

Licence number L7750/2001/10

Licence holder Evolution Mining (Mungari) Pty Ltd

**ACN** 002 124 745

Registered business address Level 30

175 Liverpool Street SYDNEY NSW 2000

**DWER file number** 2011/009482-1

**Duration** 15/03/2021 to 14/03/2041

**Date of amendment** 1 August 2022

Premises details Mungari Gold Project

COOLGARDIE WA 6429

Legal description -

Part mining tenements M15/829, M15/830,

M15/1741, M15/1408, M15/1287, M15/688, L15/228,

L15/246, L15/227 and M15/1407

As depicted in Schedule 1 and defined in Schedule 2

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i> )	Assessed production / design capacity
Category 5: Processing and beneficiation of metallic or non-metallic ore	3,000,000 tonnes per annual period
Category 6: Mine dewatering	5,000,000 tonnes per annual period
Category 12: Screening etc. of material	500,000 tonnes per annual period
Category 89: Putrescible landfill	2000 tonnes per annual period

This amended licence is granted to the licence holder, subject to the attached conditions, on 1 August 2022, by:

#### Gargi Joshi

# A/MANAGER, RESOURCE INDUSTRIES REGULATORY SERVICES

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

# **Licence history**

	_	
Date	Reference number	Summary of changes
21/02/2013	W5353/2013/1	New application
01/04/2011	L7750/2001/9	Licence re-issue
02/09/2013	W5464/2013/1	Works approval for new TSF
17/07/2014	L7750/2001/9	Licence amended to include category 5 and conditions relevant to the operation of the Frog's Legs project (concurrent revocation of L7877/2003/6)
16/04/2015	L7750/2001/9	DER initiated amendment to include improvement requirements for oily/water separator wastewater.
N/A	L7750/2001/9	Applicant initiated amendment to extend due date for improvement requirement to 31 March 2016. Not issued – see row below.
28/01/2016	L7750/2001/9	Further applicant-initiated amendment to include the reclaiming and storing tailings from the Mungari TSF for use in the Frog's Leg paste plant and construction of associated infrastructure.
04/09/2018	L7750/2001/9	Amendment Notice 1 was a DWER initiated amendment to condition the Licence Holder to construct a TSF seepage trench following ongoing seepage issues with the facility.
22/01/2019	L7750/2001/9	Amendment Notice 2 was an amendment initiated by the Licence Holder for TSF raise to 363.15m AHD and to relocate the landfill within the prescribed premises boundary.
18/12/2019	L7750/2001/9	Amendment to extend the expiry date from 14 March 2020 to 14 March 2021.
		Includes amalgamation of previously separated issued Amendment Notices 1 and 2.
05/03/2021	L7750/2001/10	Administrative Licence renewal. Expiry date extended to 14 March 2041.
22/06/2021	L7750/2001/10	Amendment to change the premises boundary, increase Category 5 throughput, include Category 12 activities, alter landfilling operations, remove total recoverable hydrocarbons limit for oil-water separators, and update references for operational procedures.
04/11/2021	L7750/2001/10	Amendment to add TSF cell 3 onto the licence. This includes the addition of new groundwater monitoring bores.
01/08/2022	L7750/2001/10	Amendment to add TSF cell 4 onto the 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 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 that all pipelines containing tailings, decant recovery, process water or mine dewater are either:
  - (a) equipped with telemetry with leak detect alarms; and/or
  - (b) equipped with automatic cut-outs in the event of a pipe failure; and/or
  - (c) provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.
- 2. The Licence Holder must ensure that any saline dewatering effluent shall only be disposed of in the following manner:
  - (a) used for dust suppression; or
  - (b) used within on-site processing activities; or
  - (c) discharged to;
    - i. Frog's Leg Pit Sump;
    - ii. Frog's Leg Turkeys nest;
    - iii. Mungari Raw Water Dam; or
    - iv. Northern Transfer Pond.

as defined in Figure 2 of Schedule 1: Maps, in a manner that avoids damage to surrounding vegetation.

3. The Licence Holder must ensure that tailings are only discharged into containment cells with the relevant infrastructure requirements and at the locations specified in Table 1.

**Table 1: Containment infrastructure** 

Containment point reference	Containment cell or dam number(s)	Material	Infrastructure requirements
Mungari Tailings Storage Facility	TSF Cell 1 and Cell 2	Tailings	Constructed to achieve a permeability of at least <10 <sup>-8</sup> m/s or equivalent.
(Figure 3 of Schedule 1: Maps)	TSF Cell 3 and Cell 4	Tailings	Constructed with an in-situ compacted soil liner with a hydraulic conductivity of 5 x 10 <sup>-8</sup> m/s (95% UCL) and maximum hydraulic conductivity of 2 x 10 <sup>-7</sup> m/s.

- 4. The Licence Holder must manage containment cells in Table 1 such that:
  - (a) a minimum total freeboard of 500mm or a 1 in 100 year/72-hour storm event (whichever is greater) is maintained; and
  - (b) methods of operation minimise the likelihood of erosion of the embankments by wave action.
- **5.** The Licence Holder must manage TSF cells such that:
  - (a) the supernatant pond on each cell of the TSF is minimised as far as practicable; and
  - (b) a seepage collection and recovery system will be implemented should seepage occur.

#### L7750/2001/10

- **6.** The Licence Holder must:
  - (a) undertake inspections as detailed in Table 2:
  - (b) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and
  - (c) maintain a record of all inspections undertaken.

**Table 2: Inspection of infrastructure** 

Scope of inspection	Type of inspection	Frequency of inspection
Tailings pipelines	Visual integrity	Daily
Return water lines	Visual integrity	Daily
TSF Embankment freeboard	Visual to confirm required freeboard capacity is available	Daily
Dewatering pipelines	Visual integrity	Daily

- 7. The Licence Holder must undertake a single annual water balance for the TSF, including each TSF cell. The water balance shall as a minimum consider the following:
  - (a) regional rainfall;
  - (b) evaporation;
  - (c) decant water recovery volumes;
  - (d) seepage recovery volumes; and
  - (e) volumes of tailings (tonnages) deposited.
- **8.** The Licence Holder is authorised to operate the TSF to the operating height specified in Table 3.

Table 3: Staged operating heights for the TSF

TSF cell	Construction height (m)	Operating height (m)
TSF Cell 1 (Stage 5)	360.8 mRL	360.5 mRL
TSF Cell 2 (Stage 5)	360.8 mRL	360.5 mRL
TSF Cell 3 (Stage 1)	347.4 mRL	347.1 mRL
TSF Cell 4 (Stage 1)	347.4 mRL	347.1 mRL

## **Landfill operations**

- **9.** The Licence Holder must only accept waste on to the landfill if:
  - (a) it is of a type listed in Table 4;
  - (b) the quantity accepted is below any quantity limit listed in Table 4; and
  - (c) it meets any specification listed in Table 4.

#### **Table 4: Waste acceptance**

Waste type	Quantity limit	Specification
Clean fill		None specified.
Inert Waste Type 1		None specified.
Inert Waste Type 2	2000 tonnes per annual period	Plastic only.
Putrescible Waste		Limited to paper, cardboard and treated timber.

- 10. The Licence Holder must ensure that where waste does not comply with condition 9 it is removed from the premises by the delivery vehicle or, where that is not possible, the Licence Holder shall contact the CEO to agree a course of action in relation to the waste.
- 11. The Licence Holder must ensure that wastes accepted onto the landfill are only subjected to the process set out in Table 5 and in accordance with any process limits described in that table.

Table 5: Waste processing

Waste type	Process(es)	Process limits		
Clean fill		All waste types		
Inert Waste Type 1		Disposal of waste by landfilling shall only take place within the landfill areas shown on the Maps in Schedule 1: Maps (Figure 4).		
Inert Waste Type 2	Receipt, handling and	Waste must only be deposited within a designated landfill trench.		
	disposal of waste by landfilling	<ul> <li>Landfill trenches must be constructed so as to have a maximum volume for waste deposition of 1,350m<sup>3</sup>.</li> </ul>		
Putrescible Waste	landilling	<ul> <li>The Licence Holder must keep a record the location of all landfill trenches constructed.</li> </ul>		
		The separation distance between the base of the landfill trenches and the highest groundwater level shall not be less than 2m.		

- **12.** The Licence Holder must manage the landfilling activities to ensure:
  - (a) waste is levelled and compacted once a week;
  - (b) waste is placed and compacted to ensure all faces are stable and capable of retaining restoration material; and
  - (c) restoration of a cell or phase takes place in conjunction with rehabilitation of the waste rock dump.
- 13. The Licence Holder must ensure that cover is applied and maintained on landfilled wastes in accordance with Table 6 and that sufficient stockpiles of cover are maintained on site at all times.

**Table 6: Cover requirements** 

Waste type	Material	Depth	Timescales	
Putrescible wastes	Inert and incombustible	Sufficient to ensure the waste is completely covered and	Cover shall be applied monthly	
Inert Waste Type 2	material	that no waste is exposed		
Inert waste Type 1	No soven nearvine			
Clean Fill	No cover require	ed .		

- **14.** The Licence Holder must:
  - (a) implement security measures at the site to prevent as far as is practical unauthorised access to the site; and
  - (b) undertake regular inspections of all security measures and repair damage as soon as practicable.
- **15.** The Licence Holder must ensure that wind-blown waste is contained within the boundary of the premises and that wind-blown waste is returned to the tipping area on at least a weekly basis.

## **Crushing and screening operations**

**16.** The Licence Holder may operate the crushing and screening plant in the locations specified as permissible crushing and screening locations as indicated in Figure 5 of Schedule 1: Maps.

## **Monitoring**

- **17.** The Licence Holder must ensure that:
  - (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
  - (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).
- **18.** The Licence Holder shall ensure that:
  - (a) monthly monitoring is undertaken at least 15 days apart; and
  - (b) quarterly monitoring is undertaken at least 45 days apart.
- **19.** The Licence Holder must undertake the monitoring of dewatering effluent according to the specifications in Table 7.

**Table 7: Monitoring of dewatering effluent** 

Emission point reference	Parameter	Units	Frequency
Northern Transfer Pond	рН	pH units	Monthly
Transier Foliu	TDS	mg/L	Monthly
	Carbonate (CO <sub>3</sub> ), arsenic (As), aluminium (Al), calcium (Ca), cadmium (Cd), chloride (Cl), cobalt (Co), chromium (Cr), copper (Cu), iron (Fe), potassium (K), magnesium (Mg), manganese (Mn), sodium (Na), nickel (Ni), lead (Pb), selenium (Se), sulphate (SO <sub>4</sub> ) and zinc (Zn)		Quarterly

**20.** The Licence Holder must undertake the process monitoring in Table 8 according to the specifications in that table.

**Table 8: Process monitoring** 

Monitoring point reference	Process description	Parameter	Units	Frequency	Method
Northern Transfer Pond and Mungari Raw Water Dam (Figure 2 of Schedule 1: Maps)	Cumulative monthly volumes of dewatering water from:  • Frog's Leg Pit to Northern Transfer Pond;  • White Foil Pit to Mungari Raw Water Dam;  • White Foil Pit to Northern Transfer Pond; and  • Northern Transfer Pond to Pope John Pit	Volume of dewatering water	kL	Monthly	None specified
TSF (Figure 3 of Schedule 1: Maps)	-	Volumes of tailings deposited into each cell of the TSF	m³	Continuous	None specified
TSF (Figure 3 of Schedule 1: Maps)	-	Volumes of water recovered from each cell of the TSF	m³	Continuous	None specified
Oily/water separator	Water from oily/water separator to be used for site wide dust suppression. Water from oily/water separator to be diluted at a	TRH	mg/L	Quarterly	Spot sample

Monitoring point reference	Process description	Parameter	Units	Frequency	Method
	minimum rate of 1 part water from oily/water separator to 15 parts groundwater prior to use for dust suppression.				
Landfilling areas (Figure 4 of Schedule 1: Maps)	Landfilling of wastes	Waste accepted to landfill	tonnes	Bi-annually	None specified

21. The Licence Holder must undertake the ambient groundwater monitoring in Table 9 according to the specifications in that table and record and investigate results that do not meet any limit specified.

Table 9: Monitoring of ambient groundwater quality

Monitoring point reference	Parameter	Units	Limit	Averaging period	Frequency
MB02	Standing water level (SWL)	mbgl	4	Spot sample	Monthly
MB03	MB02 – MB04, MB06 and MB08-MB15 only				
MB04	0				
MB05	Standing water level (SWL) MB05 only	mbgl	2		Monthly
MB06					
MB08	pH <sup>1</sup>	pH units	-		Monthly
MB09		unito			
MB10	Total dissolved solids (TDS) <sup>1</sup>	mg/L	-		Monthly
MB11	Electrical conductivity (EC) <sup>1</sup>	-	-		Monthly
MB12	WAD CN	mg/L	0.5		Quarterly
MB13	WAD CIV	IIIg/L	0.5		Quarterly
MB14	Total CN	mg/L	-		Quarterly
MB15	Ca, Mg, Na, K, CO <sub>3</sub> , Cl, SO <sub>4</sub> ,	mg/L	-		Annually
As depicted in Figure 3, Schedule 1: Maps	Al, As, Cd, Cr, Cu, Fe, Mn, Ni, Zn, Pb, Co				-

Note 1: pH. TDS and EC are permitted to be measured in the field in accordance with Australian Standard 5667.

- **22.** The Licence Holder must undertake an annual assessment of vegetation within the zone of influence of the TSF. The assessment must:
  - (a) photograph and record the presence and condition of key vegetation features within the zone of influence;
  - (b) compare the results of the assessment against previous years assessments and identify whether any deterioration in the presence and/or quality of vegetation has taken place; and
  - (c) be undertaken by a person qualified in vegetation identification and sampling.

#### L7750/2001/10

## **Records and Reporting**

- 23. 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.
- **24.** 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 no later than 90 days after the end of that annual period an Annual Audit Compliance Report in the approved form.
- **25.** 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, 3 and 4 of this licence;
  - (c) monitoring programmes undertaken in accordance with conditions 19, 20, 21, and 22 of this licence; and
  - (d) complaints received under condition 23 of this licence.
- **26.** The books specified under condition 25 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.
- 27. The Licence Holder must submit to the CEO an Annual Environmental Report within 90 calendar days after the end of the annual period. The report shall contain the information listed in Table 10 in the format or form specified in that table.

**Table 10: Annual Environmental Report** 

Condition	Requirement
7	TSF annual water balance
23	Complaints summary
19	Monitoring of dewatering effluent
20	Process monitoring
21	Ambient groundwater monitoring
22	Assessment of vegetation

- **28.** The Licence Holder must ensure that the Annual Environmental Report also contains:
  - (a) any relevant process, production or operational data; and
  - (b) an assessment of the information contained within the report against previous monitoring results and Licence limits and/or targets.
- 29. The Licence Holder must, within 7 days of becoming aware of any non-compliance with a limit specified within condition 21 of this licence, notify the CEO in writing of that non-compliance and include in that notification the following information:
  - (a) the time and date when the non-compliance occurred;
  - (b) if any environmental impact occurred as a result of the non-compliance and if so what that impact is and where the impact occurred;
  - (c) the details and result of any investigation undertaken into the cause of the non-compliance; and
  - (d) what action has been taken and the date on which it was taken to prevent the non-compliance occurring again.

# **Definitions**

In this licence, the terms in Table 11 have the meanings defined.

**Table 11: Definitions** 

Term	Definition	
ACN	Australian Company Number	
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).	
annual period	a 12-month period commencing from 1 January until 31 December of the immediately following year.	
Approved form	means the Annual Audit Compliance Report (AACR) form template approved by the CEO for use and available via DWER's external website.	
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	
books	has the same meaning given to that term under the EP Act.	
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	
Condition	a condition to which the licence is subject under section 62 of the Environmental Protection Act 1986	
Controlled waste	has the definition in Environmental Protection (Controlled Waste) Regulations 2004	
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.	
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 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.	

Term	Definition	
EP Act	Environmental Protection Act 1986 (WA)	
EP Regulations	Environmental Protection Regulations 1987 (WA)	
freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point	
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	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.	
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	
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure 1) in Schedule 1 to this licence.	
prescribed premises	has the same meaning given to that term under the EP Act.	
Qualified, Competent Civil or Structural Engineer	<ul> <li>means a person who:</li> <li>a) holds a Bachelor's degree recognised by Engineers Australia; and</li> <li>b) has a minimum of five years of experience working in a supervisory role in civil or structural engineering; and</li> <li>c) is employed by an independent third party external to the Works Approval Holder's business;</li> </ul>	
	d) or is otherwise approved in writing by the CEO to act in this capacity.	
quarterly	means the 4 inclusive periods from 1 April to 30 June, 1 July to 30 September, 1 October to 31 December and in the following year, 1 January to 31 March	
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 April to 30 September and 1 October to 31 March in the following year	
spot sample	means a discrete sample representative at the time and place at which the sample is taken	
TRH	means Total Recoverable Hydrocarbons	
TSF	means Tailings Storage Facility	
usual working day	means 0800 – 1700 hours, Monday to Friday excluding public holidays in	

### L7750/2001/10

## Department of Water and Environmental Regulation

Term	Definition
	Western Australia
waste	has the same meaning given to that term under the EP Act.
Zone of influence	means the area of a receiving environment with the potential to be altered or changed as a result of an emission or discharge

\_\_\_\_\_

### **END OF CONDITIONS**



# **Schedule 1: Maps**

The boundary of the prescribed premises is shown in the map below .

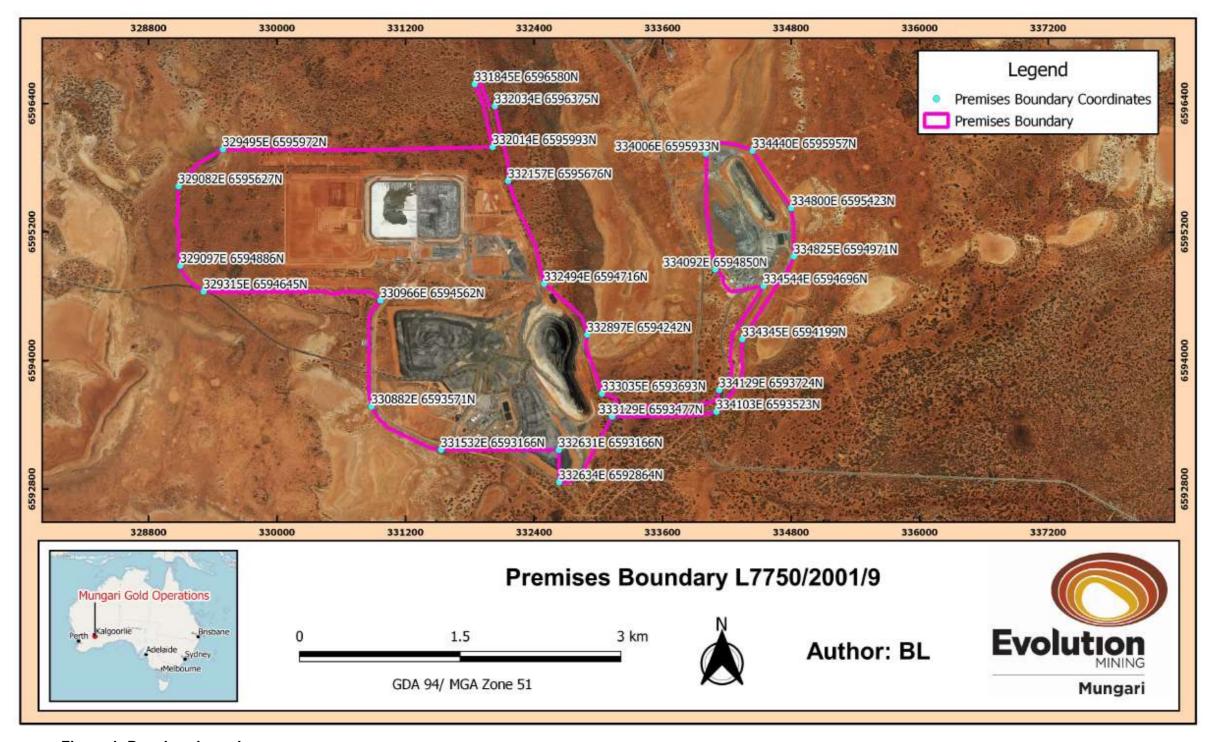


Figure 1: Premises boundary

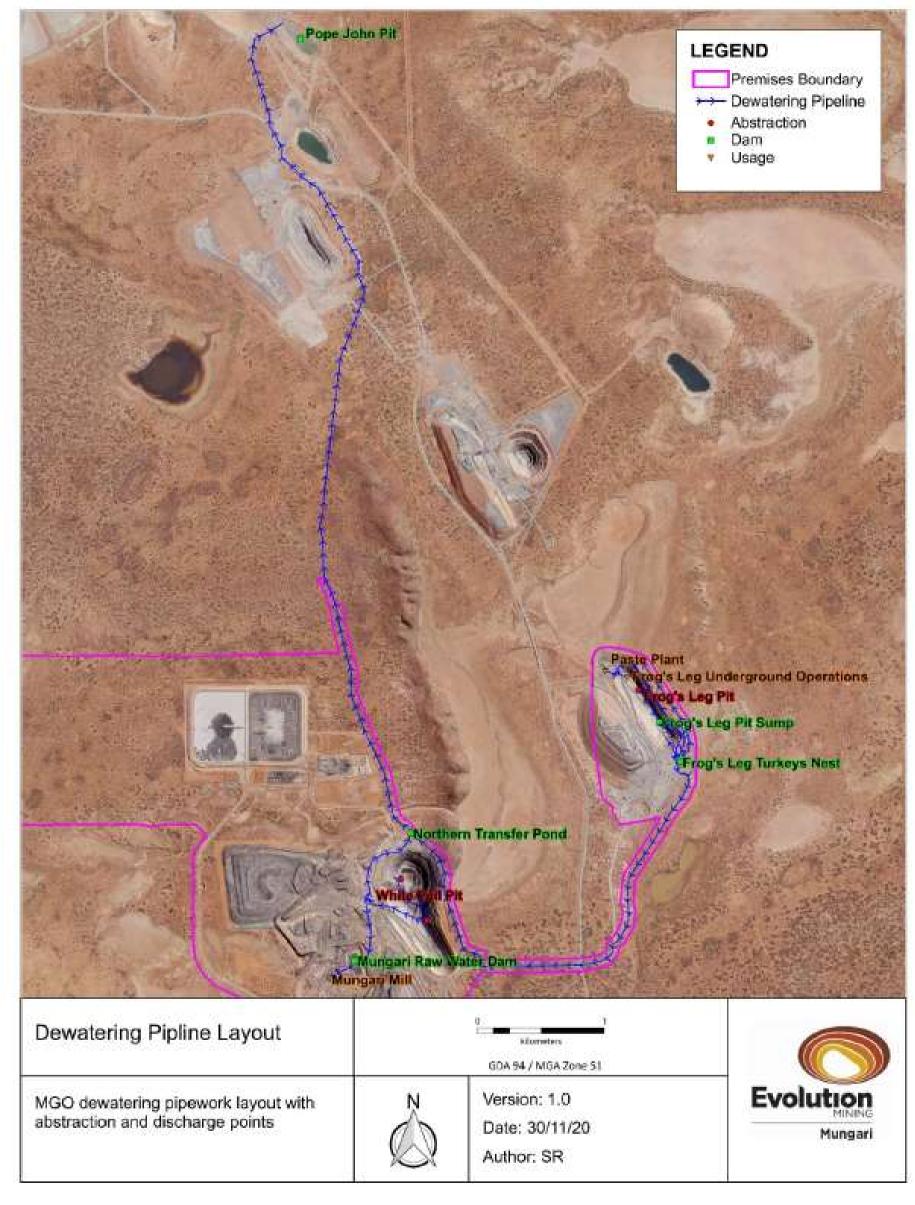


Figure 2: Dewatering discharge infrastructure, monitoring points and pathway

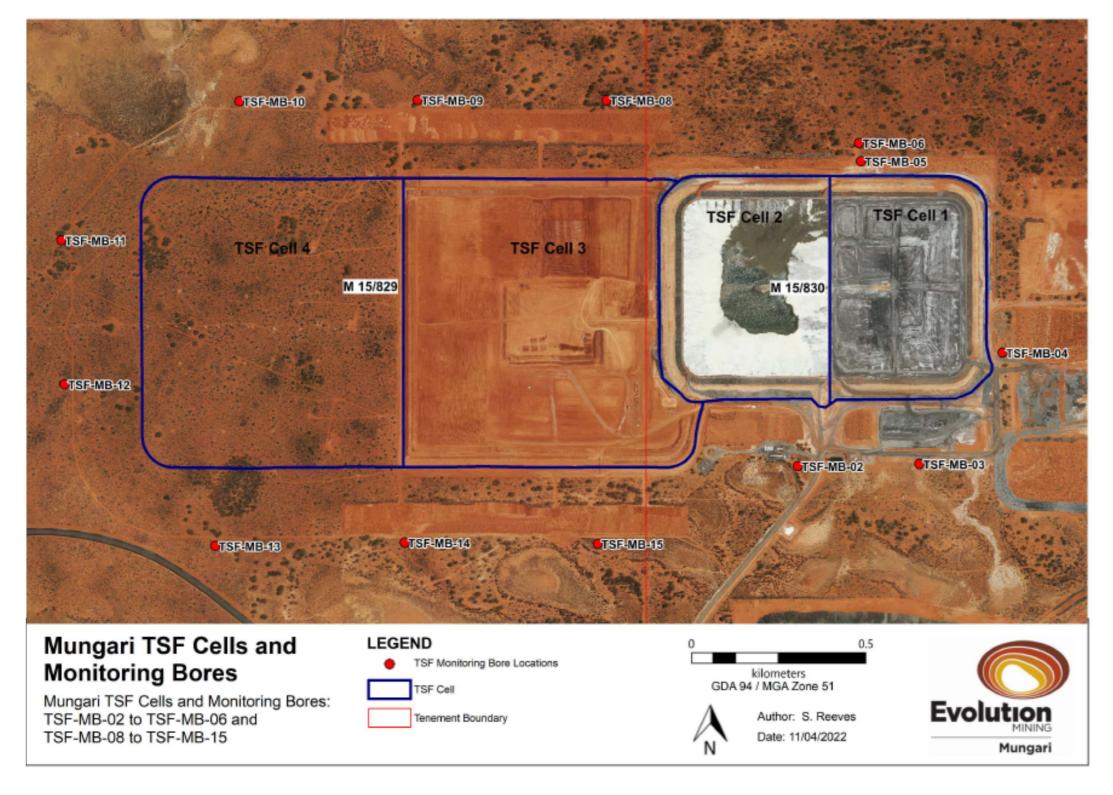


Figure 3: TSF Cells 1, 2, 3 and 4 and Monitoring Bores MB02 - MB06 and MB08 - MB15



Figure 4: Landfill trench areas

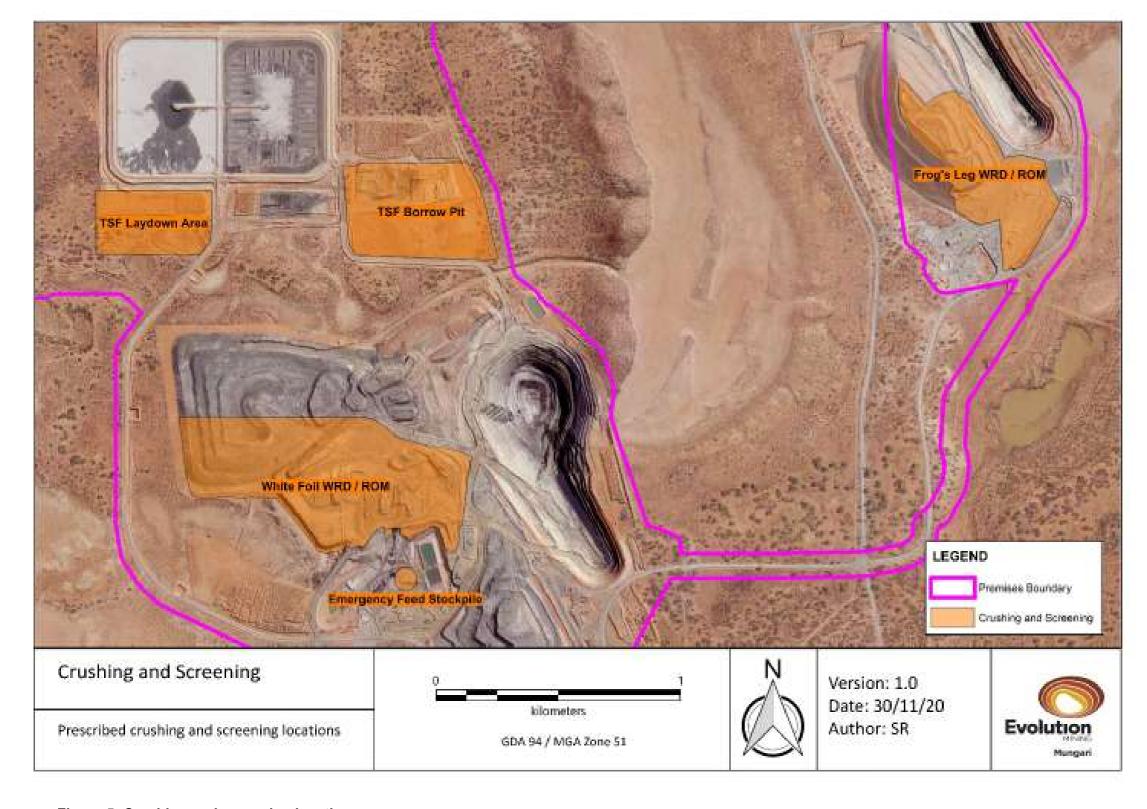


Figure 5: Crushing and screening location

# **Schedule 2: Premises boundary**

The premises boundary is defined by the coordinates in Table 12

Table 12: Premises boundary coordinates (GDA 1994 Zone 51)

Easting	Northing
331845	6596581
332034	6596376
332157	6595677
332494	6594717
332897	6594242
333035	6593694
334129	6593724
334544	6594696
334092	6594851
334006	6595933
334440	6595958
334800	6595423
334825	6594971
334345	6594199
334103	6593523
333129	6593477
332634	6592864
332631	6593166
331532	6593166
330882	6593572
330966	6594563
329315	6594646
329097	6594886
329082	6595628

# Department of Water and Environmental Regulation

Easting	Northing
329495	6595972
332014	6595993