



Licence number	L9036/2017/1
Licence holder	Pilgangoora Operations Pty Ltd
ACN	616 560 395
Registered business address	Level 2 146-160 Colin Street WEST PERTH WA 6005
DWER File Number	DER2017/000279
Duration	11/09/2018 to 25/08/2037
Date of issue	11 September 2018
Date of amendment	14/07/2022
Premises	Pilgangoora Lithium Project M45/1230 and M45/1231 MARBLE BAR WA 6760

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production / design capacity
Category 5 – Processing or beneficiation of metallic or non-metallic ore	Process plant - 1,540,000 tonnes per annual period TSF - 770,000 tonnes of tailings per annual period

This licence is granted to the licence holder, subject to the following conditions, on 14 July 2022, by:

A/Senior Environmental Officer, Resource Industries

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

Licence history

Date	Reference number	Summary of changes
11/09/2018	L9036/2017/1	Licence granted.
26/06/2020	L9036/2017/1	Amendment to include construction and operation of TSF Stage 3/4.
14/07/2022	L9036/2017/1	Transfer of licence to Pilgangoora Operations Pty Ltd

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.

Definitions and interpretation

Definitions

In this licence , the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
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
annual period	means a 12 month period commencing from 1 January until 31 December in the same year
ANZECC 2000	ANZECC & ARMCANZ (2000), Australian and New Zealand Guidelines for Fresh and Marine Water Quality
Approved Policy	has the same meaning given to the term under the EP Act
ASC NEPM	Assessment and management of contaminated sites, Contaminated sites guidelines (available at http://www.der.wa.gov.au)
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 <i>Water Quality – Sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples</i>
AS/NZS 5667.10	means the Australian Standard AS/NZS 5667.10 <i>Water Quality – Sampling – Guidance on sampling of waste waters</i>
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 <i>Water Quality – Sampling- Guidance on the sampling of groundwaters</i>
Australian & New Zealand Guidelines for Fresh & Marine Water Quality	Australian & New Zealand Guidelines for Fresh & Marine Water Quality (available at http://www.waterquality.gov.au)
Averaging Period	means the time over which a limit is measured or a monitoring result is obtained
Bq/L	Becquerel per litre
Books	has the same meaning given to that term under the EP Act
Category/ Categories/ Cat.	Categories of prescribed premises as set out in Schedule 1 of the EP Regulations

Term	Definition
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 33 Cloisters Square PERTH WA 6850 info@dwer.wa.gov.au
Compliance Report	means a report in a format approved by the CEO as presented by the licence holder or as specified by the CEO (guidelines and templates may be available on the department's website)
Condition	means a condition to which this licence is subject under s.62 of the EP Act
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under s.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
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the licence holder in writing and sent to the licence holder's address for notifications, as described at the front of this licence , in relation to: (a) compliance with the EP Act or this licence ; (b) the Books or other sources of information maintained in accordance with this licence ; or (c) the Books or other sources of information relating to Emissions from the premises.
Discharge	has the same meaning given to that term under the EP Act
DMS	Dense Media Separation
DWER	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
EP Act	means the <i>Environmental Protection Act 1986</i> (WA)
EP Regulations	means the <i>Environmental Protection Regulations 1987</i> (WA)
Freeboard	Means the distance between the maximum water surface elevation

Term	Definition
	and the top of the retaining banks or structures at their lowest point
HDPE	high density polyethylene
HPGR	High Pressure Grinding Rolls
Implementation Agreement or Decision	has the same meaning given to that term under the EP Act
Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act
Licence	refers to this document, which evidences the grant of a licence by the CEO under s.57 of the EP Act, subject to the Conditions
licence holder	refers to the occupier of the premises being the person to whom this licence has been granted, as specified at the front of this licence
LIMS	Low Intensity Magnetic Separator
Material Environmental Harm	has the same meaning given to that term under the EP Act
mbgl	metres below ground level
mRL	metres Reduced Level
NATA	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
Pollution	has the same meaning given to that term under the EP Act
Premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the map in Schedule 1 to this licence
Prescribed premises	has the same meaning given to that term under the EP Act
Primary Activities	refers to the prescribed premises activities listed on the front of this licence as described in Schedule 2, at the locations shown in Schedule 3
quarterly	means the 4 inclusive periods from 1 January to 31 March, 1 April to 30 June, 1 July to 30 September and 1 October to 31 December

Term	Definition
	in the same year
ROM	Run of Mine
Serious Environmental Harm	has the same meaning given to that term under the EP Act
Spot Sample	means a discrete sample representation at the time and place at which the sample is taken
TSF	Tailing Storage Facility
TSF - Stage 2	means to an embankment level of 186 mRL with capacity to store 1,561,000 tonnes of tailings
TSF Stage 3/4	means to an embankment level of 190.3 mRL with total TSF capacity to store 2,610,000 tonnes of tailings.
TSF Stage 3/4 Design Report	<i>Tailings Storage Facility Stage 3/4 Raise Permitting Design Report</i> , prepared for Altura Mining Limited by Knight Piesold Consulting, PE801-00317/22 Rev 0, March 2020
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
WHIMS	Wet High Intensity Magnetic Separator
WRL	Waste Rock Landforms
µS/cm	means microSiemens per centimetre

Conditions

Emissions

Infrastructure and equipment

1. The licence holder must ensure that the infrastructure and equipment listed in Table 2 is maintained and operated in accordance with the corresponding operational requirement set out in Table 2.

Table 2: Infrastructure and equipment controls table

	Site infrastructure and equipment	Operational requirements
1	TSF	<p><u>TSF general</u></p> <ul style="list-style-type: none">• Multi-zoned, downstream profile embankment, single cell configuration.• Permeability of base less than 1×10^{-8} m/s.• Stage 2 – Embankment level of 186 mRL.• Stage 3/4 - Embankment level of 190.3 mRL (after submission of infrastructure compliance documents required by condition 15).• A total freeboard of 500 mm maintained. <p><u>Cut-off trench</u></p> <ul style="list-style-type: none">• Located beneath the entire length of the embankment. <p><u>Tailings underdrainage system</u></p> <ul style="list-style-type: none">• Consisting of an embankment toe drain, branch drains and finger drains.• Supernatant water and rainfall runoff removed from the TSF and returned to the process plant. <p><u>Supernatant pond</u></p> <ul style="list-style-type: none">• The supernatant pond controlled by managed spigotting from the perimeter embankment so that it is located at the centre of the eastern embankment. <p><u>Tailings deposition</u></p> <ul style="list-style-type: none">• Tailings discharged into the TSF by sub-aerial deposition methods.• Active beach regularly rotated around the TSF.

	Site infrastructure and equipment	Operational requirements
		<u>Pipelines (tailings delivery, distribution and decant return)</u> <ul style="list-style-type: none"> • Constructed of HDPE. • Contained within a containment trench. • Flow meters and leak detection sensors. <u>Tailings delivery and decant return pipelines</u> <ul style="list-style-type: none"> • Contained within a pipeline containment trench.
2	Process water dam	<ul style="list-style-type: none"> • Lined with HDPE. • Total Freeboard of 300 mm maintained.

Emission Limits

- The licence holder shall not discharge more than 770,000 tonnes of tailing per year to the TSF.

Monitoring

- The licence holder must complete daily inspections of the integrity of the TSF and process pipelines (tailings delivery, distribution and decant return pipelines).
- The licence holder must undertake monitoring of the water balance for the TSF each monthly period and (as a minimum) record the following information:
 - site rainfall;
 - evaporation;
 - decant water recovery volumes;
 - seepage recovery volumes;
 - volumes of tailings deposited; and
 - estimate of seepage losses.
- The licence holder must ensure that:
 - all samples are collected and preserved in accordance with AS/NZS 5667.1;
 - all groundwater sampling is conducted in accordance with AS/NZS.11; and
 - 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.
- The licence holder must ensure that
 - monthly monitoring is undertaken at least 15 days apart;

- (b) quarterly monitoring is undertaken at least 45 days apart; and
- (c) six monthly monitoring is undertaken at least 5 months apart.

7. The licence holder must monitor emissions:

- (a) from each monitoring location;
- (b) for the corresponding parameter;
- (c) in the corresponding unit;
- (d) for the corresponding averaging period;
- (e) at the corresponding frequency; and
- (f) using the corresponding method,

as set out in Table 3.

Table 3: Emissions monitoring

Monitoring location	Parameter	Unit	Averagin g period	Frequency	Method
<u>TSF</u> MB-01-1 MB-01-2 MB-02-1 MB-02-2 MB-03-1 MB-03-2 MB-04-1 MB-04-2 EX19CHC05 (as shown in Schedule 1, Ambient groundwater monitoring map)	Standing Water Level ¹	mbgl	Spot sample	Monthly	AS/NZS 5667.1 AS/NZS 5667.11
	pH ¹	pH units		Quarterly	
	Electrical Conductivity	µS/cm			
	Total Dissolved Solids	mg/L			
	Total Alkalinity as CaCO ₃				
	Carbonate Alkalinity as CO ₃				
	Bicarbonate Alkalinity as HCO ₃				
	Fluoride by ISE				
	Chloride, Cl				
	Sulfate, SO ₄				
	Nitrite, NO ₂				
	Nitrate, NO ₃				
	Sodium, Na				

Monitoring location	Parameter	Unit	Averaging period	Frequency	Method
	Potassium, K				
	Calcium, Ca				
	Magnesium, Mg				
	Total Hardness by Calculation				
	Phosphorus, P				
	Total Phosphorus				
	Total Nitrogen				
	Aluminium, Al				
	Arsenic, As				
	Cadmium, Cd				
	Cobalt, Co				
	Chromium, Cr				
	Copper, Cu				
	Iron, Fe				
	Lithium, Li				
	Manganese, Mn				
	Nickel, Ni				
	Lead, Pb				
	Zinc, Zn				
	Barium, Ba				
	Boron, B				
	Mercury, Hg				
	Molybdenum, Mo				

Monitoring location	Parameter	Unit	Averaging period	Frequency	Method
	Antimony, Sb				
	Selenium, Se				
	Silicon, Si				
	Tin, Sn				
	Vanadium, V				
	Uranium, U				
	Thorium, Th				
	Bismuth, Bi				
	Nobium, Nb				
	Thallium, Tl				
	Caesium, Cs				
	Rubidium, Rb				
	Radium-266	Bq/L		Six monthly	
Radium-228					

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

Record-keeping

8. 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) the maintenance of infrastructure required to ensure that it is kept in good working order in accordance with Condition 1 of this licence ;
 - (c) monitoring undertaken in accordance with Conditions 2 to 7 of this licence ; and
 - (d) complaints received under Condition 9 of this licence ;
- In addition, the Books must:
- (e) be legible;
 - (f) if amended, be amended in such a way that the original and subsequent amendments remain legible and are capable of retrieval;
 - (g) be retained for at least 3 years from the date the Books were made; and

- (h) be available to be produced to an Inspector or the CEO.
9. The licence holder must record the number and details of any complaints received by the licence holder relating to its obligations under this licence and its compliance with Part V of the EP Act at the premises, and any action taken by the licence holder in response to the complaint. Details of complaints must include:
 - (a) an accurate record of the concerns or issues raised, for example a copy of any written complaint or a written note of any verbal complaints made;
 - (b) the name and contact details of the complainant, if provided by the complainant;
 - (c) the date of the complaint; and
 - (d) the details and dates of the actions taken by the licence holder in response to the complaints.
 10. The licence holder must submit to the CEO, no later than 30 March, an Annual Audit Compliance Report indicating the extent to which the licence holder has complied with the conditions in this licence for the Annual Period.
 11. The licence holder must submit to the CEO, no later than 30 March, an Annual Environment Report for the previous annual period, which contains at a minimum:
 - (a) the water balance information required by condition 4 with a comparison against previous results; and
 - (b) the results of all the monitoring activity required by condition 7 with a comparison against previous monitoring results and the ASC NEPM; Australian & New Zealand Guidelines for Fresh & Marine Water Quality; and ANZECC, 2000 Livestock (cattle) drinking water guidelines.
 12. The licence holder must submit to the CEO the monitoring results required by condition 7 when the ANZECC 2000 drinking level guidelines for livestock (cattle) are exceeded, and within 30 days after monitoring is conducted.
 13. The licence holder must comply with a Department Request, within 14 days from the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

TSF Stage 3/4

14. The licence holder must construct the infrastructure listed in Table 4, in accordance with the corresponding design and construction requirements as set out in Table 4.

Table 4: Design and construction requirements

Infrastructure	Design and construction requirement	Plan
TSF Stage 3/4 embankment raise	<ul style="list-style-type: none"> 190.3 mRL height. Downstream raise construction methods. Multi-zoned, earth-fill embankment. Low permeability zone (Zone A) on upstream face, in accordance with 	Site Plan 5: Stage 3/4 general arrangement

	<p>TSF Stage 3/4 Design Report, Section 8.</p> <ul style="list-style-type: none"> Perimeter embankments to have an upstream slope of 2H:1V, downstream slope of 2.75V:1V and minimum crest width of 8 m. 	
Decant system	<p>1.8 m slotted precast concrete tower decant tower sections.</p> <p>Decant tower surrounded by free-draining coarse rockfill.</p>	
Underdrainage tower	Raised to the embankment crest.	
Emergency spillway	In accordance with TSF Stage 3/4 Design Report, Drawing Number 801-317-A2003-601 Rev B, and Drawing Number 801-317-A2003-900 Rev B.	

- 15.** The licence holder must within 30 days of each item of infrastructure required by condition 14 being constructed:
- undertake an audit of their compliance with the requirements of condition 14; and
 - prepare and submit to the CEO an audit report on that compliance.
- 16.** The environmental compliance report required by condition 15, must include as a minimum the following:
- certification by a qualified geotechnical engineer that the items of infrastructure or component(s) thereof, as specified in condition 14, have, or have not been constructed in accordance with the relevant requirements specified in condition 14; and
 - be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person; and
 - where an item of infrastructure has been certified as not being constructed, or does not comply with the corresponding requirements, the works approval holder must correct the non-compliant or defective works, prior to re-certifying, or provide to the CEO a description of, and explanation for, any departures from the requirements specified in Table 4 that do not require rectification and do not constitute a material defect along with the environmental compliance report.
- 17.** Upon submission of the environmental compliance report required by condition 15, the licence holder may deposit tailings into TSF Stage 3/4.

Schedule 1: Maps

Premises map

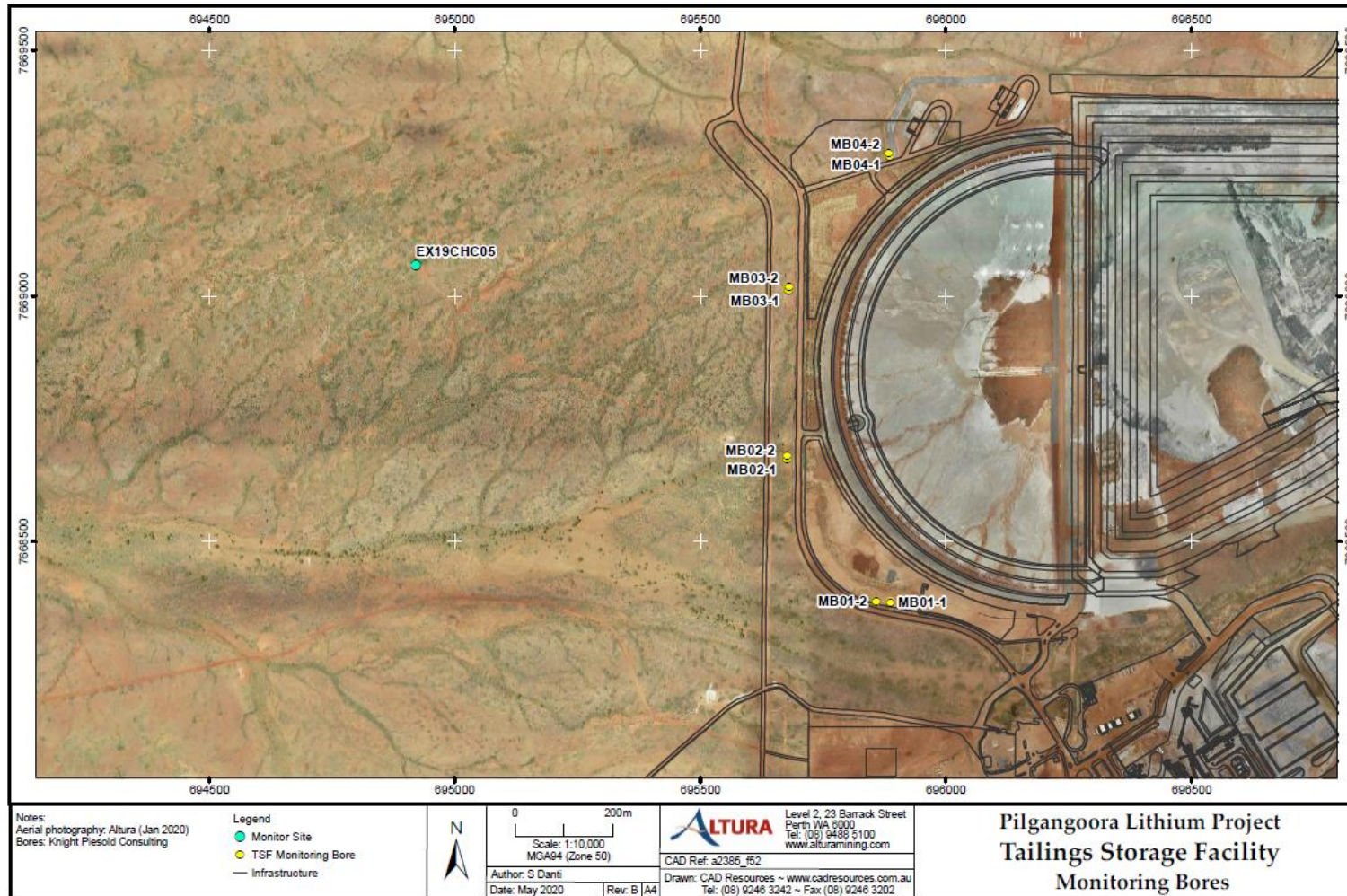
The premises are shown in the map below (Figure 1). The purple line depicts the boundary of the premises.

Figure 1: Map of the boundary of the prescribed premises



Ambient groundwater monitoring map

Figure 2: Groundwater monitoring bores



Schedule 2: Primary Activities

At the time of assessment, Emissions and Discharges from the Primary Activity was considered in the determination of the risk and related Conditions for the premises.

The Primary Activity is listed in Table 5:

Table 5: Primary Activity

Primary Activity	Premises production or design capacity
Category 5 – Processing or beneficiation of metallic or non-metallic ore	Process Plant - 1,540,000 tonnes per Annual Period TSF - 770,000 tonnes per Annual Period

Infrastructure and equipment

The Primary Activity infrastructure and equipment situated on the premises is listed in Table 6.

Table-6: Infrastructure and equipment

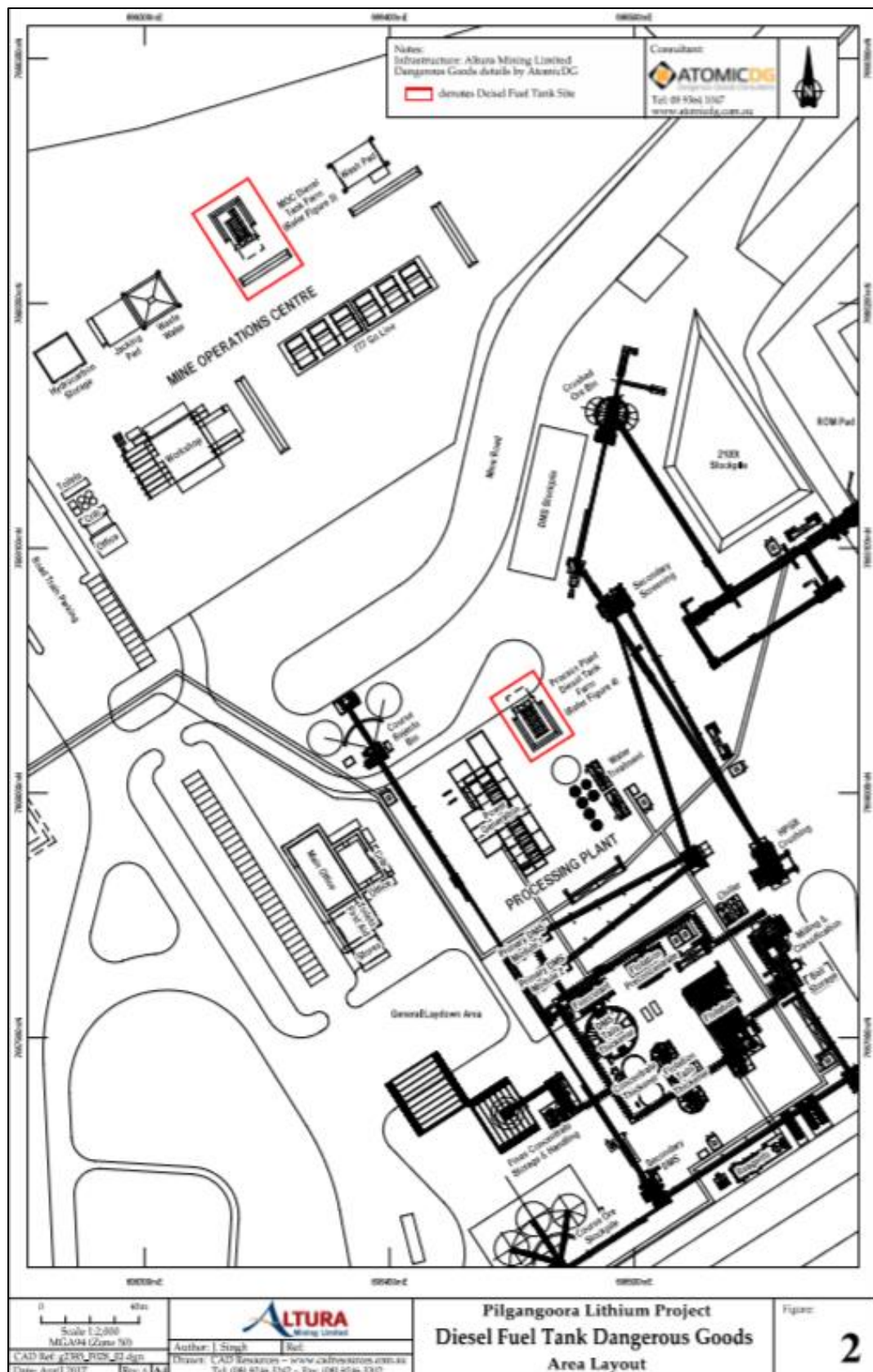
Infrastructure and equipment		Plan reference
1	ROM pad	Schedule 3, Site Plan 1 and 2: ROM pad
2	Primary and secondary crushing station	Schedule 3, Site Plan 1: Mine Operations and Processing Centre; and Schedule 3, Site Plan 2: Processing Plant
3	HPGR Machine	
4	DMS station – 3 separate modular plants (two for primary separation and a single module for secondary separation)	
5	Coarse product stockpile	
6	Coarse rejects bin	
7	Milling and flotation station (three stages of upgrading: rougher, cleaning and re-cleaning circuit)	
8	Concentrate thickener and filter station (Magnetic separation – LIMS and WHIMS)	
9	Tailings thickener	
10	Product stockpile	

Infrastructure and equipment		Plan reference
11	Associated conveyors and pipelines	
12	WRL TSF (including embankments, cut-off trench, underdrainage, decant and pumps)	Schedule 3, Site Plan 1, Site Plan 3, Site Plan 4 and Site Plan 5: Tailings Storage Facility; decant trench; underdrainage tower; underdrainage branch drain; underdrainage/basin liner extent; embankment toe drain; and access ramp and emergency spillway
13	TSF pipelines (tailings delivery pipeline and distribution pipeline and decant return pipeline)	Not shown
14	Process plant reagents (DMS reagents, flotation reagents and thickening reagents)	Schedule 3, Site Plan 2: Reagents
15	Process water dam	Schedule 3, Site Plan 1: Process Water Dam

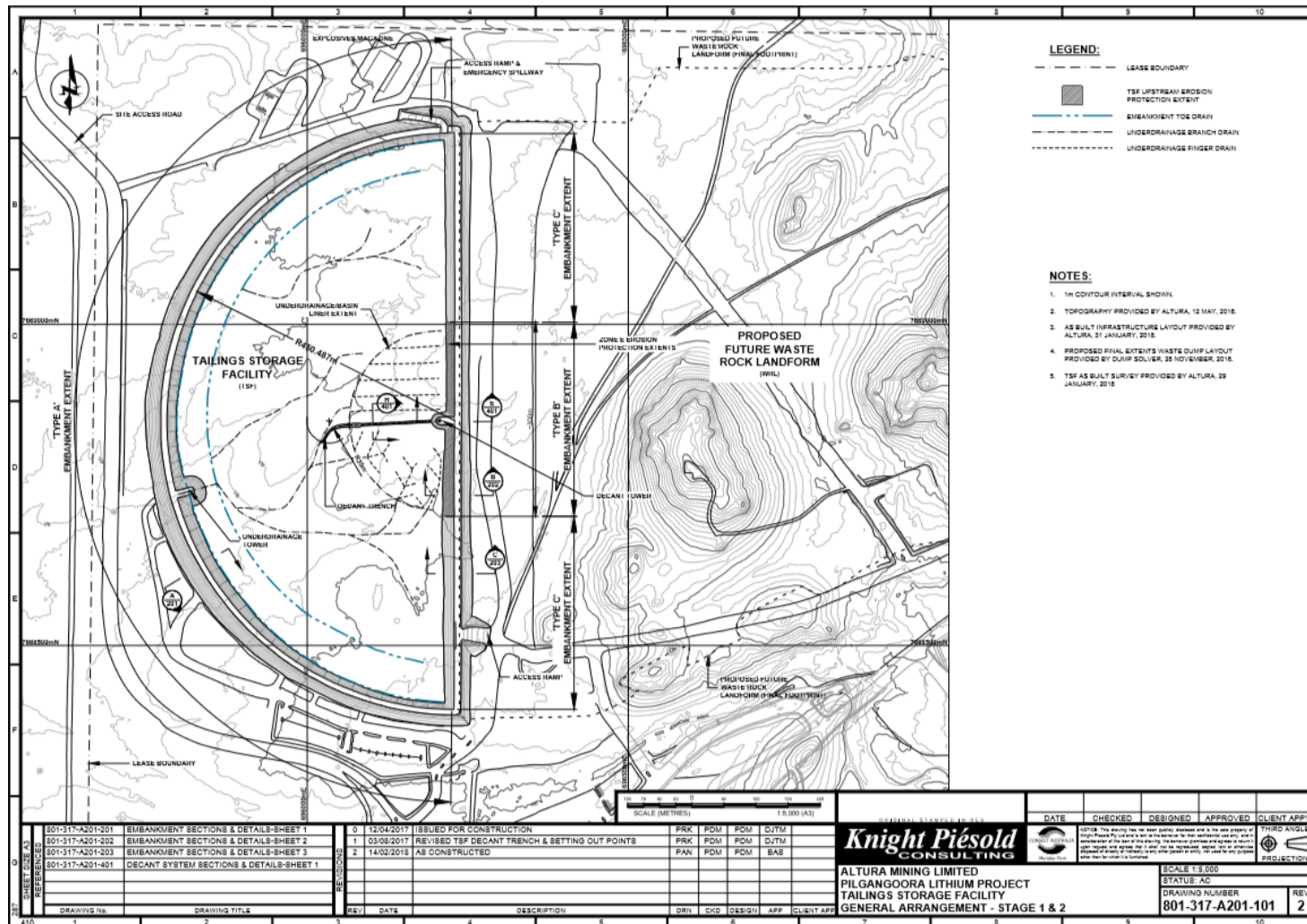
Site plan 1 – Key infrastructure



Site plan 2 – Key infrastructure



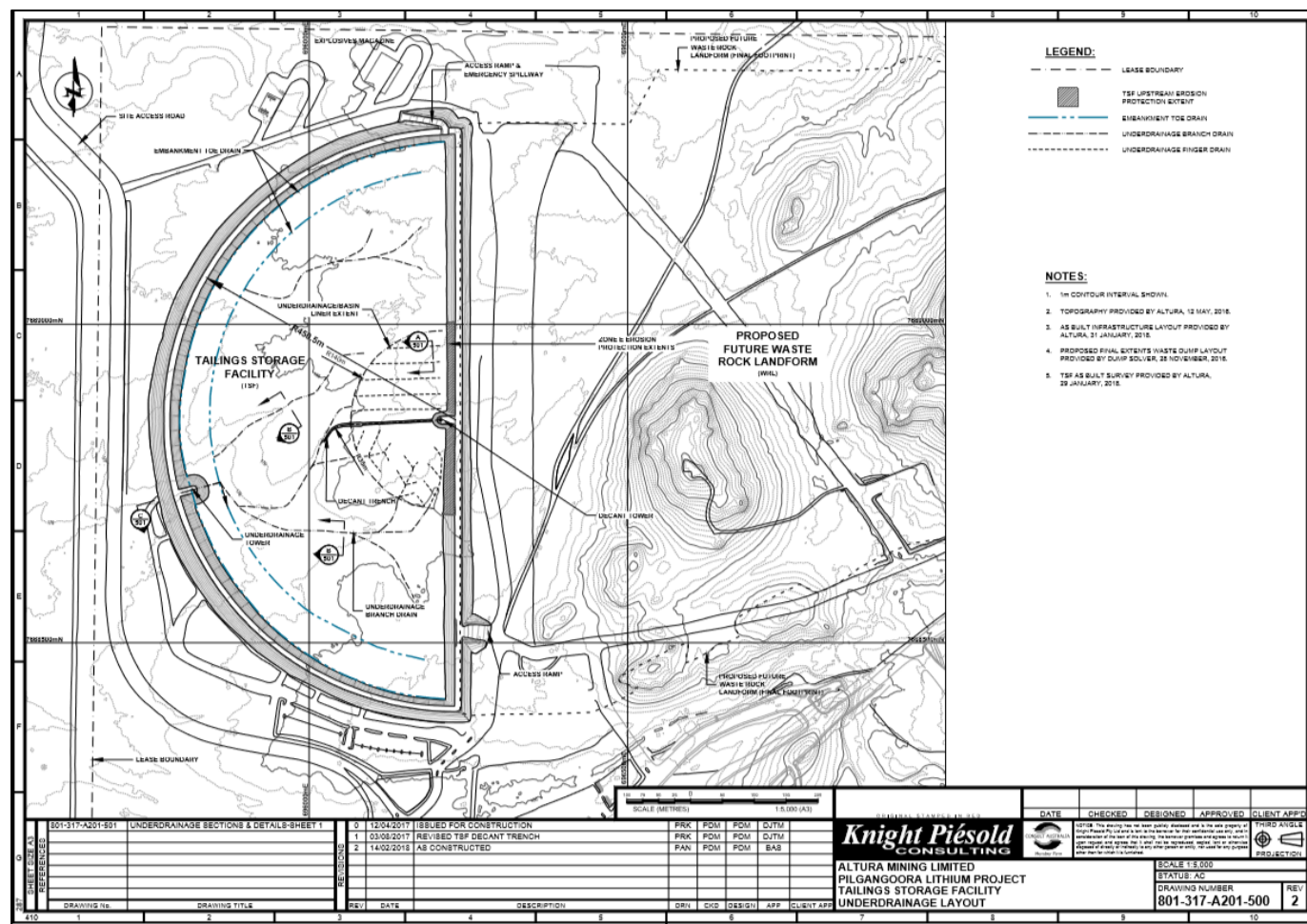
Site plan 3 – TSF general arrangement (Stage 2)



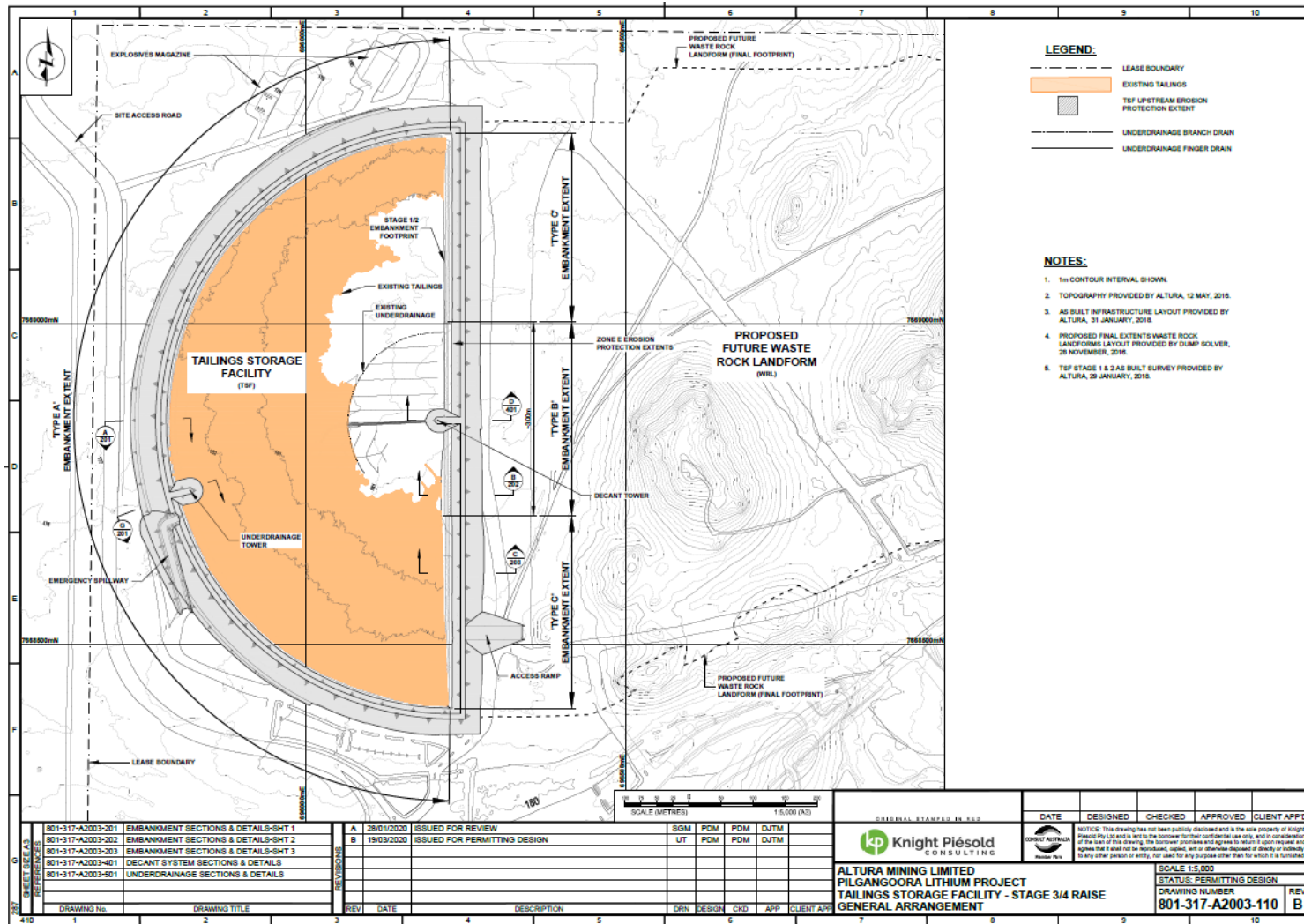
L9036/2017/1

Date of amendment: 14/07/2022

Site plan 4 – TSF underdrainage



Site Plan 5: Stage 3/4 General arrangement



L9036/2017/1

Date of amendment: 14/07/2022