



<b>Works approval number</b>	W6358/2020/1
<b>Works approval holder</b>	Australian Aboriginal Mining Corporation
<b>ACN</b>	76 126 497 434
<b>Registered business address</b>	Level 9, 182 St Georges Tce Perth, Western Australia 6000
<b>DWER file number</b>	DER2019/000649
<b>Duration</b>	27/07/2020 to 26/07/2023
<b>Date of issue</b>	24/07/2020
<b>Premises details</b>	First Iron Project Tenement M47/1424 As defined by the coordinates in Schedule 2

<b>Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)</b>	<b>Assessed production / design capacity</b>
Category 5 Processing or beneficiation of metallic or non-metallic ore: premises on which – (a) Metallic or non-metallic ore is crushed, ground, milled or otherwise processed; or (b) tailings from metallic or non-metallic ore are reprocessed; or (c) tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam	5 million tonnes per annum
Category 85 Sewage facility: premises – (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters	30m <sup>3</sup> per day

This works approval is granted to the works approval holder, subject to the attached conditions, on 24 July 2020, by:

**Alana Kidd**

**Manager – Resource Industries**

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

## Interpretation

In this works approval:

- (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 works approval:
  - (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 works approval requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this works approval.

# Works approval conditions

The works approval holder must ensure that the following conditions are complied with:

## Construction phase

### Infrastructure and equipment

1. The works approval holder must:
  - (a) construct and/or install the infrastructure and/or equipment;
  - (b) in accordance with the corresponding design and construction / installation requirements; and
  - (c) at the corresponding infrastructure location, as set out in Table 1.

**Table 1: Design and construction / installation requirements**

Infrastructure	Design and construction / installation requirements	Infrastructure location
ORE HANDLING PLANT		
Compacted earth pad	1. Production/design capacity of up to 5 Mtpa; 2. Dust control fittings including: a) Sprinklers on crushers and screens; b) Shields/covers on conveyors and transfer points.	Schedule 1 – Premises Map
ROM Bin		
Vibrating grizzly feeder		
Primary crusher		
Conveyors		
Primary screen – double deck banana screen		
Secondary crusher		
Tertiary crusher		
37m radial stacker		
WASTE WATER TREATMENT PLANT		
External balance tank installed on impermeable concrete pad	1. Designed and constructed to treat up to 30m <sup>3</sup> per day of wastewater to the following standard:	Schedule 1 – Premises map; WWTP layout map
Balance pump		
Primary 1 tank		
Primary 2 tank		

Infrastructure	Design and construction / installation requirements		Infrastructure location	
Aeration tank with media	Parameter	Target concentration		
Blower	Biochemical Oxygen Demand (BOD)	<20mg/L		
Clarifier, including airlift Return Activated Sludge (RAS)	Total suspended solids (TSS)	<30mg/L		
Disinfection chamber - including tablet chlorinator	Total nitrogen (TN)	<30mg/L		
	Total phosphorus (TP)	<8mg/L		
Pump out chamber	pH	6.5 to 8.5		
Sludge tank	E.coli	<1,000 cfu/100ml		
Control panel	Residual chlorine	0.2 – 2.0 mg/L		
Audible and visual pump fault alarm	Total dissolved solids	<600mg/L		
Irrigation pump	2. Alarm system to alert operator upon: a) Pump/s failure; b) High tank levels.			
Discharge flow meter	3. Treated wastewater pipeline connected to sprayfield			
Treated wastewater pipeline				
WASTE WATER TREATMENT PLANT – SPRAY IRRIGATION FIELD				
Spray irrigation field	1. Spray irrigation field size of 0.82 hectares; 2. Above ground hammer type sprinklers; 3. Individual branch line flush valves; 4. Automated control from WWTP irrigation pump; 5. Perimeter fence installed to allow a 5m spray drift buffer; 6. Safety signage displayed on perimeter fencing.			Schedule 1 – Premises map; WWTP layout map
1200 mm high two-strand steel wire perimeter fence				

## Compliance reporting

2. The works approval holder must within 60 calendar days of an item of infrastructure or equipment required by condition 1 being constructed and/or installed:
- (a) undertake an audit of their compliance with the requirements of condition(s) 1; and
  - (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.

3. The Environmental Compliance Report required by condition 2, must include as a minimum the following:
  - (a) certification by a suitably qualified and experienced engineer that the items of infrastructure or component(s) thereof, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1;
  - (b) as constructed layout plan for the OHP and WWTP infrastructure specified in condition 1; and
  - (c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

## Environmental commissioning phase – Waste Water Treatment Plant

### Environmental commissioning requirements - Waste Water Treatment Plant

4. The works approval holder may only commence environmental commissioning of the WWTP listed in condition 1 once the Environmental Compliance Report has been submitted for the WWTP in accordance with condition 2 of this works approval.
5. Any environmental commissioning activities undertaken for the WWTP listed in condition 1 may only be carried out:
  - (a) in accordance with the corresponding commissioning requirements; and
  - (b) for the corresponding authorised commissioning duration,
 as detailed in Table 2.

**Table 2: Environmental commissioning requirements – Waste Water Treatment Plant**

Infrastructure	Commissioning requirements	Authorised commissioning duration
WWTP	Only irrigate treated wastewater from the WWTP to the designated irrigation area, as specified by Schedule 1, Figure 1	For a period not exceeding 90 calendar days in aggregate.

### Monitoring during environmental commissioning - Waste Water Treatment Plant

6. The works approval holder must monitor emissions during environmental commissioning in accordance with Table 3.
7. The works approval holder must record the results of all monitoring activity required by condition 6.

**Table 3: WWTP emissions monitoring during commissioning**

Discharge point	Monitoring location	Parameter	Frequency	Averaging period	Unit	Method
WWTP sprayfield - as depicted in Schedule 1, Figure 2 WWTP layout map	Pipeline leading to the WWTP sprayfield	Flow volume to sprayfield	Continuous	24 hours	kL/day	-
		5-Day Biochemical Oxygen Demand (BOD <sub>5</sub> )	Fortnightly	Spot sample	mg/L	AS/NZS 5667.10 - 1998  Measurement of pH with a serviced and calibrated field water quality meter is permitted.  Measurement of residual free chlorine with field based equipment is permitted.  For all other parameters samples must be submitted to and tested by a laboratory with NATA accreditation.
		Total Suspended Solids (TSS)	Fortnightly		mg/L	
		Total Nitrogen (TN)	Fortnightly		mg/L	
		Total Phosphorus (TP)	Fortnightly		mg/L	
		<i>E.coli</i>	Fortnightly		cfu/100ml	
		Residual Free Chlorine	Daily		mg/L	
		pH	Daily		N/A	
		Total dissolved solids (TDS)	Fortnightly		mg/L	

## Environmental commissioning reporting - Waste Water Treatment Plant

8. The Works Approval holder must submit to the CEO by no later than 30 days after the end of the commissioning period during which irrigation to land has occurred, a report for the conditions listed in Table 4, and which provides information in accordance with the corresponding requirement set out in Table 4.

**Table 4: WWTP commissioning report**

Conditions	Requirement
4, 5, 6 and 7	<ul style="list-style-type: none"><li>(a) Statement on the period of commissioning;</li><li>(b) Volume (in kL) of wastewater applied daily to the irrigation area, and fortnightly cumulative volumes presented in table format;</li><li>(c) Treated wastewater monitoring data in tabulated and graphical form including the sampling date;</li><li>(d) An assessment of the treated wastewater monitoring data against the design target concentrations;</li><li>(e) Copies of laboratory analysis reports.</li></ul>

## Time limited operations phase

### Commencement and duration

9. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 1:
- (a) where an item of infrastructure is not authorised to undertake environmental commissioning, the Environmental Compliance Report as required by condition 2 has been submitted by the works approval holder for that item of infrastructure; and
  - (b) where an item of infrastructure is authorised to undertake environmental commissioning under condition 4, the Environmental Commissioning Report for that item of infrastructure as required by condition 8 has been submitted by the works approval holder.
10. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 1:
- (a) for a period not exceeding 90 calendar days from the day the works approval holder meets the requirements of condition 9 for that item of infrastructure.

### Time limited operations requirements

11. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 5 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 5.

**Table 5: Infrastructure and equipment requirements during time limited operations**

	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	Ore Handling Plant (OHP)	<ul style="list-style-type: none"> <li>Record volumes of ore produced during time limited operation</li> <li>Operate and maintain sprinkler systems on crushing and screening plant</li> <li>Maintain shields and covers on conveyors and transfer points</li> <li>Operate water trucks to manage dust emissions from the ore stockpile, hardstand and bare areas.</li> </ul>	Figure 1 in Schedule 1
2.	WWTP	<ul style="list-style-type: none"> <li>Maintain the WWTP infrastructure in good working order.</li> <li>Record volumes of treated wastewater produced during time limited operations discharged to the irrigation field</li> <li>Maintain even distribution of treated wastewater discharge in the irrigation field so as there is no visible runoff outside the irrigation field.</li> <li>Weekly inspection of pipelines to ensure pipeline integrity</li> </ul>	Figure 2 in Schedule 1

### Monitoring during time limited operations

12. The works approval holder must monitor treated wastewater emissions during time limited operations in accordance with Table 6.
13. The works approval holder must record the results of all monitoring activity required by conditions 11 and 12. Within 30 days of the end of the time limited operations period, the works approval holder shall submit a report to the CEO detailing the monitoring records.



**Table 6: WWTP emissions monitoring during time limited operations**

Discharge point	Monitoring location	Parameter	Frequency	Averaging period	Unit	Method
WWTP sprayfield - as depicted in Schedule 1, Figure 2 WWTP layout map	Pipeline leading to the WWTP sprayfield	Flow volume to sprayfield	Continuous	24 hours	kL/day	-
		5-Day Biochemical Oxygen Demand (BOD <sub>5</sub> )	Monthly	Spot sample	mg/L	AS/NZS 5667.10 - 1998  Measurement of pH with a serviced and calibrated field water quality meter is permitted.  Measurement of residual free chlorine with field based equipment is permitted.  For all other parameters samples must be submitted to and tested by a laboratory with NATA accreditation.
		Total Suspended Solids (TSS)	Monthly		mg/L	
		Total Nitrogen (TN)	Monthly		mg/L	
		Total Phosphorus (TP)	Monthly		mg/L	
		<i>E.coli</i>	Monthly		cfu/100ml	
		Residual Free Chlorine	Daily		mg/L	
		pH	Daily		N/A	
		Total dissolved solids (TDS)	Monthly		mg/L	

## Records and reporting

- 14.** The works approval holder must record the following information in relation to complaints received by the works approval 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 works approval holder to investigate or respond to any complaint.
- 15.** The works approval holder must maintain accurate and auditable books including the following records, information, reports, and data required by this works approval:

  - (a) the works conducted in accordance with condition 1;
  - (b) monitoring programmes undertaken in accordance with condition 6 and condition 12; and
  - (c) complaints received under condition 14.
- 16.** The books specified under condition 15 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 works approval holder for the duration of the works approval; and
  - (d) be available to be produced to an inspector or the CEO as required.

## General

- 17.** The licence holder shall ensure any sludge removed from the WWTP is disposed of in accordance with the Western Australian guidelines for biosolids management, Department of Environment and Conservation (February 2012).

## Definitions

In this works approval, the terms in Table 7 have the meanings defined.

**Table 7: Definitions**

Term	Definition
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V Division 3 of the EP Act.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
environmental commissioning	means the sequence of activities to be undertaken to test equipment integrity and operation, or to determine the environmental performance, of equipment and infrastructure to establish or test a steady state operation and confirm design specifications.
Environmental Commissioning Report	means a report on any commissioning activities that have taken place and a demonstration that they have concluded, with focus on emissions and discharges, waste containment, and other environmental factors.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been constructed and/or installed in accordance with the works approval.
EP Act	<i>Environmental Protection Act 1986</i> (WA).
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA).
Mtpa	Million tonnes per annum
OHP	Ore Handling Plant
premises	the premises to which this works approval applies, as specified at the front of this works approval and as shown on the premises map (Figure 1) in Schedule 1 to this works approval.

Term	Definition
prescribed premises	has the same meaning given to that term under the EP Act.
time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
waste	has the same meaning given to that term under the EP Act.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.
WWTP	Waste Water Treatment Plant

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**END OF CONDITIONS**



## Schedule 1: Maps

### Premises map

The boundary of the prescribed premises and the proposed location of the OHP and WWTP is shown in the map below.

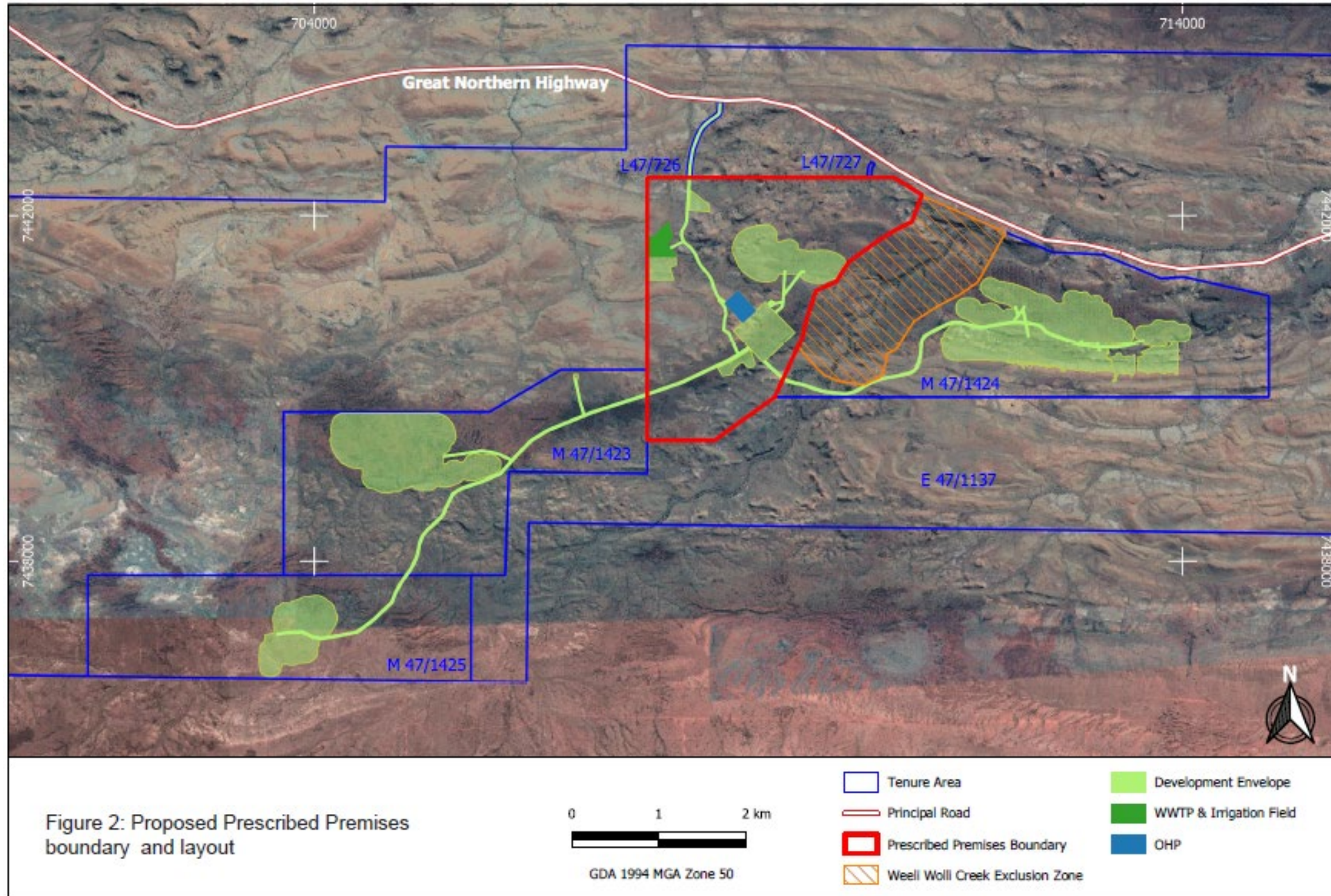


Figure 1: Map of the boundary of the prescribed premises and proposed location of the OHP and WWTP



## WWTP layout

The layout of the WWTP and sprayfield is shown in Figure 2 below.

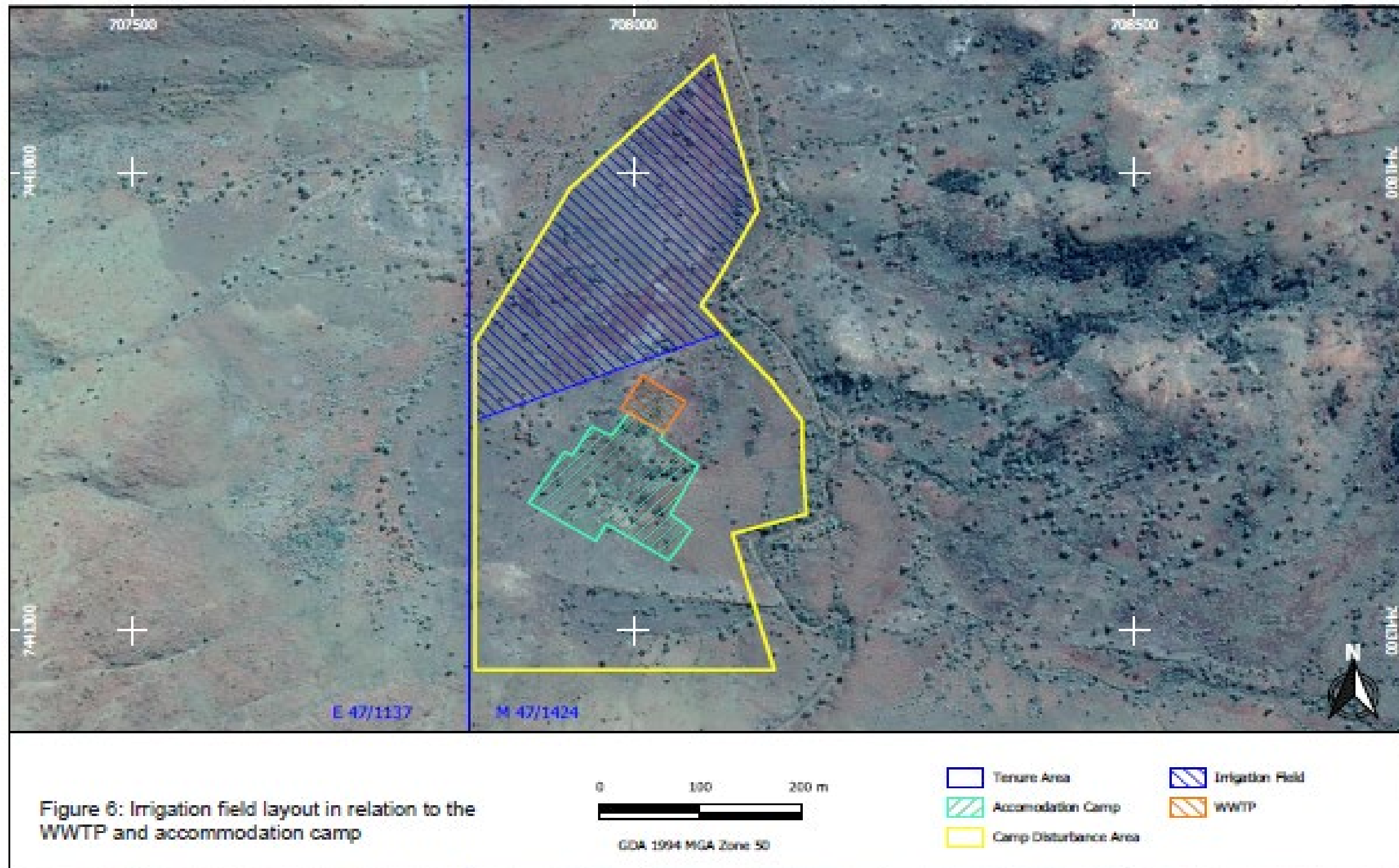


Figure 2: WWTP facility layout

## Schedule 2: Premises boundary

The premises boundary is defined by the coordinates in Table 8

**Table 8: Premises boundary coordinates (coordinate system GDA 1994 Zone 50)**

<b>Easting</b>	<b>Northing</b>
707836.0	7442440.0
710683.4	7442440.0
709669.7	7440795.4
709619.2	7440575.6
709572.5	7440492.2
709305.0	7439901.0
708612.0	7439401.0
707836.0	7439401.0
707836.0	7442440.0
711000.0	7442239.3
710883.7	7441929.8
710699.3	7441836.3
710605.8	7441778.2
710506.0	7441717.6
710155.5	7441462.7
710014.5	7441238.4
709778.7	7441131.3