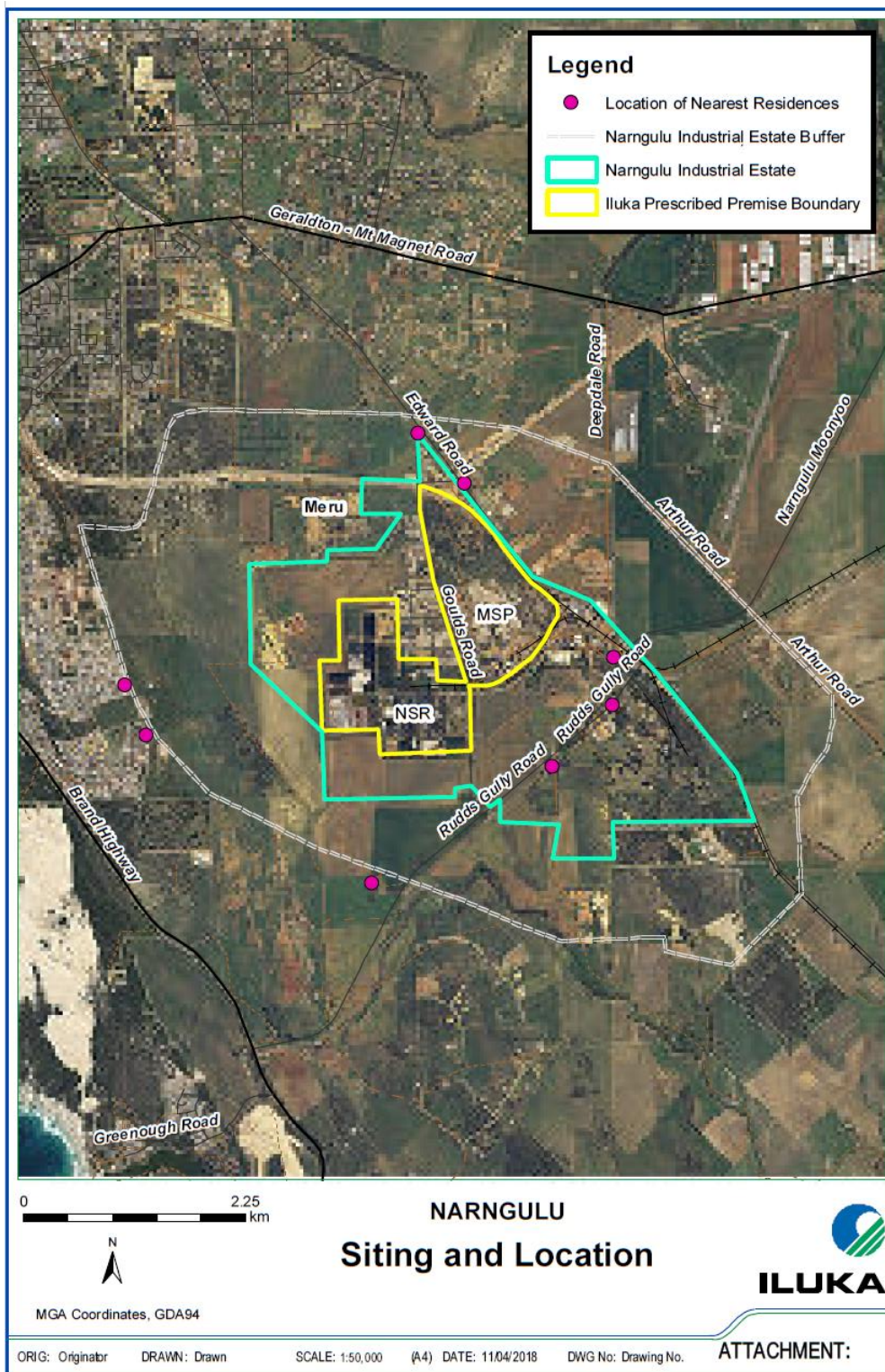
### Records and reporting

21. The licence holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:
  - (a) the name and contact details of the complainant, (if provided);
  - (b) the time and date of the complaint;
  - (c) the complete details of the complaint and any other concerns or other issues raised; and
  - (d) the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint
22. The licence holder must:
  - (a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and

- (b) prepare and submit to the CEO by 15 March each year an Annual Audit Compliance Report in the approved form
- 23.** The licence holder must submit to the CEO by 15 March each year, an Annual Environmental Report containing monitoring data and other collected data required by any condition of this licence from 1 January to 31 December each year.
- 24.** The licence holder must maintain accurate and auditable books including the following records, information, reports, and data required by this licence:
  - (a) the calculation of fees payable in respect of this licence;
  - (b) any maintenance of infrastructure that is performed in the course of complying with condition 1 of this licence;
  - (c) monitoring programmes undertaken in accordance with conditions 7, 8 and 18 of this licence; and
  - (d) complaints received under condition 21 of this licence.
- 25.** The books specified under condition 24 must:
  - (a) be legible;
  - (b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;
  - (c) be retained by the licence holder for the duration of the licence; and
  - (d) be available to be produced to an inspector or the CEO as required.



## Schedule 1: Maps and premises



**Figure 1** The premises are shown in the map. The yellow line depicts the premises boundary.



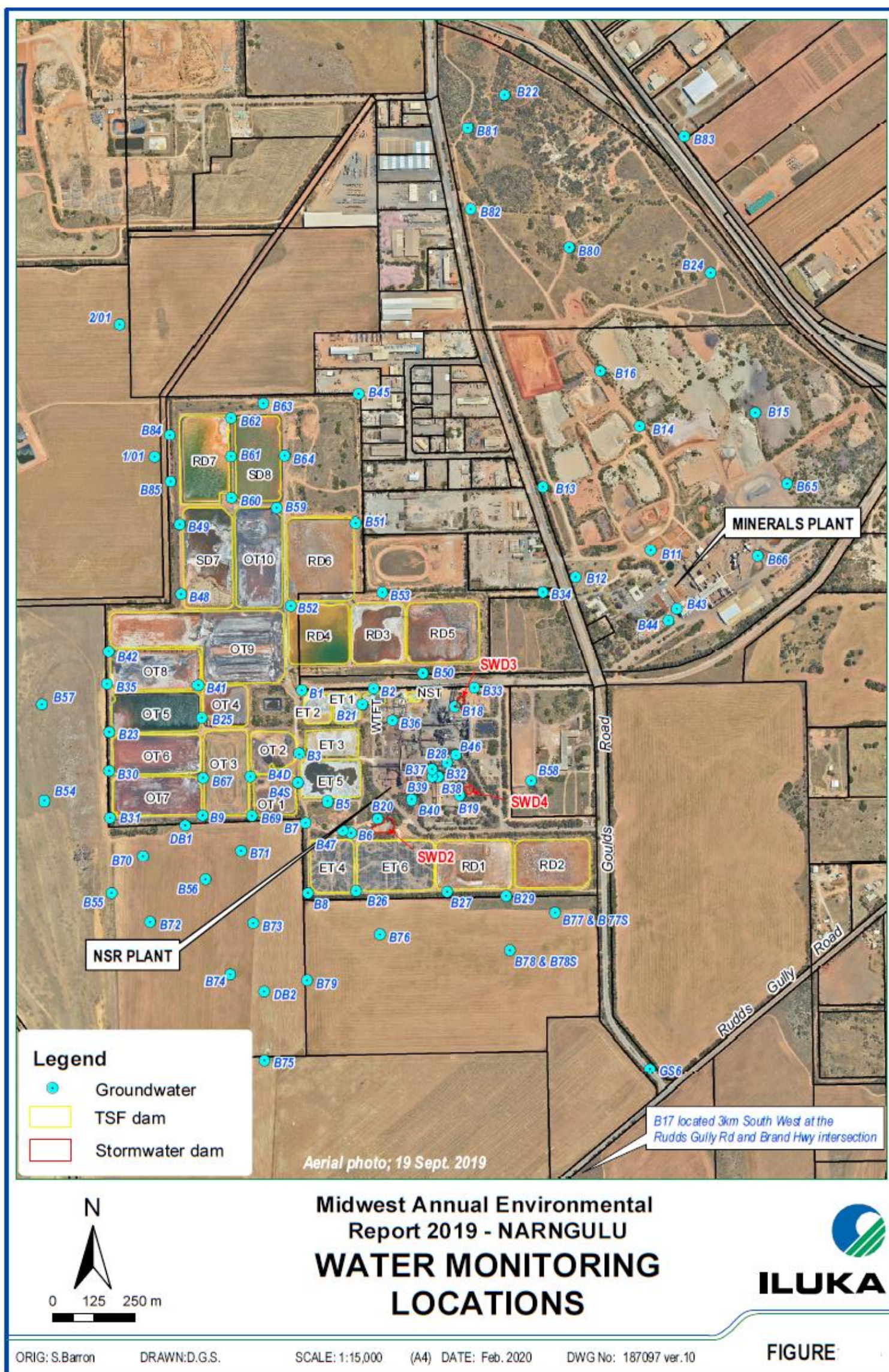
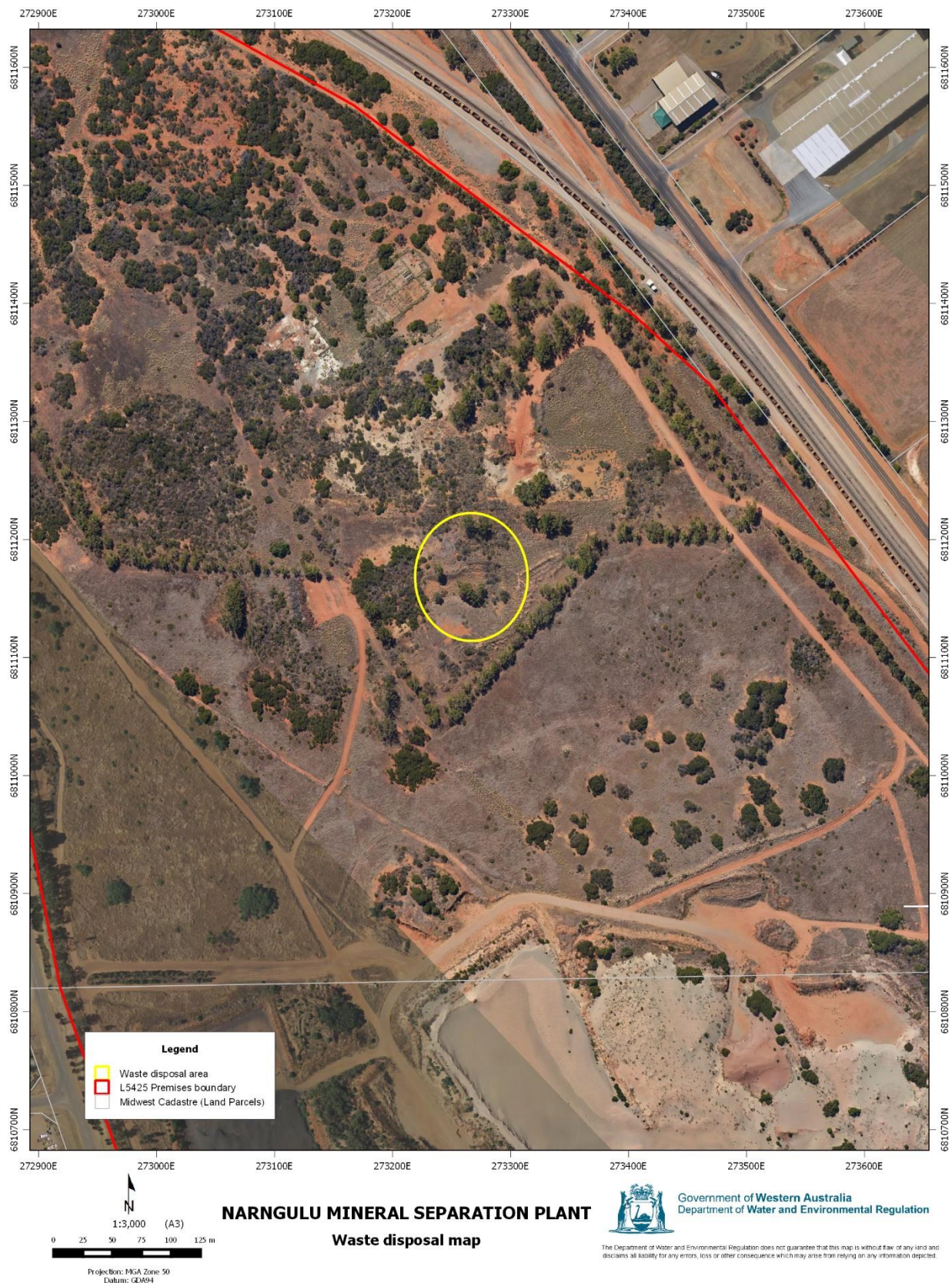


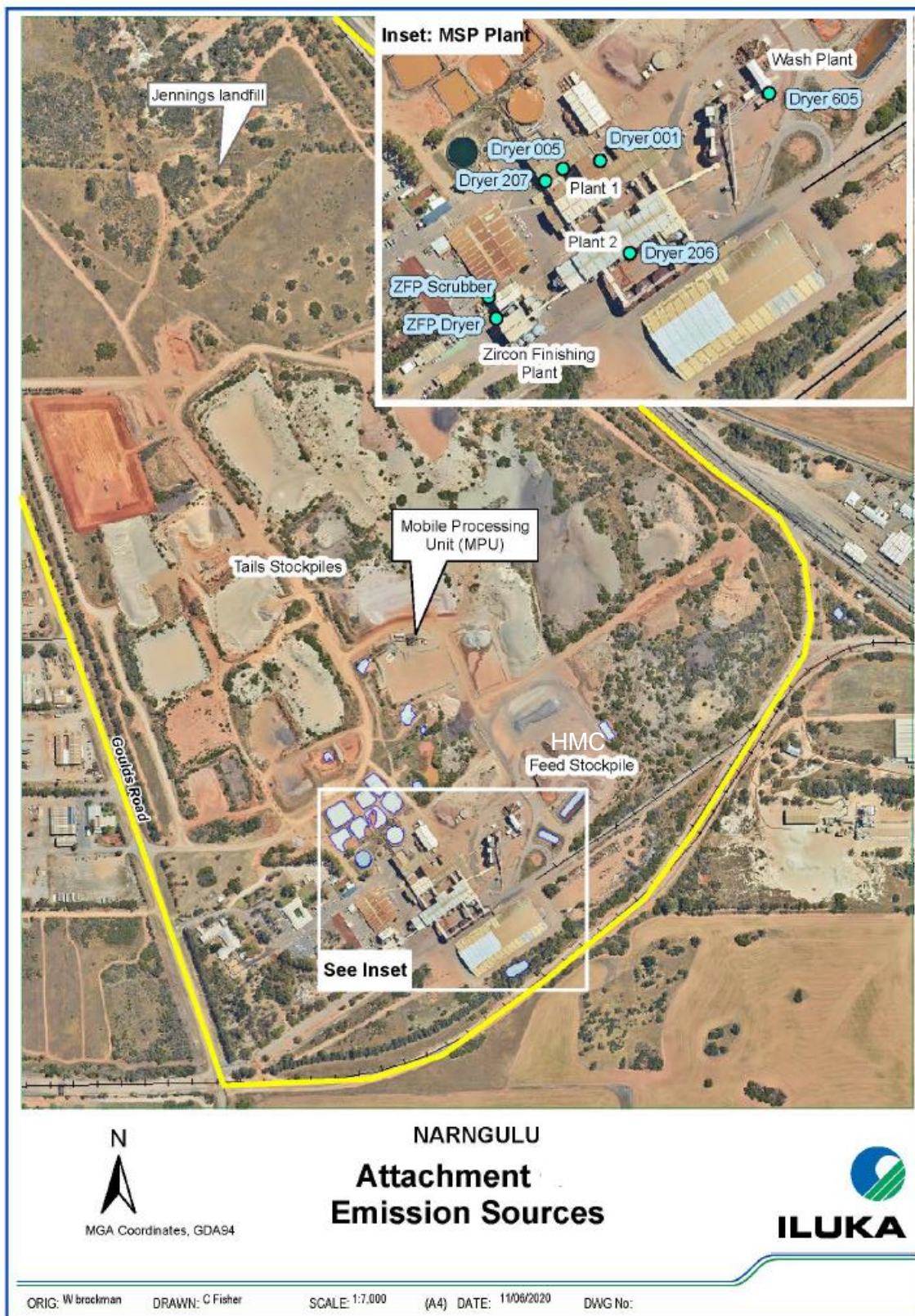
Figure 2 Water monitoring sites





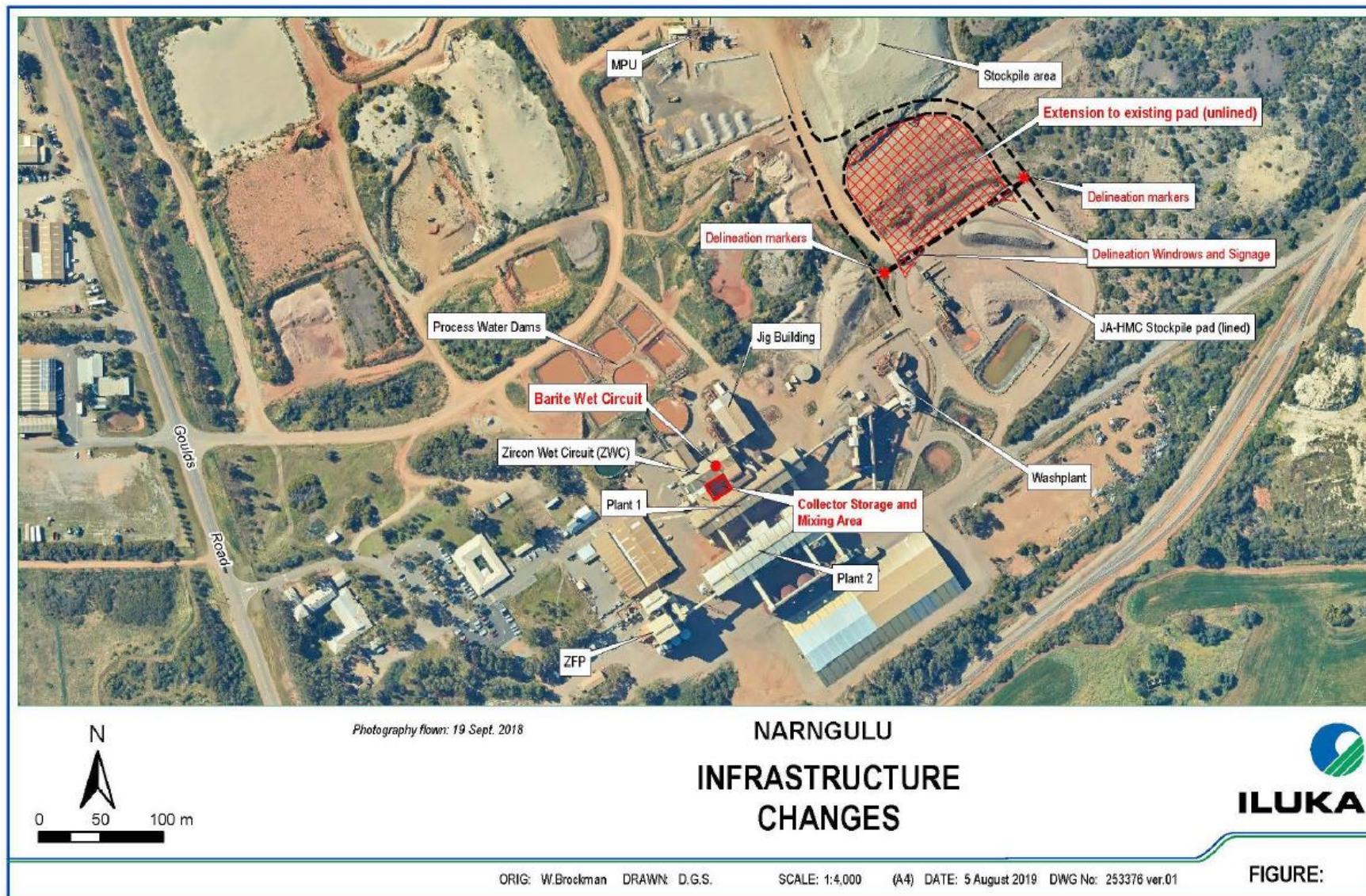
**Figure 3 Waste disposal map**





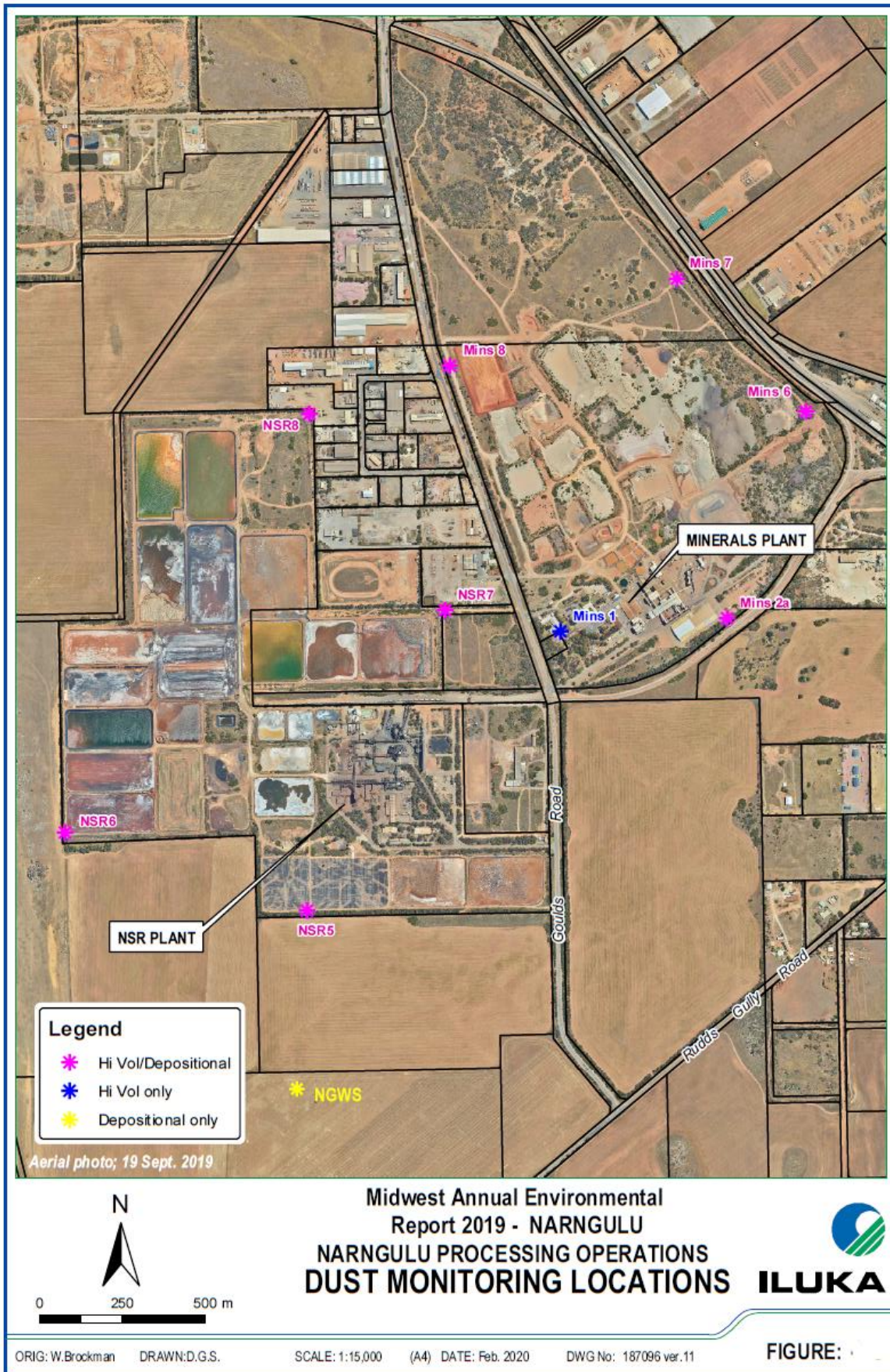
**Figure 4 Point source emissions**





**Figure 5 Location of infrastructure of the MSP**





**Figure 6 Dust monitoring locations**





**Figure 7 Pipeline delivering waste streams to TSFs**





**Figure 8 Tailings storage facilities**

## Schedule 2: Prescribed premises category and boundary

The premises prescribed categories under schedule 1 of *Environmental Protection Regulation 1987*

### Prescribed premises categories

Category number	Category Description	Approved premises production or design capacity
8	Mineral sands mining or processing: premises on which mineral sands ore is mined, screened, separated or otherwise processed.	1,200,000 tonnes per annual period

### Premises boundary coordinates

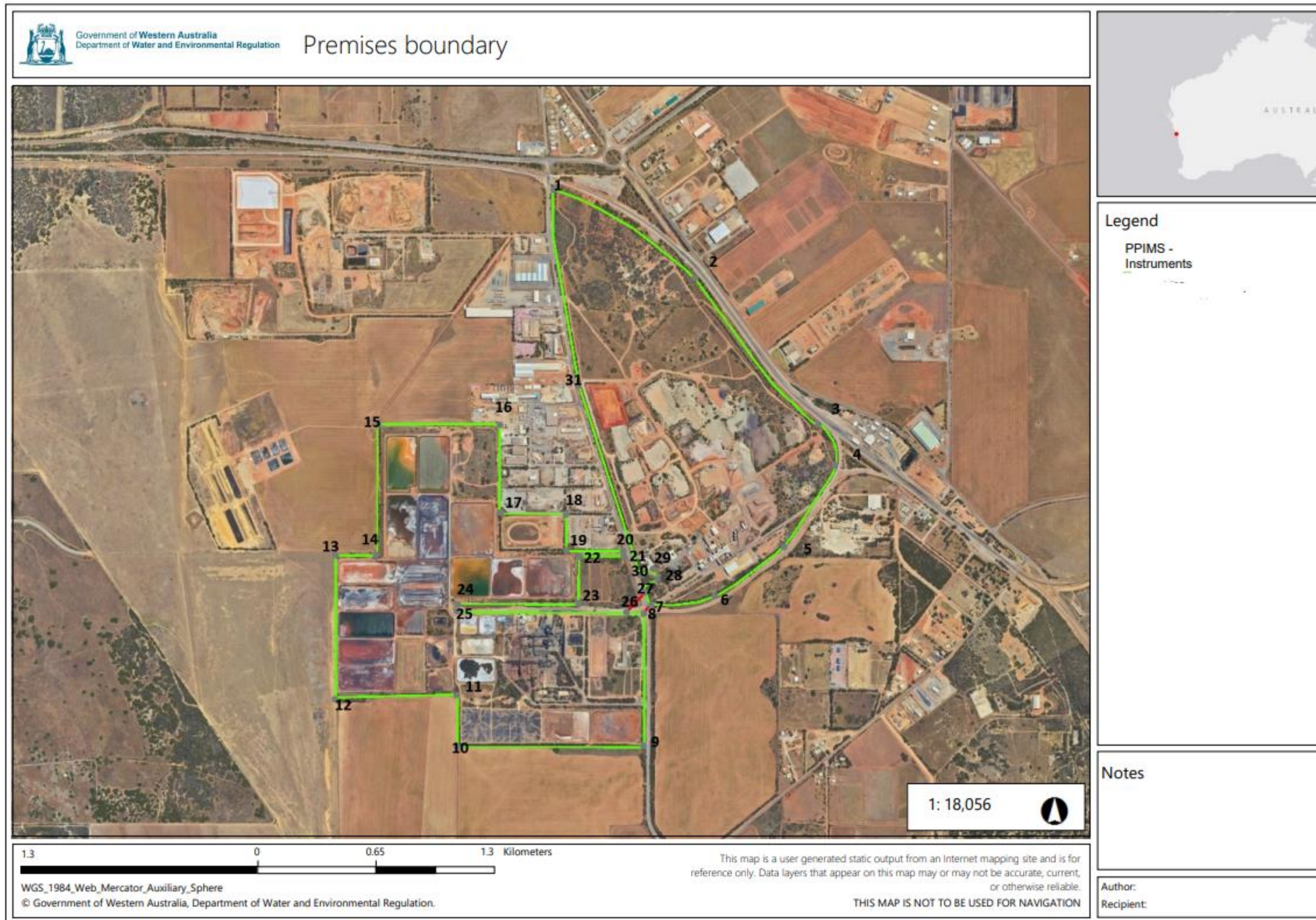
Premises boundary as set out in Table 5 and Figure 9 below.

**Table 8 Premises boundary coordinates (GDA94)**

Point	Lat °S	Lon °E
1	28.80182	114.67192
2	28.80562	114.67883
3	28.81189	114.68488
4	28.81366	114.68570
5	28.81716	114.68321
6	28.81926	114.67982
7	28.81968	114.67669
8	28.82002	114.67634
9	28.82569	114.67632
10	28.82575	114.66716
11	28.82351	114.66718
12	28.82370	114.66119
13	28.81752	114.66124
14	28.81752	114.66321
15	28.81189	114.66332
16	28.81191	114.66928

Point	Lat °S	Lon °E
17	28.81569	114.66931
18	28.81577	114.67252
19	28.81729	114.67255
20	28.81735	114.67534
21	28.81757	114.67538
22	28.81757	114.67321
23	28.81957	114.67312
24	28.81964	114.66722
25	28.81992	114.66718
26	28.81996	114.67549
27	28.81911	114.67639
28	28.81853	114.67701
29	28.81810	114.67679
30	28.81836	114.67617
31	28.81024	114.67312





**Figure 9 Premises boundary shown in green. Red line indicates where the transfer pipeline is located which includes public road.**