Licence

Licence Number	L9056/2017/1
Licence Holder	Pilgangoora Operations Pty Ltd
ACN	616 560 395
Registered business address	Level 2, 146 Colin Street WEST PERTH WA 6005
File Number	DER2017/000318
Duration	25/07/2019 to 24/07/2039
Date of amendment	13/09/2022
Premises	Pilgangoora Lithium -Tantalum Project Mining Tenements M45/1256 and L45/417 MARBLE BAR WA 6760 As depicted in Schedule 1, Figure 3

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production / design capacity**
Category 5: Processing or beneficiation of metallic or non-metallic ore	2,000,000 tonnes per annum
Category 52: Electric power generation	15.7 MW
Category 54: Sewage facility	150 m^3/day
Category 64: Putrescible landfill	20,000 tonnes per annum
Category 73: Bulk storage of chemicals	1,036 m^3 in aggregate

This Licence is amended and issued to the Licence Holder, subject to the following conditions, on 13/09/2022, by:

Carmen Standring
Digitally signed by Carmen Standring
Date: 2022.09.13 12:49:32 +08'00'

A/MANAGER, RESOURCE INDUSTRIES
REGULATORY SERVICES

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

Explanatory notes

These explanatory notes do not form part of this Licence.

Defined terms

Definition of terms used in this Licence can be found at the start of this Licence. Terms which are defined have the first letter of each word capitalised throughout this Licence.

Department of Water and Environmental Regulation

The Department of Water and Environmental Regulation (DWER) is established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the *Environmental Protection Act 1986* (WA) (EP Act). The Department also monitors and audits compliance with licences, takes enforcement action and develops and implements licensing and industry regulation policy.

Licence

Section 56 of the EP Act provides that an occupier of Prescribed Premises commits an offence if Emissions are caused or increased, or permitted to be caused or increased, or Waste, noise, odour or electromagnetic radiation is altered, or permitted to be altered, from Prescribed Premises, except in accordance with a works approval or licence.

Categories of Prescribed Premises are defined in Schedule 1 of the *Environment Protection Regulations 1987* (WA) (EP Regulations).

This Licence does not authorise any activity which may be a breach of the requirements of another statutory authority including, but not limited to the following:

- conditions imposed by the Minister for Environment under Part IV of the EP Act;
- conditions imposed by DWER for the clearing of native vegetation under Part V, Division 2 of the EP Act;
- any requirements under the *Waste Avoidance and Resource Recovery Act 2007;*
- any requirements under the *Environmental Protection (Controlled Waste) Regulations 2004*; and
- any other requirements specified through State legislation.

It is the responsibility of the Licence Holder to ensure that any action or activity referred to in this Licence is permitted by, and is carried out in compliance with, other statutory requirements.

The Licence Holder must comply with the Licence. Contravening a Licence Condition is an offence under s.58 of the EP Act.

Responsibilities of a Licence Holder

Separate to the requirements of this Licence, general obligations of Licence Holders are set out in the EP Act and the regulations made under the EP Act. For example, the Licence Holder must comply with the following provisions of the EP Act:

- the duties of an occupier under section 61; and
- 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 (s.53).

Strict penalties apply for offences under the EP Act.

Reporting of incidents

The Licence Holder has a duty to report to DWER all discharges of waste that have caused or are

likely to cause Pollution, Material Environmental Harm or Serious Environmental Harm, in accordance with s.72 of the EP Act.

Offences and defences

The EP Act and its regulations set out a number of offences, including:

- Offence of emitting an Unreasonable Emission from any Premises under s.49.
- Offence of causing Pollution under s.49.
- Offence of dumping Waste under s.49A.
- Offence of discharging Waste in circumstances likely to cause Pollution under s.50.
- Offence of causing Serious Environmental Harm (s.50A) or Material Environmental Harm (s.50B).
- Offence of causing Emissions which do not comply with prescribed standards (s.51).
- Offences relating to Emissions or Discharges under regulations prescribed under the EP Act, including materials discharged under the *Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA).*
- Offences relating to noise under the *Environmental Protection (Noise) Regulations 1997 (WA).*

Section 53 of the EP Act provides that a Licence Holder commits an offence if Emissions are caused, or altered from a Prescribed Premises unless done in accordance with a Works Approval, Licence or the requirements of a Closure Notice or an Environmental Protection Notice.

Defences to certain offences may be available to a Licence Holder and these are set out in the EP Act. Section 74A(b)(iv) provides that it is a defence to an offence for causing Pollution, in respect of an Emission, or for causing Serious Environmental Harm or Material Environmental Harm, or for discharging or abandoning Waste in water to which the public has access, if the Licence Holder can prove that an Emission or Discharge occurred in accordance with a Licence.

This Licence specifies the Emissions and Discharges, and the limits and Conditions which must be satisfied in respect of Specified Emissions and Discharges, in order for the defence to offence provision to be available.

Authorised Emissions and Discharges

The Specified and General Emissions and Discharges from Primary Activities conducted on the Prescribed Premises are authorised to be conducted in accordance with the Conditions of this Licence.

Emissions and Discharges caused from other activities not related to the Primary Activities at the Premises have not been Conditioned in this Licence. Emissions and Discharges from other activities at the Premises are subject to the general provisions of the EP Act.

Amendment of licence

The Licence Holder can apply to amend the Conditions of this Licence under s.59 of the EP Act. An application form for this purpose is available from DWER.

The CEO may also amend the Conditions of this Licence at any time on the initiative of the CEO without an application being made.

Amendment Notices constitute written notice of the amendment in accordance with s.59B(9) of the EP Act.

Duration of Licence

The Licence will remain in force for the duration set out on the first page of this Licence or until it is surrendered, suspended or revoked in accordance with s.59A of the EP Act.

Suspension or revocation

The CEO may suspend or revoke this Licence in accordance with s.59A of the EP Act.

Fees

The Licence Holder must pay an annual licence fee. Late payment of annual licence fees may result in the licence ceasing to have effect. A licence that has ceased to have effect due to non-payment of annual licence fees continues to exist; however, it ceases to provide a defence to an offence under s.74A of the EP Act.

Late fees are a component of annual licence fees and should a Licence Holder fail to pay late fees within the time specified the licence will similarly cease to have effect.

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
AER	Annual Environment Report
Annual Audit Compliance Report (AACR)	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).
Annual Period	means a 12-month period commencing from 1 July until 30 June in the following year.
ANZECC/ ARMCANZ Guidelines	Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australia and New Zealand Environment and Conservation Council and the Agriculture and Resource Management Council of Australia and New Zealand. Paper No. 4. Canberra. (ANZECC/ARMCANZ). Available at http://www.agriculture.gov.au/water/quality/nwqms
Application	The inclusion of all applications, including revised applications and additional information provided in Works Approval Holder responses to requests for information between 15 November 2017 and 5 June 2018.
Approved Policy	has the same meaning given to the term under the EP Act
ASC NEPM	*National Environment Protection (Assessment of Site Contamination) Measure 1999.* Available at https://www.der.wa.gov.au/images/documents/your-environment/contaminated-sites/guidelines/Assessment_and_management_of_contaminated_sites.pdf
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 Water quality - Sampling Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples
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
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
Condition	means a condition to which this Licence is subject under s.62 of the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
CO	means carbon monoxide
Delegated Officer	an officer under section 20 of the EP Act.
Department	means the department established under section 35 of the *Public Sector Management Act 1994* 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.
DWER	Department of Water and Environmental Regulation.
Effluent	means treated sewage.
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 *Environmental Protection Act 1986* (WA).
EP Regulations	means the *Environmental Protection Regulations 1987* (WA).
EPBC Act	Means the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)
Freeboard	Means the distance between the maximum water surface elevation and the top of the retaining banks or structures at their lowest point
HDPE	High Density Polyethylene.
Implementation Agreement or Decision	has the same meaning given to that term under the EP Act.
Influent	means un-treated sewage
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.
Material Environmental Harm	has the same meaning given to that term under the EP Act.
mbgl	metres below ground level
m^3	metres cubed
mRL	metres Reduced Level
mtpa	million tonnes per annum
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
Noise Regulations	*Environmental Protection (Noise) Regulations 1997 (WA)*
NOx	means oxides of nitrogen, calculated as the sum of nitric oxide and nitrogen dioxide and expressed as nitrogen dioxide
Occupier	has the same meaning given to that term under the EP Act.
PM	means particulate matter
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 1.
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 in the same year
Risk Event	As described in Guidance Statement: Risk Assessment
Serious Environmental Harm	has the same meaning given to that term under the EP Act.
SOx	means oxides of sulfur
Spot Sample	means a discrete sample representation at the time and place at which the sample is taken
TDS	Total Dissolved Solids
TRH	Total Recoverable Hydrocarbons
TMF	Tailings Management Facility
TMF Cell 1	Cell 1 of the Tailings Management Facility

TMF Cell 2	Cell 2 of the Tailings Management Facility
TMF 1 Stage 1A	Tailings Management Facility Cell 1, Stage 1A to final RL of 185.3 m
TMF 1 Stage 1B	Tailings Management Facility Cell 1, Stage 1B to final RL of 189.3 m
TMF 2 Stage 1A	Tailings Management Facility Cell 2, Stage 1A to final RL of 185.3 m
TMF 2 Stage 1B	Tailings Management Facility Cell 2, Stage 1B to final RL of 189.3 m
TMF 1 Stage 2	Tailings Management Facility Cell 1, Stage 2 to final RL of 194.8 m
TMF 2 Stage 2	Tailings Management Facility Cell 2, Stage 2 to final RL of 194.8 m
TMF 1 Stage 3	Tailings Management Facility Cell 1, Stage 3 to final RL of 200.8 m
TMF 2 Stage 3	Tailings Management Facility Cell 2, Stage 3 to final RL of 200.8 m
tpa	tonnes per annum
TSS	Total Suspended Solids
Unreasonable Emission	has the same meaning given to that term under the EP Act.
µS/cm	MicroSiemens per centimetre
VOC	Volatile Organic Carbons
Waste	has the same meaning given to that term under the EP Act.
WRD	Waste Rock Dump
WWTP	Wastewater Treatment Plant

Interpretation

In this Licence:

(a) the words ‘including’, ‘includes’ and ‘include’ will be read as if followed by the words ‘without limitation’;

(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 means the version of the standard, guideline or code of practice in force at the time of granting of this Licence and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Licence; and

(e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act.

Conditions

Emissions

1. The Licence Holder must not cause any Emissions from the Primary Activities on the Premises except for specified Emissions and general Emissions described in Column 1 of Table 2 subject to the exclusions, limitations or requirements specified in Column 2 of Table 2.

Table 2: Authorised Emissions table

Column 1	**Column 2**
Emission type	**Exclusions/Limitations/Requirements**
Specified Emissions	
Sediment – laden water from the Sediment Ponds	Subject to compliance with Conditions 2, 5 16 and Schedule 2.
Air emissions from the Power Station	Subject to compliance with Conditions 2,5 and Schedule 2.
Discharge of tailings to TMF 1 Stages 1A and B, 2 and 3	Subject to compliance with Conditions 2, 5, 9, 9, 11, 12, 13 14, 17, 24 and Schedule 2.
Discharge of tailings to TMF 2 Stages 1A and B, 2 and 3	Subject to compliance with Conditions 2, 5, 9, 9, 11, 12, 13 14, 17, 24 and Schedule 2.
TMF Decant water and Seepage water	Subject to compliance with Conditions 2, 5, 9, 10, 11, 17
Combined treated effluent and reverse osmosis reject water to camp irrigation area	Subject to compliance with Conditions 2, 3, 5, 12, 15 and Schedule 2.
Putrescible and Inert Waste to Landfill	Subject to compliance with Conditions 2, 4, 5 and Schedule 2.
General Emissions (excluding Specified Emissions)	
Emissions which: • arise from the Primary Activities set out in Schedule 2; or • arise from a Material Change.	Emissions excluded from General Emissions are: • Unreasonable Emissions; or • Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or • Discharges of Waste in circumstances likely to cause Pollution; or • Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or • Emissions or Discharges which do not comply with an Approved Policy; or • Emissions or Discharges which do not comply with a prescribed standard; or • Emissions or Discharges which do not comply with the conditions in an Implementation Agreement or Decision; or • Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the Environmental

Column 1	Column 2
Emission type	**Exclusions/Limitations/Requirements**
	Protection (Unauthorised Discharges) Regulations 2004.

Discharge of emissions

2. The Licence Holder must ensure that the emissions specified in Table 3 are discharged only from the corresponding discharge point and only at the corresponding discharge point location.

Table 3: Authorised discharge points

Emission	Discharge point name and location Schedule 1, Schedule 2 and Schedule 4
Sediment laden / potentially contaminated water that has been settled through the Sediment Ponds	Sediment Pond East Sediment Pond West Sediment Pond 3 Sediment Pond 4
NOx SOx CO VOC PM	GEN1 GEN2 GEN3 GEN4 GEN5 GEN6 GEN7 GEN8 GEN9 GEN10
Tailings	TMF Cell 1 TMF Cell 2
TMF Decant Water and Seepage water	Process Water Pond as depicted in Figure 5 of Schedule 1 and for dust suppression purposes within purple demarcated area depicted in Figure 7 of Schedule 1
Combined treated effluent and reverse osmosis reject water	WWTP Spray Field
Inert and putrescible wastes	Landfill including trenches within Monster WRD

Emission Limits

3. The Licence Holder must ensure that emissions from the discharge point listed in Table 4 for the corresponding parameter do not exceed the corresponding limit when monitored in accordance with Condition 11 or 15.

Table 4: Emission and discharge limits

Discharge point	Parameter	Limit
Oily Water Separators	TRH	< 15 mg/L
WWTP effluent stream to irrigation area	TDS	< 4,000 mg/L
Dust suppression at authorised area shown in Figure 7 of Schedule 1	Volume of TMF decant and/or seepage water discharged	15,000m^3 per month

Waste Acceptance

4. The Licence Holder must only accept waste of a waste type into the landfill shown in Schedule 1, which does not exceed the corresponding rate at which waste is received, and which meets the corresponding acceptance specification set out in Table 5.

Table 5: Types of waste authorised to be accepted into the landfill

Waste type	Acceptance specification[1]
Inert Waste Type 1	• Construction and demolition waste for storage and sorting • Waste containing asbestos must not be accepted.
Inert Waste Type 2	Tyres only
Putrescible waste	None specified
Contaminated solid waste	Meeting the guideline values waste acceptance criteria specified for class I or II landfills listed in Landfill Waste Classification and Waste Definitions 1996 (As amended December 2009),

Note 1: Waste is authorised to be accepted from the Pilgan premises (Licence L9056/2017) and Ngungaju (Prescribed Premises L9036/2017).

Infrastructure and equipment

5. The Licence Holder must ensure that the site infrastructure and equipment listed in Table and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 6.

Table 6: Infrastructure and equipment controls table

Site infrastructure and equipment	Operational requirements
Processing Plant	• Process capacity of 2 Mtpa; • Ore is fed through three stages of crushing, multiple screening processes, dense media separation, high pressure grinding, gravity concentrators, cyclones, cleaner spirals, cleaner scavenger spirals, low intensity magnetic separation, hydrocylones, ball mill, flotation, mill and concentrate thickener to produce lithium and tantalum concentrate; • With the exception of the Tailings Thickener, plant is on a concrete pad and concrete bunded with a containment capacity equivalent to 110% of the capacity of largest tank and drainage to the Process Water Pond. Tailings Thickener will have a diversion drain to divert any spill into the sediment pond. • Tailings Thickener fitted with bed level alarm to indicate if there is a leak in the Tailings Thickener. Bed level alarm linked to process control instrumentation. • Tailings Thickener to have constant monitoring via digital CCTV camera, and visual inspection of the area at least twice a day (once per shift) • Spills of tailings materials (associated with processing plant or tailings thickener) to be contained and removed as soon as practicable to an appropriate location.

	• Electric sump pumps installed and operational in the concrete flooring to collect and pump any spilled material back into the process stream; • Flow transmitter and magflow meter installed and operational; • Isotainers, mixing tanks and storage tanks are located on a concrete bunded area with plinths within the Processing Plant area; and • Product stockpiles.
TMF Cell 1	<u>General:</u> • Integrated waste landform over 30.2 ha; • Embankment level: ➢ TMF 1, Stage 1A - 185.3mRL; ➢ TMF 1, Stage 1B - 189.3mRL; ➢ TMF1, Stage 2 - 194.8mRL; ➢ TMF1, Stage 3 - 200.8mRL; • Permeability of between 2.48 x 10^{-6} m/s and 27.40 x 10^{-6} m/s; • Minimum freeboard of 500m maintained; and • Contain rainfall of a 1 in 100 year, 72 hour ARI event. • TMF Operations manual updated at least every two years. <u>Underdrainage system:</u> • Underdrainage provided at the low point of the Cell 1 Stage 1A perimeter (northern corner) to minimize water accumulation. • Underdrainage pipe is pre-slotted and comprises of: ➢ "HDPE PE100 PN16 DN200 mm, ➢ PVC-U PN16 DN200, or ➢ SRP Rocla Plastream DN225" (115275.04 SP01 Rev0) • This pipe is placed in the existing drainage line and extends 60 m towards the upstream side of the embankment and is covered by 0.5 m of gravel material which is extended until the gravel packing meets the natural ground surface. <u>Cut-off trench:</u> • Cut off trench (to a depth of 1.5m and width of 3.0m through superficial materials) constructed through the surficial deposits on the upstream side of the starter embankments (constructed from pre-strip mine waste rock materials with low permeability upstream zone formed from clayey sand materials excavated from the vicinity of the TMF footprint) and extended around the full TMF perimeter; and • A sandy filter zone separates the low-permeability zone from the waste rock zone. <u>Decant Pond:</u> • Decant removed to Process Water Dam via submersible pumps to minimize surface area of the decant pond at all times; • Return water pump installed and operational with capacity of at least 30L/s; • Shade cloth filter added to the decant tower to prevent smaller filter rock particles entering the tower sump and effecting the submersible pump operation; • The maximum operating pond depth at decant tower of 1.3 m; and • Daily inspection of decant pond location. <u>Deposition:</u> • Multiple rotating spigots (ring main) on a cyclic (rotating) basis. • Discharge spigot spacing -24m • Directional discharge control at the spigots should be managed on a daily basis to maintain an overall drainage gradient towards the pond area, prevent long term ponding in areas other than the designated decant area and minimise drying beach thickness. • Target "wet" layer thickness of a maximum 250 mm to be achieved for tailings deposition on each deposition cycle. • Tailings discharge at minimum 50% solids concentration rate. <u>Pipelines (tailings delivery, distribution and decant return):</u> • Audible alarms fitted to record pressure changes fitted to all pipelines and monitored in the control room; • Tailings delivery line and return water line above ground within bunds with spill catch pits of 12 hours containment; • Continuous process control monitoring (leak detection) and flow meters at either end of the tailings delivery lines; • Physical inspection of the pipeline corridors at least once per 12 hour shift (twice

	daily); and • In the event flow meter readings indicate pipeline failure, the affected pipeline is shut down. <u>Monitoring:</u> • Eight piezometers are monitored for determining phreatic surface within the tailings; • Groundwater monitoring is conducted at the thirteen monitoring bores adjacent to the TMF (Table) to enable detection of seepage and groundwater mounding/quality; and
TMF Cell 2	<u>General:</u> • Integrated waste landform over 30.9 ha; • Embankment level: ➢ TMF 2, Stage 1A of 185.3mRL; ➢ TMF 2, Stage 1B of 189.3mRL; ➢ TMF 2, Stage 2 - 194.8mRL; ➢ TMF 2, Stage 3 - 200.8mRL; • Permeability of between 2.4 x 10^{-9} to 9.5 x 10^{-9} m/s; • Minimum freeboard of 500m maintained; and • Contain rainfall of a 1 in 100 year, 72 hour ARI event. • TMF Operations manual updated at least every two years. <u>Underdrainage system and Cut-off trench:</u> • Cut off trench constructed through the surficial deposits on the upstream side of the starter embankments and extended around the full TMF perimeter. <u>Decant Pond:</u> • Decant removed to Process Water Dam via submersible pumps to minimize surface area of the decant pond at all times; • Return water pump installed and operational with capacity of at least 30L/s; • Shade cloth filter added to the decant tower to prevent smaller filter rock particles entering the tower sump and effecting the submersible pump operation; • The maximum operating pond depth at decant tower of 1.3 m; and • Daily inspection of decant pond location. <u>Seepage Trenches:</u> • Southern and Northern Seepage trenches and associated infrastructure installed, maintained and operational as depicted in Schedue 1, Figure 5. <u>Deposition:</u> • Multiple rotating spigots (ring main) on a cyclic (rotating) basis. • Discharge spigot spacing - 24m • Directional discharge control at the spigots should be managed on a daily basis to maintain an overall drainage gradient towards the pond area, prevent long term ponding in areas other than the designated decant area and minimise drying beach thickness. • Target “wet” layer thickness of a maximum 250 mm to be achieved for tailings deposition on each deposition cycle. • Tailings discharge at minimum 50% solids concentration rate. <u>Pipelines (tailings delivery, distribution and decant return):</u> • Audible alarms fitted to record pressure changes fitted to all pipelines and monitored in the control room; • Tailings delivery line and return water line above ground within bunds with spill catch pits of 12 hours containment; • Continuous process control monitoring (leak detection) and flow meters at either end of the tailings delivery lines; • Physical inspection of the pipeline corridors at least once per 12 hour shift (twice daily); and • In the event flow meter readings indicate pipeline failure, the affected pipeline is shut down. <u>Monitoring:</u> • Ten piezometers are monitored for determining phreatic surface within the tailings; • Groundwater monitoring is conducted at the ~~six~~ thirteen monitoring bores adjacent to the TMF (Table) to enable detection of seepage and groundwater mounding/quality; and

Power Station	• Installed load capacity of 15.7 MW; • 10 x diesel generators with capacities ranging from 1300 kVA to 3100 kVA; • Drainage at the power station units graded such that spills and surface water flow enters a triple oil/water interceptor; • Sediment pond to receive surface water flow; • Automated Control System; • Waste oil tanks self-contained double skin design within concrete aprons; • Fully enclosed metal bin storage for used oil contaminated parts are collected for disposal offsite; and • Oily water separator, with oil from the separation process stored in a 1,000 L tank prior to disposal offsite.
Fuel Storage Facilities	• Complies with Australian Standard AS 1940-2004 The storage and handling of flammable and combustible liquids.
Sediment Ponds	• Receives site stormwater; • Clay lined; • Minimum freeboard of 300mm is maintained in the ponds; • Twice daily Inspections, and before known significant rainfall events to ensure they are capable of functioning to remove sediment during high-rainfall events; • Surface water monitoring sites have been established, which include sites upstream and downstream of the (entire) operation; and • Receives overflow from the Process Water Ponds in the event of extreme rainfall events. • Receives overflow from tailings thickener is the event of a spill, leak or rupture. • Any tailings material or leachate contained within sediment pond to be removed as soon as practicable to an appropriate location.
Oily Water Separators	• Where water is likely to be contaminated with hydrocarbons and other contaminants, this water will be directed to an Oily Water Separator prior to discharge to the environment or re-use onsite; and • Oily Water Separators treat hydrocarbon waste to a maximum TRH concentration of <15mg/L prior to discharge which is monitored monthly.
Raw Water Tank	• 1.833 ML capacity (with 288 kL reserved for fire water capacity); • HDPE lined steel impermeable tank; • Fully covered; and • Water cannot ingress the tank during rainfall events.
Process Water Pond	• Capacity of Cell 1 is 9.2 ML and capacity of Cell 2 is 15 ML; • Minimum freeboard of 300m maintained in the pond; • Freeboard markers visible; • Maintain 1.8 mm HDPE liner via regular inspections; • Float cut-off system maintained to prevent overflow; • Twice daily inspections of the pond during operation; • Monitored after each rainfall event to check for adequate freeboard being available and to initiate pumping of the retained water into the process circuit or used for dust suppression within purple area demarcated in Figure 7 of Schedule 1; and • Water collected in the pond is reused in processing.
WWTP	• Moving Bed Bioreactor System with less than 150 m^3/day treatment capacity; • Balance tank fitted with high level alarm wired to visual strobe light and sounder to alert of overflows; • Treated effluent / Irrigation tank fitted with high level alarm; • Flow meters installed at influent inlet point and effluent egress point; and • Stock exclusion fence maintained surrounding entire WWTP facility.
WWTP Spray Field	• Irrigation sprayfield of 3.04 ha; • Internal soil berm must be maintained inside the fence to prevent surface run off from the spray field during storm events; • The spray field is managed to prevent waterlogging of the surface or ponding of water by alternating discharge between the sprinklers; • No irrigation generated run-off, spray drift or discharge occurs beyond the boundary of the irrigation area;

	• Wastewater is evenly distributed over the irrigation area; • Soil erosion is prevented from occurring inside the irrigation area; • Healthy vegetation cover is maintained over the wastewater irrigation areas; • The spray field area is monitored for the presence of weeds on at least a quarterly basis, with herbicide treatment being carried out as required; • Daily inspections of the spray field are undertaken to ensure there is no waterlogging of soil or ponding, vegetation health is not declining and to identify maintenance requirements; • Maintain the fencing around the irrigation area that acts as an effective barrier to unauthorised persons, cattle, horses and other stock; • Undertake regular inspections of all fencing and repair damage as soon as practicable; and • Maintenance is undertaken as required to ensure correct operation of the system.
Landfill	• Capacity of 20,000 tpa; • Only putrescible waste, inert wastes and tyres are disposed of at the landfill in separate trenches; • Trenches are covered a minimum of once per fortnight with soil material; • Appropriate and adequate signage is maintained around the landfill sites; • Place and compact waste to ensure that all faces are stable and capable of retaining restoration material; • Restore cells (trenches) within 6 months after disposal in that cell (trench) has been completed; • Store sufficient, dense, inert and incombustible material that is readily available at all times to cover the landfill tipping area; • The size of the tipping face is kept to a minimum, and not larger than 30 metres in length or more than 2 metres above ground level in height; • Waste is levelled and compacted (e.g. maximum 300 mm lifts, passed over at least 3 times by heavy earthmoving machinery) as soon as practicable after it has been placed within the cell (trench); • Cover landfilled waste with sufficient clean fill (e.g. 100 mm) at least weekly, to ensure that the waste is completely covered and that no waste is exposed; • Windblown waste is returned to the landfill site on a regular and recurring basis, at least monthly; • Unserviceable tyres shall be transported to a designated area within the approved waste rock dump disturbance footprint. They shall be stacked appropriately and periodically buried in accordance with Regulation 14(2) of the EP Regs; • No hydrocarbons and / or chemicals are disposed of into the landfill facility; and • The volume of waste disposed of into the landfill is recorded.
All	• Where stormwater is likely to be contaminated with hydrocarbons and other contaminants, water will be directed to an oil water separation system prior to discharge to the environment or re-use onsite (with TPH less than 15mg/L). Initial sampling for other contaminants will be required prior to discharge; and • During periods of flow in the four creeks (Northern, Houston, Pilgangoora, Southern) at a minimum of once annually, surface water samples are collected at one site upstream of the project and one site downstream of the Project with laboratory analyses for pH, TDS, TSS, electrical conductivity, major cations and anions, and contaminants. • Water carts used within purple demarcated area in Figure 7, Schedule 1 must be fitted with sprays and dribble bars that can be adjusted to avoid overspray and runoff. • Quarterly visual monitoring of vegetation condition surrounding purple demarcated area shown in Figure 7, Schedule 1

Monitoring

6. The Licence Holder must ensure that:

(a) all samples are collected and preserved in accordance with AS/NZS 5667.1;

(b) all wastewater sampling is conducted in accordance with AS/NZS 5667.10;

(c) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and

(d) 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.

7. The Licence Holder must ensure that:

(a) monthly monitoring is undertaken at least 15 days apart;

(b) six monthly monitoring is undertaken at least 5 months apart; and

(c) quarterly monitoring is undertaken at least 45 days apart.

8. The Licence Holder must ensure that all monitoring equipment used on the Premises to comply with the Conditions of this Licence is calibrated in accordance with the manufacturer's specifications.

9. The Licence Holder must complete and document twice daily inspections of the integrity of the Process Water Pond, TMF and process pipelines (tailings delivery, distribution and decant return pipelines).

10. The Licence Holder must undertake water balance for the TMF each monthly period and (as a minimum) consider the following:

(a) site rainfall;

(b) evaporation rate obtained from on-site evaporation pan or calculated as per Schedule 3;

(c) surface runoff;

(d) decant water stored and recovery volumes;

(e) seepage recovery volumes from TMF underdrainage and other seepage infrastructure;

(f) decant water and seepage recovery water volumes used for dust suppression within authorised area demarcated in Figure 7, Schedule 1;

(g) volume of tailings deposited;

(h) tailings solid content (w/w %);

(i) volume of water in tailings; and

(j) calculated seepage rate, calculated as per Schedule 3; and compared against predicted seepage rates for the TMF.

11. The Licence Holder must sample TMF decant water:

(a) at the locations specified in Column 1 of Table 7;

(b) for the parameters specified in Column 2 of Table 7;

(c) in the units specified in Column 3 of Table 7;

(d) over the Averaging Period specified in Column 4 of Table 7;

(e) for the frequency specified in Column 5 of Table 7;

(f) using the method specified in Column 6 of Table 7;

(g) compare the results to the long-term irrigation (LTV) trigger values, aquatic ecosystem

criteria and livestock drinking water values applied from the ANZECC/ARMCANZ Guidelines, where applicable; and

(h) compare the results to the groundwater monitoring results obtained in Condition 12.

Table 7: Decant water monitoring

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Location	**Parameter[2, 3]**	**Unit**	**Averaging Period**	**Frequency**	**Method**
Decant water within the TMF 1 and 2	pH[1]	mg/L	Spot sample	Six monthly	AS/NZS 5667.1 AS/NZS 5667.11
	Electrical Conductivity, EC[1]				
	Ammonia, NH_3				
	Nitrite, NO_2 as NO_2				
	Nitrate, NO_3 as NO_3				
	Bicarbonate Alkalinity as HCO_3				
	Calcium Carbonate $CaCO_3$				
	Carbonate Alkalinity as CO_3				
	Total Dissolved Solids, TDS				
	Total Alkalinity as $CaCO_3$				
	Total Hardness by Calculation				
	Sulfate, SO_4				
	Aluminium, Al				
	Antimony, Sb				
	Arsenic, As				
	Boron, B				
	Barium, Ba				
	Bismuth, Bi				
	Calcium, Ca				
	Cadmium, Cd				
	Chlorine, Cl				
	Cobalt, Co				
	Chromium, Cr				
	Caesium, Cs				
	Copper, Cu				
	Fluoride, F				
	Hexavalent Chromium, Cr^{6+}				
	Iron, Fe				
	Potassium, K				
	Lead, Pb				
	Lithium, Li				
	Magnesium, Mg				
	Mercury, Hg				
	Molybdenum, Mo				
	Manganese, Mn				

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Location	**Parameter[2, 3]**	**Unit**	**Averaging Period**	**Frequency**	**Method**
	Nickel, Ni				
	Niobium, Nb				
	Nitrate, NO_3 as NO_3				
	Nitrite, NO_2 as NO_2				
	Phosphorus, P				
	Rubidium, Rb				
	Selenium, Se				
	Silicon, Si				
	Silver, Ag				
	Sodium, Na				
	Strontium, Sr				
	Tantalum, Ta				
	Thallium, Tl				
	Thorium, Th				
	Tin, Sn				
	Uranium, U				
	Vanadium, V				
	Zinc, Zn				
	Gross Alpha	Bq/L	Spot sample	Six monthly	AS/NZS 5667.1 AS/NZS 5667.11
	Gross Beta				
	Radium-226				
	Radium-228				

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

Note 2: Level of detection is required to be sufficient to enable a comparison with ANZECC/ARMCANZ Guidelines.

Note 3: Metals should be monitored as total metals.

12. The Licence Holder must sample ambient groundwater:

(a) at the locations specified in Column 1 of Table 8 and depicted in the Ambient Groundwater Monitoring Map in Schedule 1;

(b) for the parameters specified in Column 2 of Table 8;

(c) in the units specified in Column 3 of for the Table 8;

(d) over the Averaging Period specified in Column 4 of Table 8;

(e) for the frequency specified in Column 5 of Table 8;

(f) using the method specified in Column 6 of Table 8;

(g) compare the results to the long-term irrigation (LTV) trigger values and aquatic ecosystem criteria applied from the ANZECC/ARMCANZ Guidelines, where applicable;

(h) compare results to the triggers specified in Column 7 of Table 8; and

(i) compare the results to the limits specified in Column 8 of Table 8.

Table 8: Ambient groundwater monitoring

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Location	**Parameter[2, 5]**	**Unit**	**Averaging Period**	**Frequency**	**Method**	**Trigger**	**Limit[3]**
TMFMB01; TMFMB02; PMB001; PWE033; PWB005; TMFMB03; TMFMB04; TMFMB05; TMFMB06; PMB022, PMB021, WELL 5 and PWBMB004, as depicted in Schedule 1, Figure 4	Standing water level[1]	mbgl	Spot sample	Monthly	AS/NZS 5667.1 AS/NZS 5667.11	7 mbgl (5 mbgl for PWB005, TMFMB04 and TMFMB05)	5 mbgl (3 mbgl for PWB005, TMFMB04 and TMFMB05)
	pH[1]	pH units		Monthly		-	6.5-8.5
	Electrical Conductivity[1]	µS/cm		Monthly		-	-
	Ammonia, NH_3	mg/L		Monthly		-	-
	Bicarbonate Alkalinity as HCO_3			Monthly		-	-
	Calcium Carbonate $CaCO_3$			Monthly		-	-
	Carbonate Alkalinity as CO_3			Monthly		-	-
	Nitrate, NO_3 as NO_3			Monthly		-	400
	Nitrite, NO_2 as NO_2			Monthly		-	30
	Total Alkalinity as $CaCO_3$			Monthly		-	-
	Total Dissolved Solids, TDS			Monthly		-	4,000[4]
	Total Hardness by Calculation			Monthly		-	-
	Sulfate, SO_4			Monthly		-	1,000
	Calcium, Ca			Monthly		-	-
	Chloride, Cl			Monthly		-	-
	Lithium, Li			Monthly		-	-
	Magnesium, Mg			Monthly		-	600
	Potassium, K			Monthly		-	-
	Silica, Soluble			Monthly		-	-
	Sodium, Na			Monthly		-	-
	Total nitrogen, TN			Quarterly		-	-
	Total phosphorus, TP			Quarterly		-	-
	Aluminum, Al			Quarterly		-	5

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Location	**Parameter[2, 5]**	**Unit**	**Averaging Period**	**Frequency**	**Method**	**Trigger**	**Limit[3]**
	Antimony, Sb			Quarterly		-	-
	Arsenic, As			Quarterly		-	0.5
	Barium, Ba			Quarterly		-	-
	Bismuth, Bi			Quarterly		-	-
	Boron, B			Quarterly		-	5
	Bromide, Br			Quarterly		-	-
	Cadmium, Cd			Quarterly		-	0.01
	Caesium, Cs			Quarterly		-	-
	Chromium, Cr			Quarterly		-	1
	Cobalt, Co			Quarterly		-	1
	Copper, Cu			Quarterly		-	1
	Fluoride, F			Quarterly		-	2 (with the exception of PMB002) 2.5 for PMB002
	Hexavalent Chromium, Cr^{6+}			Quarterly		-	-
	Iron, Fe			Quarterly		-	-
	Lead, Pb			Quarterly		-	0.1
	Manganese, Mn			Quarterly		-	-
	Mercury, Hg			Quarterly		-	0.002
	Molybdenum, Mo			Quarterly		-	0.15
	Nickel, Ni			Quarterly		-	1
	Niobium, Nb			Quarterly		-	-
	Rubidium, Rb			Quarterly		-	-
	Selenium, Se			Quarterly		-	0.02
	Silicon, Si			Quarterly		-	-
	Tantalum, Ta			Quarterly		-	-
	Thallium, Tl			Quarterly		-	-
	Thorium, Th			Quarterly		-	-

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Location	**Parameter[2, 5]**	**Unit**	**Averaging Period**	**Frequency**	**Method**	**Trigger**	**Limit[3]**
	Tin, Sn			Quarterly		-	-
	Uranium, U			Quarterly		-	0.2
	Vanadium, V			Quarterly		-	0.2
	Zinc, Zn			Quarterly		-	20
	Gross Alpha	Bq/L		Six monthly		0.5 for PMB001, PMB022, PMB021, WELL 5 1 for PWE033, PWB005, TMFMB03, TMFMB04, PWBMB004 1.5 for TMFMB05 and TMFMB06 4 for TMFMB01 2 for TMFMB02	-
	Gross Beta			Six monthly		0.5	-
	Radium 226			Immediately, if Gross Alpha and/or Gross Beta are triggered and then six monthly		5	-
	Radium 228			Immediately, if Gross Alpha and/or Gross Beta are triggered and then six monthly		2	-

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

Note 2: Level of detection is required to be sufficient to enable a comparison with ANZECC/ARMCANZ Guidelines.

Note 3: Limits based on the Livestock drinking water quality in ANZECC/ARMCANZ Guidelines, with the exception of SWL.

Note 4: Limit for TDS based on the Livestock drinking water quality in ANZECC/ARMCANZ Livestock Guidelines for Beef Cattle

Note 5: Metals should be monitored as filtered metals.

13. The Licence Holder shall implement measures to decrease standing water level within 3 months if monitoring required by Condition 12, indicates that the standing water trigger level has been exceeded, and is not a result of natural excessive rainfall events.

14. The Licence Holder must immediately notify the CEO in writing if the results required by

Condition 12, Table 8 indicates that a trigger level and/or limit has been exceeded and outline measures to be actioned within set timeframes. Results of Gross Alpha and Gross Beta levels are exempted of this requirement and shall be included in the Annual Environmental Report, specified by Condition 22.

15. The Licence Holder must sample outputs from the combined Camp reverse osmosis brine and camp wastewater treatment plant mixing tank and oily water separators:

(a) at the locations specified in Column 1 of Table 9 and depicted in the maps in Schedule 1;

(b) for the parameters specified in Column 2 of Table 9;

(c) in the units specified in Column 3 of Table 9;

(d) over the Averaging Period specified in Column 4 of Table 9;

(e) for the frequency specified in Column 5 of Table 9;

(f) using the method specified in Column 6 of Table 9; and

(g) compare the results to the Short-term irrigation trigger values applied from the ANZECC/ARMCANZ Guidelines, where applicable.

Table 9: Wastewater monitoring during operation

Column 1	**Column 2**	**Column 3**	**Column 4**	**Column 5**	**Column 6**
Location	**Parameter[2, 3]**	**Units**	**Averaging period**	**Frequency**	**Method**
WWTP discharge point from combined effluent and RO Brine mixing tank	Volume	m^3	Annual	Continuous	Flow metering device
	Total nitrogen, TN	kg/ha/yr to the irrigation area	Annual	Quarterly	AS 5667.10 AS/NZS 5667.1
	Total phosphorus, TP	kg/ha/yr to the irrigation area			
	Total nitrogen, TN	mg/L	Spot sample		
	Total phosphorus, TP	mg/L			
	pH	pH units			
	Electrical Conductivity, EC	µS/cm			
	E.coli	cfu/100mL			
	Ammonia, NH_3	mg/L			
	Nitrate, NO_3 as NO_3				
	Nitrite, NO_2 as NO_2				
	Bicarbonate Alkalinity as HCO_3				
	Calcium Carbonate $CaCO_3$				
	Carbonate Alkalinity as CO_3				
	Biochemical Oxygen Demand, BOD				

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Location	**Parameter[2, 3]**	**Units**	**Averaging period**	**Frequency**	**Method**
	Total Suspended Solids, TSS				
	Total Dissolved Solids, TDS				
	Total Hardness by Calculation				
	Sulfate, SO_4				
	Aluminum, Al				
	Arsenic, As				
	Bismuth, Bi				
	Bromide, Br				
	Cadmium, Cd				
	Caesium, Cs				
	Calcium, Ca				
	Chloride, Cl				
	Chromium, Cr				
	Cobalt, Co				
	Copper, Cu				
	Fluoride, Fl				
	Hexavalent Chromium, Cr^{6+}				
	Iron, Fe				
	Lead, Pb				
	Lithium, Li				
	Magnesium, Mg				
	Manganese, Mn				
	Mercury, Hg				
	Molybdenum, Mo				
	Nickel, Ni				
	Niobium, Nb				
	Potassium, K				
	Rubidium, Rb				
	Selenium, Se				
	Silicon, Si				
	Sodium, Na				
	Tantalum, Ta				
	Thallium, Tl				
	Thorium, Th				
	Tin, Sn				
	Uranium, U				
	Zinc, Zn				
	Gross Alpha	Bg/L			
	Gross Beta				
	Radium-226				
	Radium-228				

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Location	**Parameter[2, 3]**	**Units**	**Averaging period**	**Frequency**	**Method**
Process Water Pond	Volume input	m^3	Annual	Continuous	Flow metering device
	Volume output	m^3	Annual	Continuous	Flow metering device
	pH[1]	pH Units	Spot sample	Six monthly	AS 5667.10 AS/NZS 5667.1
	Electrical Conductivity, EC	µS/cm			
	Total nitrogen, TN	mg/L			
	Total phosphorus, TP				
	Ammonia, NH_3				
	Nitrate, NO_3 as NO_3				
	Nitrite, NO_2 as NO_2				
	Bicarbonate Alkalinity as HCO_3				
	Calcium Carbonate $CaCO_3$				
	Carbonate Alkalinity as CO_3				
	Total Dissolved Solids (TDS)				
	Total Hardness by Calculation				
	Sulfate, SO_4				
	Aluminum, Al				
	Arsenic, As				
	Bismuth, Bi				
	Bromide, Br				
	Cadmium, Cd				
	Caesium, Cs				
	Calcium, Ca				
	Chloride, Cl				
	Chromium, Cr				
	Cobalt, Co				
	Copper, Cu				
	Fluoride, Fl				
	Hexavalent Chromium, Cr^{6+}				
	Iron, Fe				
	Lead, Pb				
	Lithium, Li				
	Magnesium, Mg				
	Manganese, Mn				
	Mercury, Hg				
	Molybdenum, Mo				
	Nickel, Ni				
	Niobium, Nb				

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Location	**Parameter[2, 3]**	**Units**	**Averaging period**	**Frequency**	**Method**
	Potassium, K				
	Rubidium, Rb				
	Selenium, Se				
	Silicon, Si				
	Sodium, Na				
	Tantalum, Ta				
	Thallium[2], Tl				
	Thorium, Th				
	Tin, Sn				
	Uranium, U				
	Zinc, Zn				
	Gross Alpha	Bg/L			
	Gross Beta				
	Radium-226				
	Radium-228				
Oily-water treatment systems	Total Recoverable Hydrocarbons	mg/L	Spot sample	Monthly	AS 5667.10 AS/NZS 5667

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

Note 2: Level of detection is required to be sufficient to enable a comparison with ANZECC/ARMCANZ Guidelines.

Note 3: Metals should be monitored as total metals.

16. The Licence Holder must sample water in the sediment ponds:

(a) at the locations specified in Column 1 of Table 10 and depicted in the Discharge Points Maps in Schedule 1;

(b) for the parameters specified in Column 2 of Table 10

(c) in the units specified in Column 3 of Table 10;

(d) over the Averaging Period specified in Column 4 of Table 10;

(e) for the frequency specified in Column 5 of Table 10;

(f) using the method specified in Column 6 of Table 10;

(g) compare the results to the ANZECC/ARMCANZ Livestock drinking water quality Guidelines, where applicable; and

(h) compare the results to the groundwater monitoring results obtained in Condition 12.

Table 10: Sediment Ponds monitoring during operation

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Location	**Parameter[2, 3]**	**Units**	**Averaging period**	**Frequency**	**Method**
Sediment Pond East discharge point Sediment Pond West discharge	Volume	m^3	Annual	Continuous	Flow metering device
	pH	pH units	Spot sample	Following rainfall events when	AS 5667.10 AS/NZS 5667.1
	Electrical Conductivity, EC	µS/cm			

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Location	**Parameter[2, 3]**	**Units**	**Averaging period**	**Frequency**	**Method**
point Sediment Pond 3 discharge point Sediment Pond 4 discharge point	Total nitrogen, TN	mg/L		discharging	
	Total phosphorus, TP				
	Bicarbonate Alkalinity as HCO_3				
	Carbonate Alkalinity as CO_3				
	Total Suspended Solids, TSS				
	Total Dissolved Solids, TDS				
	Sulfate, SO_4				
	Calcium, Ca				
	Chloride, Cl				
	Lithium, Li				
	Magnesium, Mg				
	Potassium, K				
	Sodium, Na				

Records / Reporting

Records

17. 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 5 of this Licence;

(c) monitoring undertaken in accordance with Conditions 11, 12, 15 and 16 of this Licence;

(d) complaints received under Condition 19 of this Licence; and

(e) any Material Change.

In addition, the Books must:

(f) be legible;

(g) if amended, be amended in such a way that the original and subsequent amendments remain legible and are capable of retrieval;

(h) be retained for at least 3 years from the date the Books were made; and

(i) be available to be produced to an Inspector or the CEO.

Notification

18. The Licence Holder must, within 7 days of becoming aware of any non-compliance with Conditions of this licence, notify the CEO in writing of that non-compliance and include in that notification the following information:

(a) which Condition was not complied with;

(b) the time and date when the non-compliance occurred;

(c) if any environmental impact occurred as a result of the non-compliance and if so what that impact is and where the impact occurred;

(d) the details and result of any investigation undertaken into the cause of the noncompliance;

(e) what action has been taken and the date on which it was taken to prevent the non-compliance occurring again; and

(f) what action will be taken and the date by which it will be taken to prevent the non-compliance occurring again.

Complaints

19. The Licence Holder must record the following information in relation to complaints received relating to 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.

Department Request

20. 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.

Annual Audit Compliance Report

21. 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 120 days after the end of that annual period an Annual Audit Compliance Report in the approved form.

Annual Environmental Report

22. The Licence Holder must submit to the CEO by no later than 120 days after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 11, and which provides information in accordance with the corresponding requirements set out in Table 11.

Table 11: Annual Environmental Report

Condition	Requirements
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken.
5, Table 6	Results of quarterly visual monitoring of vegetation condition surrounding authorised dust suppression area (Figure 7, Schedule 1).
10	Annual water balance for TMF – for Cell 1 and 2 The water balance provided to the CEO must include, but need not be limited to the following: (a) the data used to undertake the water balance; (b) details on how the parameters have been calculated / estimated; and (c) an interpretation of the data including: i. analysis on how TMF is performing in regard to water management including seepage rate (calculated seepage rates against predicted rates); and ii. analysis on whether existing seepage controls are considered adequate or what measures to further reduce seepage rates are required.
11	Decant water monitoring requirements as per Condition 11(a) – (h), Table 7 The results to be provided to the CEO must include, but need not be limited to the following: (a) the dates and location of sampling; (b) the raw monitoring data from each location, for each parameter in a tabulated form; and (c) an interpretation of monitoring data results including a comparison to previous monitoring results, licence triggers, limits, and relevant criteria from ANZECC/ARMCANZ guidelines.
12	Ambient groundwater monitoring requirements as per Condition 12(a) – (i), Table 8 The results to be provided to the CEO must include, but need not be limited to the following: (d) the dates and location of sampling; (e) the raw monitoring data from each location, for each parameter in a tabulated form; and (f) an interpretation of monitoring data results including a comparison to previous monitoring results, licence triggers, limits, and relevant criteria from ANZECC/ARMCANZ guidelines.
15	Wastewater monitoring during operation requirements as per Condition 15(a) – (g), Table 9 (a) the dates and location of sampling; (b) the raw monitoring data from each location, for each parameter in a tabulated form; and (c) an interpretation of monitoring data results including a comparison to previous monitoring results and relevant criteria from ANZECC/ARMCANZ guidelines.
16	Sediment Ponds monitoring requirements as per Condition 16(a) - (h), Table 10. (a) the dates and location of sampling; (b) the raw monitoring data from each location, for each parameter in a tabulated form; and (c) an interpretation of monitoring data results including a comparison to previous monitoring results and relevant criteria from ANZECC/ARMCANZ guidelines.

23 The Licence Holder must submit to the CEO, within three months from the date of this licence amendment, a report detailing a review of the current ambient groundwater monitoring strategy (as per condition 12) and seepage control infrastructure for the TMF (as per condition 5 Table 6). The report must include, but need not be limited to, the following:

(a) Results of a geophysical investigation undertaken around the base of the TMF and at various distances from the TMF using electromagnetic or electrical techniques. The investigation must identify the highly conductive zones in the subsurface that are likely to be major conduits for groundwater flow/seepage from the TMF, and their depths and extent (including seepage discharge areas).

(b) Identification of TMF seepage receptors based on the results of the geophysical investigation and supported by on ground assessment of creeklines to determine hyporheic community presence/absence, species composition and richness.

(c) Review of the suitability and effectiveness of the current monitoring network (as per column 1 Table 8), based on the results of the geophysical investigation, together with a review of existing hydrogeological information from the site. The review must identify whether additional bores to monitor seepage from the TMF are required, including their location(s) and depths. At a minimum, also based on the results of the geophysical surveys and on ground assessments, a shallow bore or a suitable monitoring point near the base of the TMF is required to be identified and installed, to obtain water samples that would be more representative of tailings pore-water quality at the base of the TMF. The review must be signed by a suitably qualified hydrogeologist, with a minimum of three years relevant experience.

(d) Review of the suitability and effectiveness of current seepage control infrastructure, based on the results of the geophysical investigation, together with a review of exiting hydrogeological information from the site. The review must identify whether additional seepage control infrastructure is required to contain seepage from the TMF including their location, depth and/or dimensions. The review must be signed by a suitably qualified hydrogeologist, with a minimum of three years relevant experience.

(e) Include a proposed timeframe to implement recommendations from the report.

Schedule 1: Maps

Premises map

The Premises are shown in Figure 1 below.

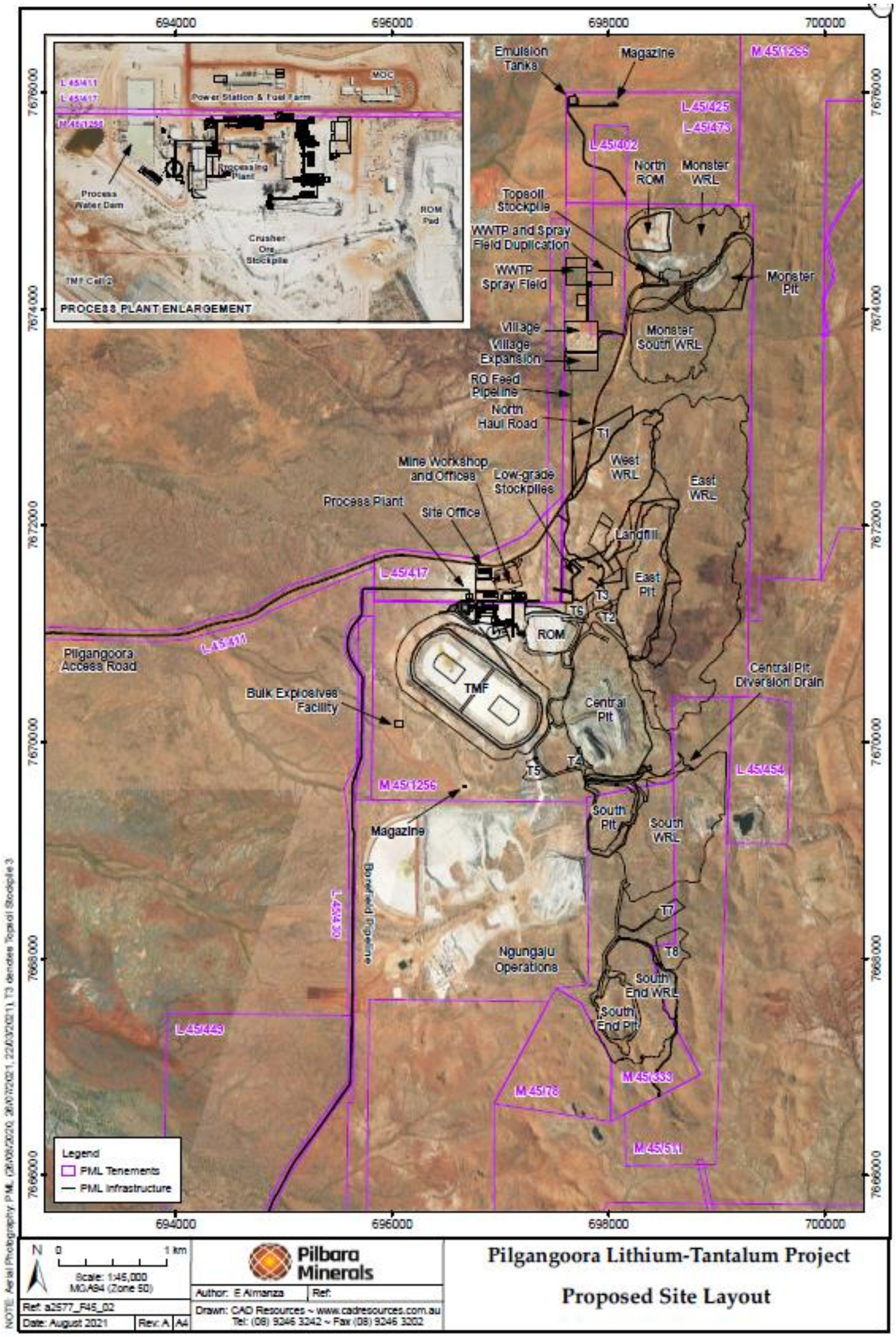


Figure 1: Site Layout

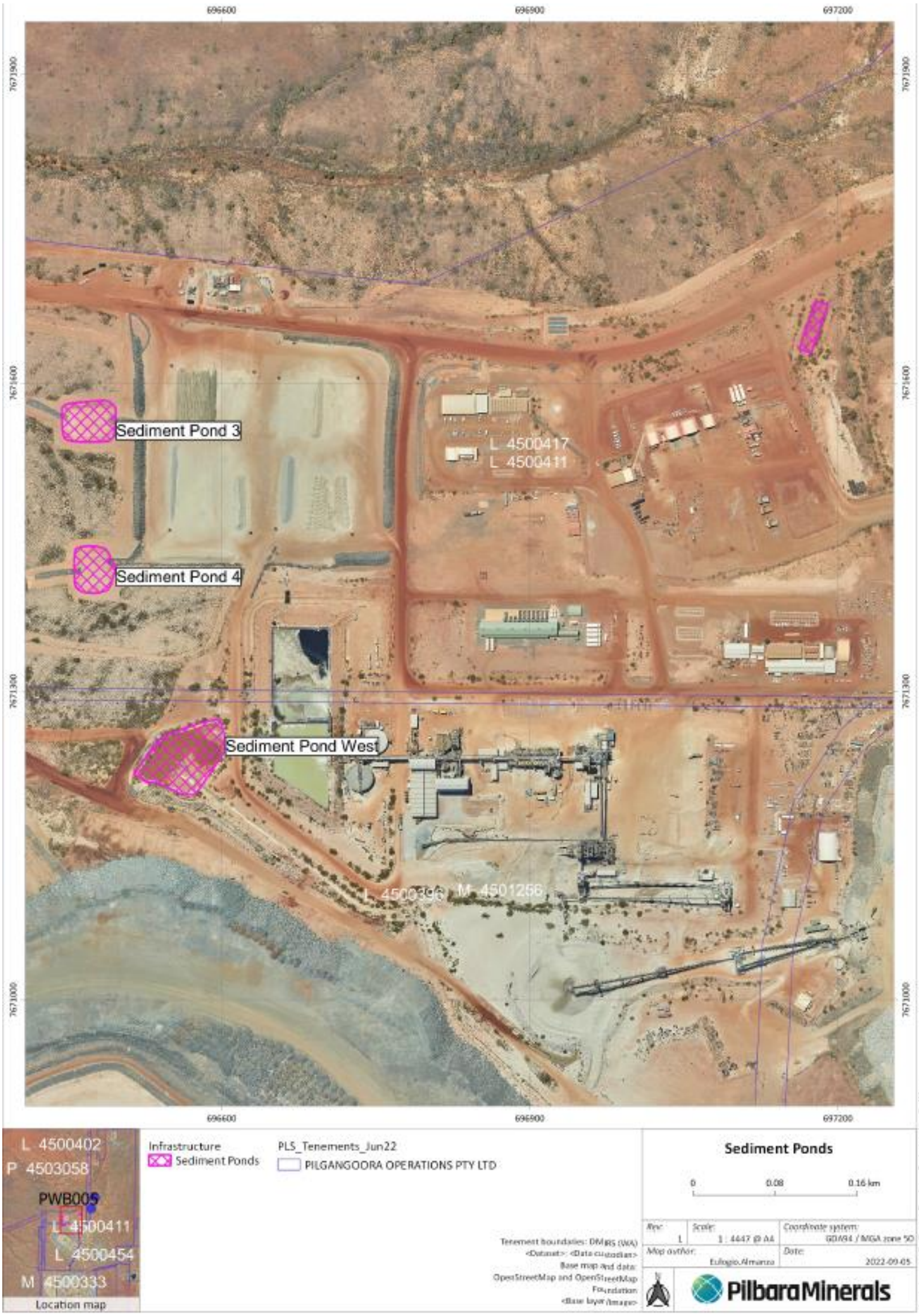


Figure 2: Locations of Sediment Ponds

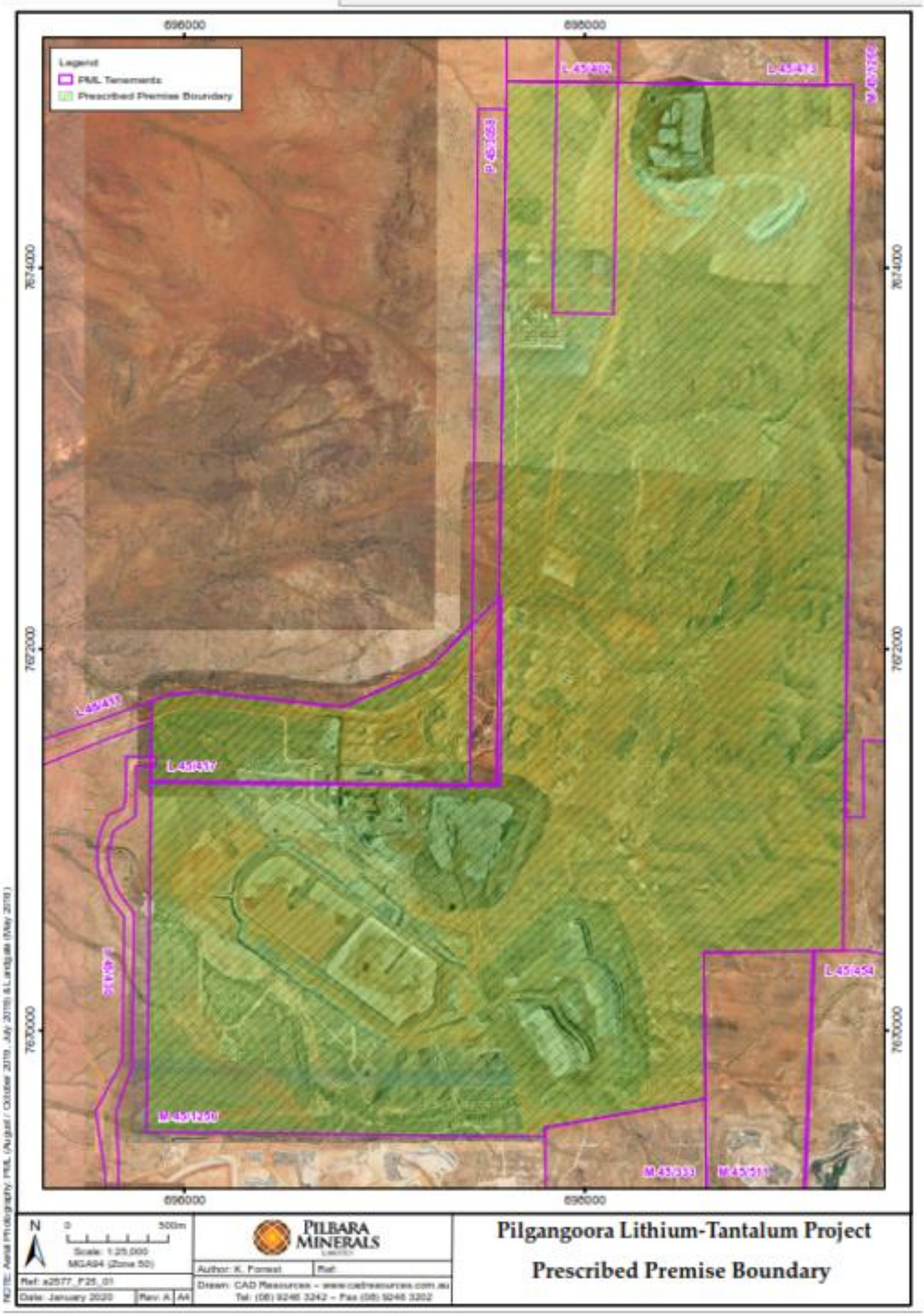


Figure 3: Prescribed Premises Boundary

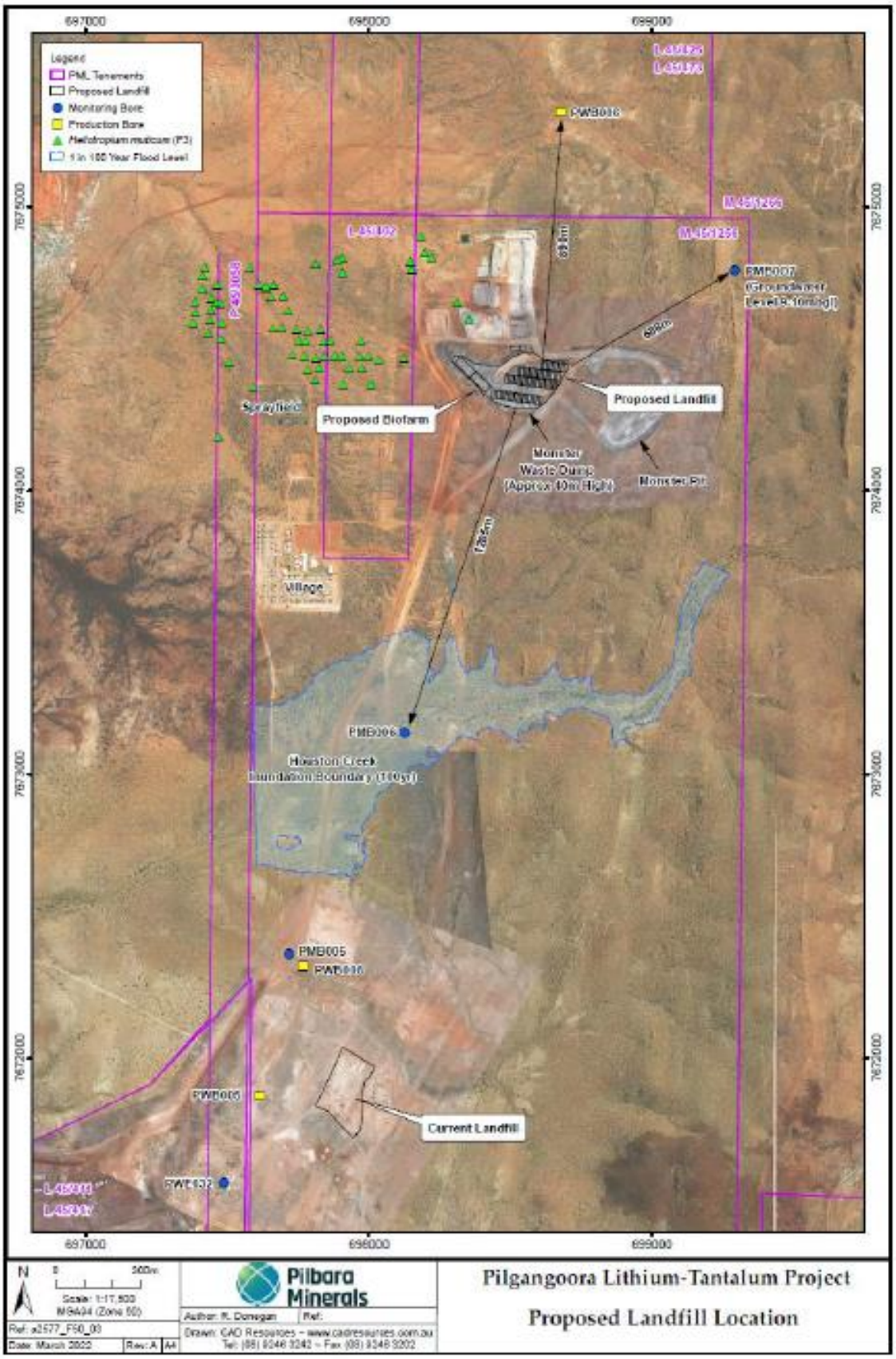


Figure 4: Landfill location within Monster WRD

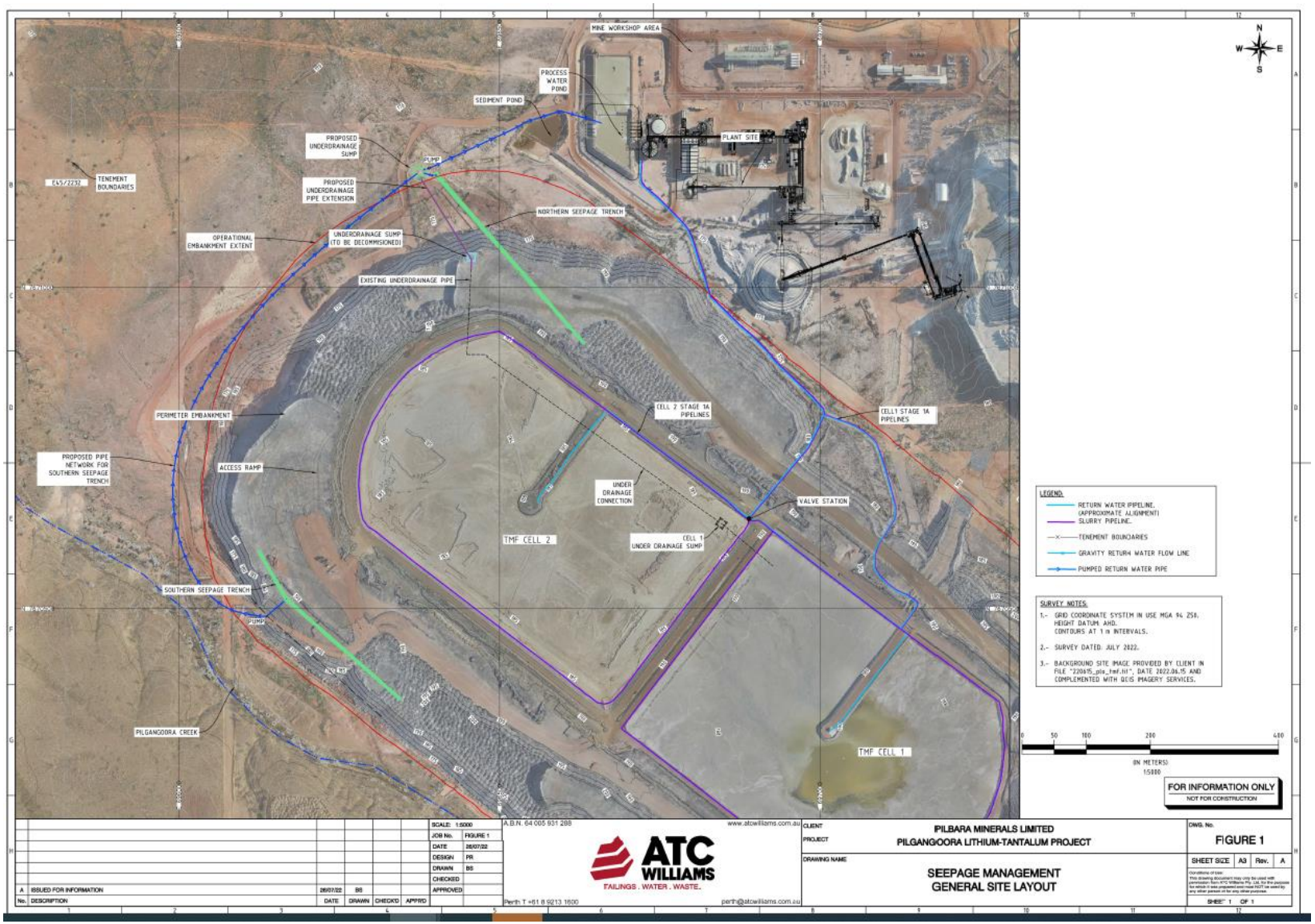


Figure 5: General configuration of pipelines and seepage management infrastructure.

Ambient groundwater monitoring map

The groundwater bores are shown in the map below.

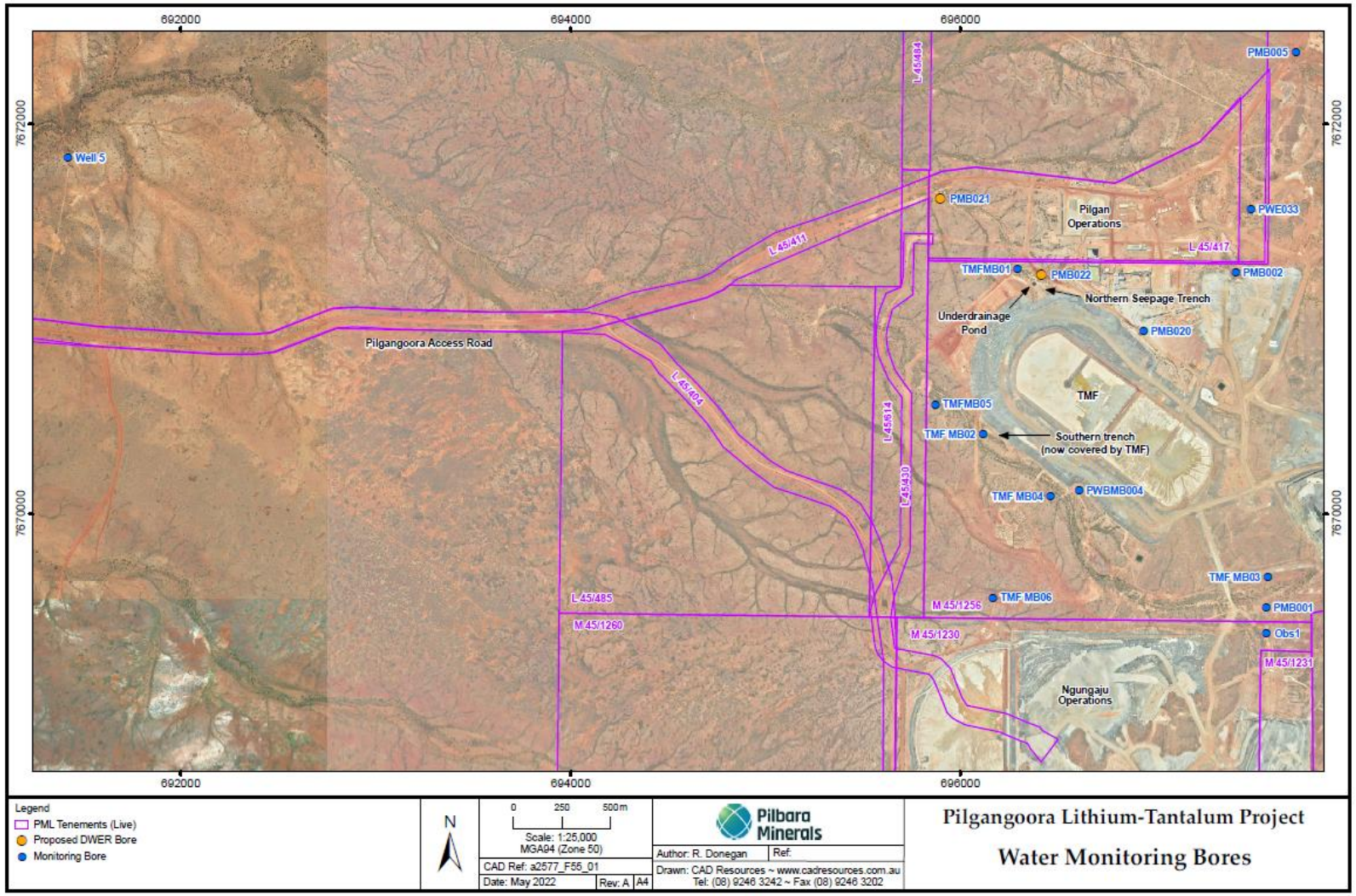


Figure 6: Location of TMF monitoring bores

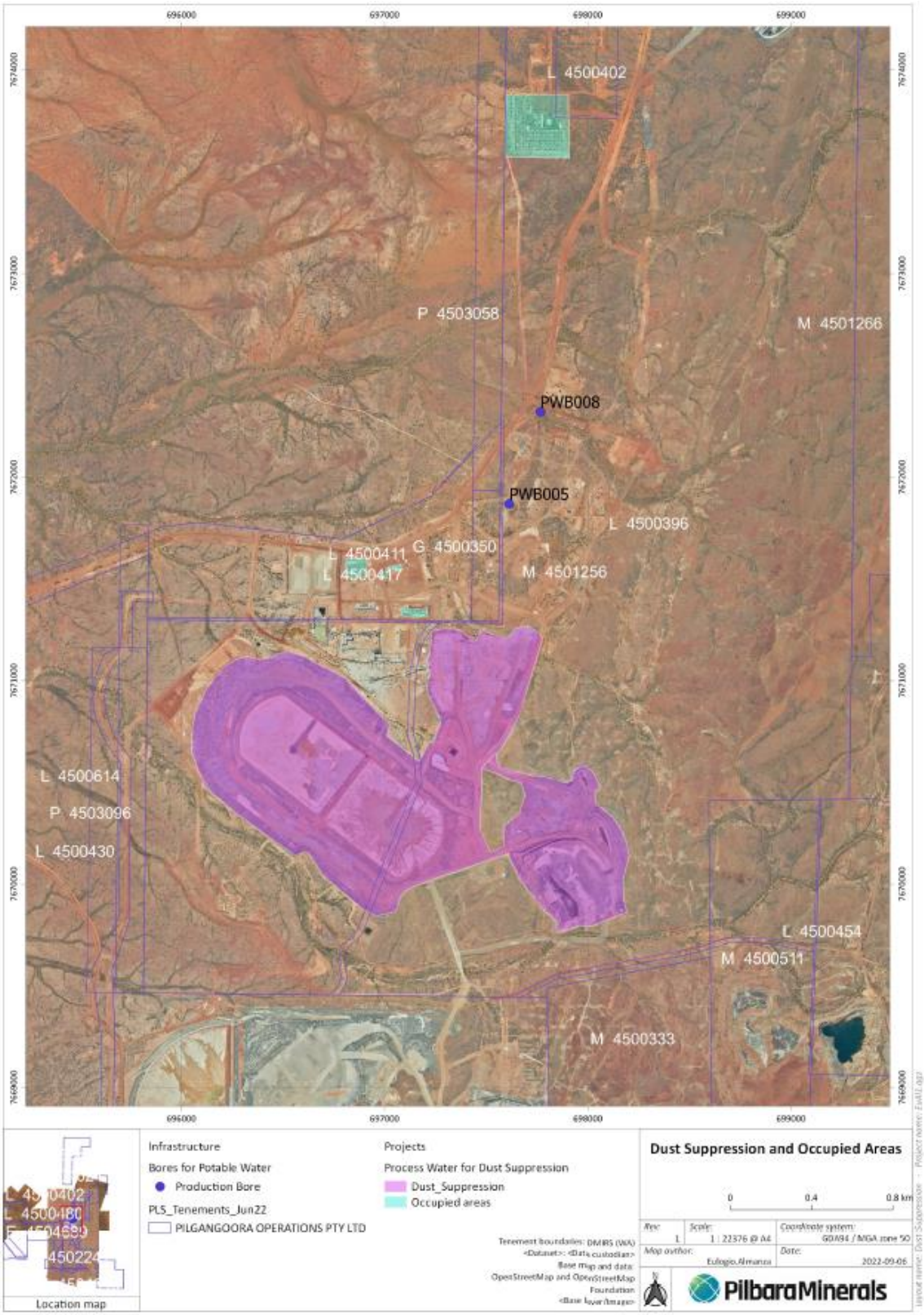


Figure 7: Authorised location for use of TMF decant and seepage water for dust suppression activities – authorised discharge area is shown in purple.

Premises boundary

The Premises boundary comprising M45/1256 and L45/417 is defined by the coordinates in Table 12.

Table 12: Premises boundary coordinates

Easting	Northing
699,326.86	7,673,631.52
699,288.31	7,670,416.47
699,149.36	7,670,415.03
698,594.73	7,670,409.05
698,600.81	7,669,824.31
698,602.72	7,669,640.18
697,800.70	7,669,488.46
697,801.21	7,669,441.84
695,812.18	7,669,465.47
695,833.82	7,671,298.10
695,833.80	7,671,298.10
695,838.80	7,671,729.30
695,906.00	7,671,755.70
696,078.20	7,671,777.20
696,793.90	7,671,695.90
697,229.10	7,671,906.40
697,437.79	7,672,137.43
697,427.72	7,671,291.88
697,560.97	7,671,290.30
697,584.12	7,673,029.19
697,610.12	7,674,980.87
699,342.79	7,674,960.16
699,326.86	7,673,631.52

Schedule 2: Primary Activities

At the time of assessment, Emissions and Discharges from the following Primary Activities were considered in the determination of the risk and related Conditions for the Premises.

The Primary Activities are listed in Table 13:

Table 13: Primary Activities

Primary Activity	Premises production or design capacity
Category 5: Processing Plant	2, 000,000 tonnes per year processed ore 1, 680, 000 tonnes tailings produced
Category 52: Power Station	15.7 MW
Category 54: Camp Wastewater Treatment Plant	150 m^3 per day
Category 64: Class II putrescible and inert landfill	20,000 tonnes per year
Category 73: Bulk storage of chemicals (diesel)	1,036 m^3 in aggregate

Infrastructure and equipment

The Primary Activity infrastructure and equipment situated on the Premises is listed in Table 14.

Table 14: Infrastructure and equipment

Infrastructure and equipment	Plan reference
Processing Plant	Process Plant as shown in the premises map in Schedule 1
Tailings Management Facility Cell 1	TMF Cell 1 as shown in the premises map in Schedule 1 and drawings in Schedule 4
Tailings Management Facility Cell 2	TMF Cell 2 as shown in the premises map in Schedule 1 and drawings in Schedule 4
Power Station comprising diesel operated generators	Power Station & Fuel Farm as shown in the premises map in Schedule 1
Bulk Fuel Farm (Diesel storage)	Power Station & Fuel Farm as shown in the premises map in Schedule 1
Process Water Pond	Process Water Pond as shown in the premises map in Schedule 1
Camp Wastewater Treatment Plant	WWTP & spray field as shown in the premises map in Schedule 1
Class II putrescible and inert landfill	Landfill as shown in the premises map and Figure 4 in Schedule 1

Site layout

The Primary Activity infrastructure and equipment is set out on the Premises in accordance with the site layout specified on Figure 1 to 5 in Schedule 1 and Drawings in Schedule 4.

Schedule 3: Water Balance - Evaporation and Seepage Rate Calculation

For calculation of evaporation rate in water balance required by condition 10, if an on-site evaporation pan is not used, the following must be assumed:

(i) a pan factor of 0.7

(ii) evaporation is only to take place from the surface of the decant pond, not the whole surface of the TSF.

The seepage rates are required to be estimated on a montly basis using the equation below:

$$\sum \text{Inputs} = \sum \text{outputs} \pm \Delta s$$

$$D + R = DE + E + RE + S$$

Where:

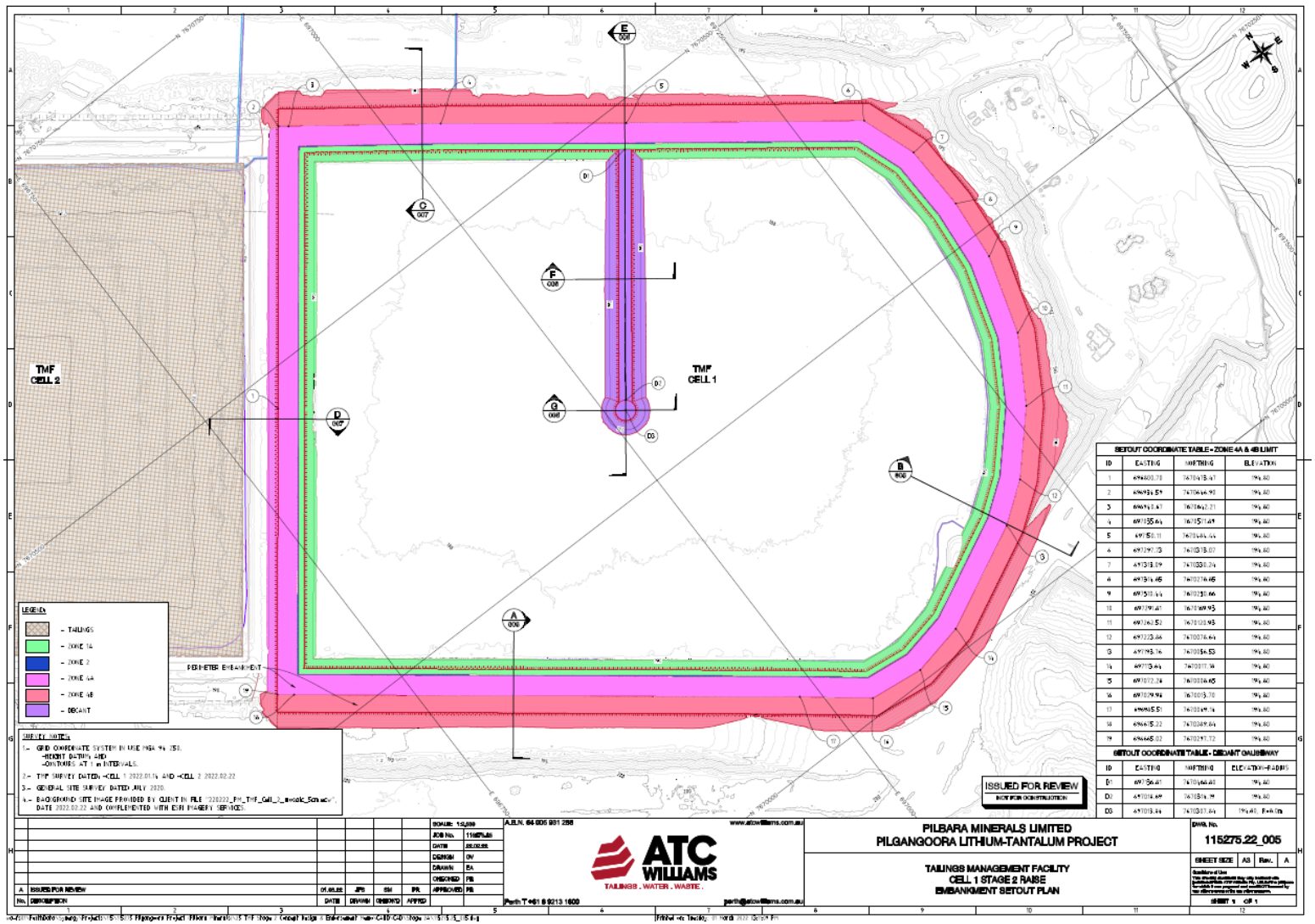
D	=	discharge rate
R	=	rainfall catchment
DE	=	decant
E	=	evaporation from the pond area
RE	=	water retained in tailings pile
S	=	seepage into substrate
Δs	=	change in ponding storage

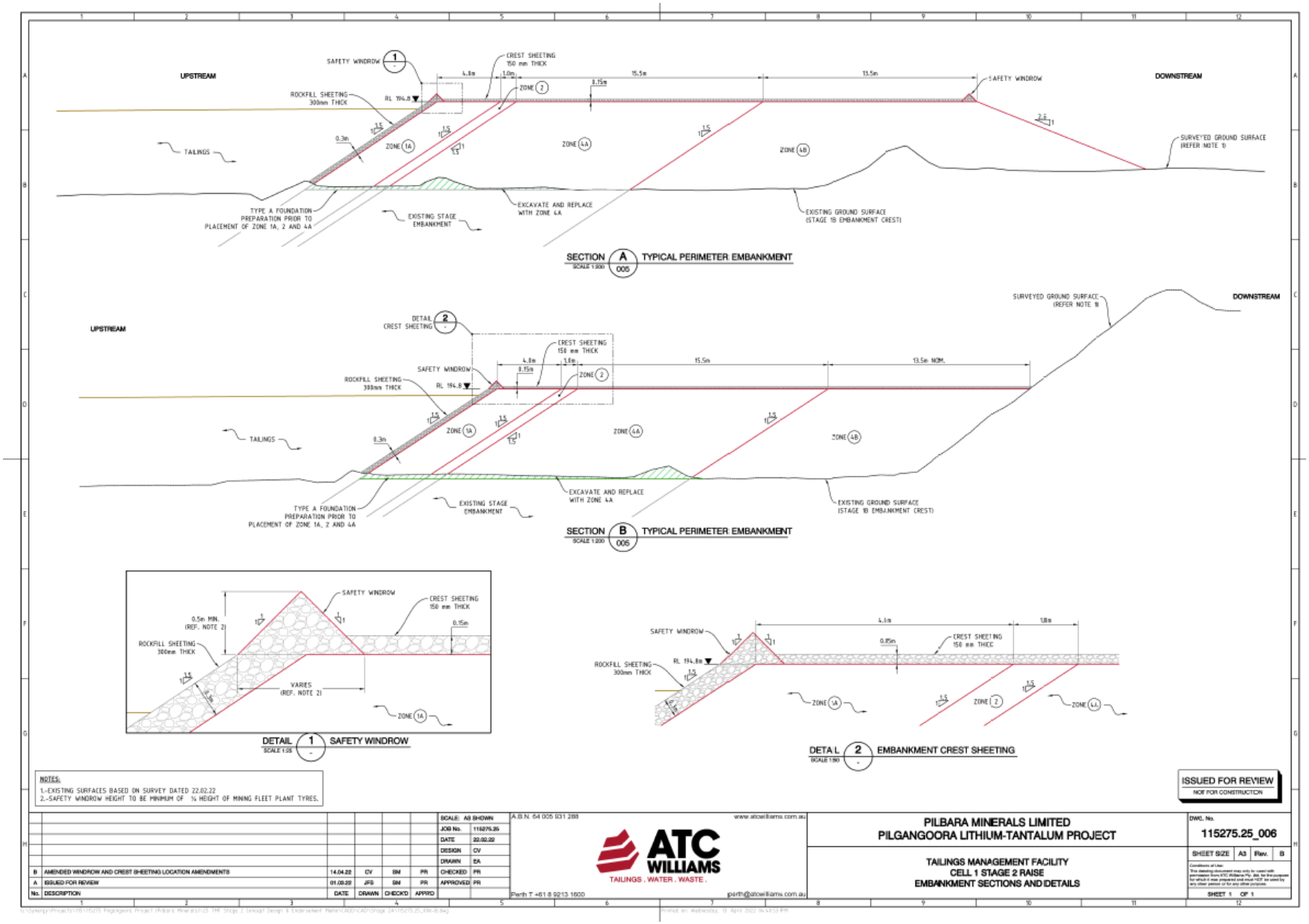
Assuming that there is no change in storage in the decant pond during the operational life of the TMF, and rearranging the equation gives the following expression for the seepage rate from the facility:

$$S = D + R - DE - E - RE$$

Schedule 4: TMF Stage 2 and 3

Cell 1 – Stage 2 raise

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SECTION B TYPICAL PERIMETER EMBANKMENT
DETAIL 1 SAFETY WINDROW
DETAIL 2 EMBANKMENT CREST SHEETING
NOTES.
1.-EXISTING SURFACES BASED ON SURVEY DATED 22.02.22
2.-SAFETY WINDROW HEIGHT TO BE MINIMUM OF ½ HEIGHT OF MINING FLEET PLANT TYRES.
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CELL 1 STAGE 2 RAISE
EMBANKMENT SECTIONS AND DETAILS
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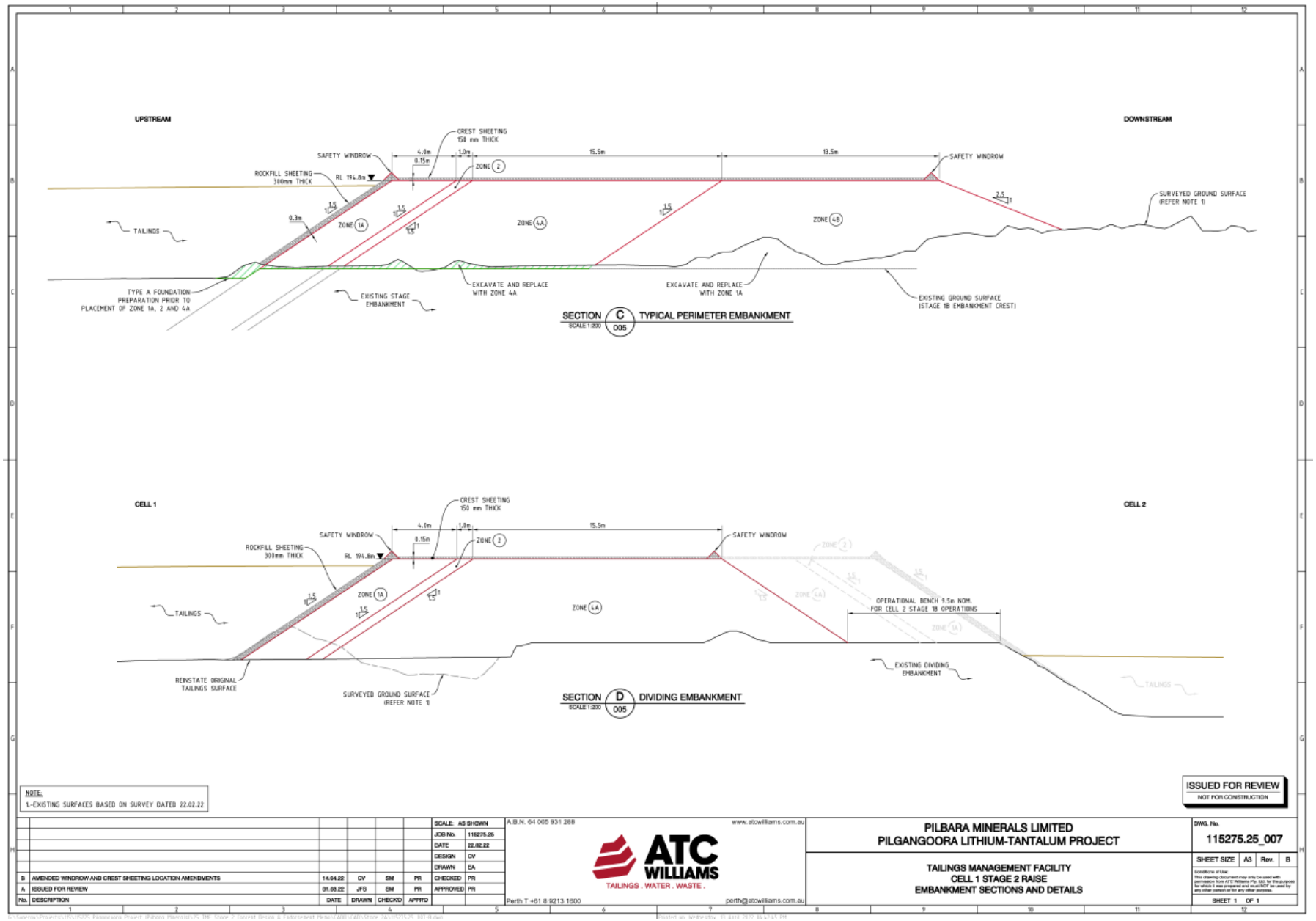
UPSTREAM
DOWNSTREAM
CREST SHEETING 150 mm THICK
SAFETY WINDROW
ROCKFILL SHEETING 300mm THICK
RL 194.8m
4.8m
1.0m
15.5m
13.5m
0.15m
ZONE 2
ZONE 1A
ZONE 4A
ZONE 4B
TAILINGS
0.3m
SURVEYED GROUND SURFACE (REFER NOTE 1)
TYPE A FOUNDATION PREPARATION PRIOR TO PLACEMENT OF ZONE 1A, 2 AND 4A
EXISTING STAGE EMBANKMENT
EXCAVATE AND REPLACE WITH ZONE 4A
EXCAVATE AND REPLACE WITH ZONE 1A
EXISTING GROUND SURFACE (STAGE 1B EMBANKMENT CREST)
SECTION C 005 SCALE 1:200 TYPICAL PERIMETER EMBANKMENT
CELL 1
CELL 2
OPERATIONAL BENCH 9.5m NOM. FOR CELL 2 STAGE 1B OPERATIONS
REINSTATE ORIGINAL TAILINGS SURFACE
EXISTING DIVIDING EMBANKMENT
SECTION D 005 SCALE 1:200 DIVIDING EMBANKMENT
NOTE:
1.-EXISTING SURFACES BASED ON SURVEY DATED 22.02.22
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B AMENDED WINDROW AND CREST SHEETING LOCATION AMENDMENTS 14.04.22 CV SM PR
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SCALE: AS SHOWN
JOB No. 115275.25
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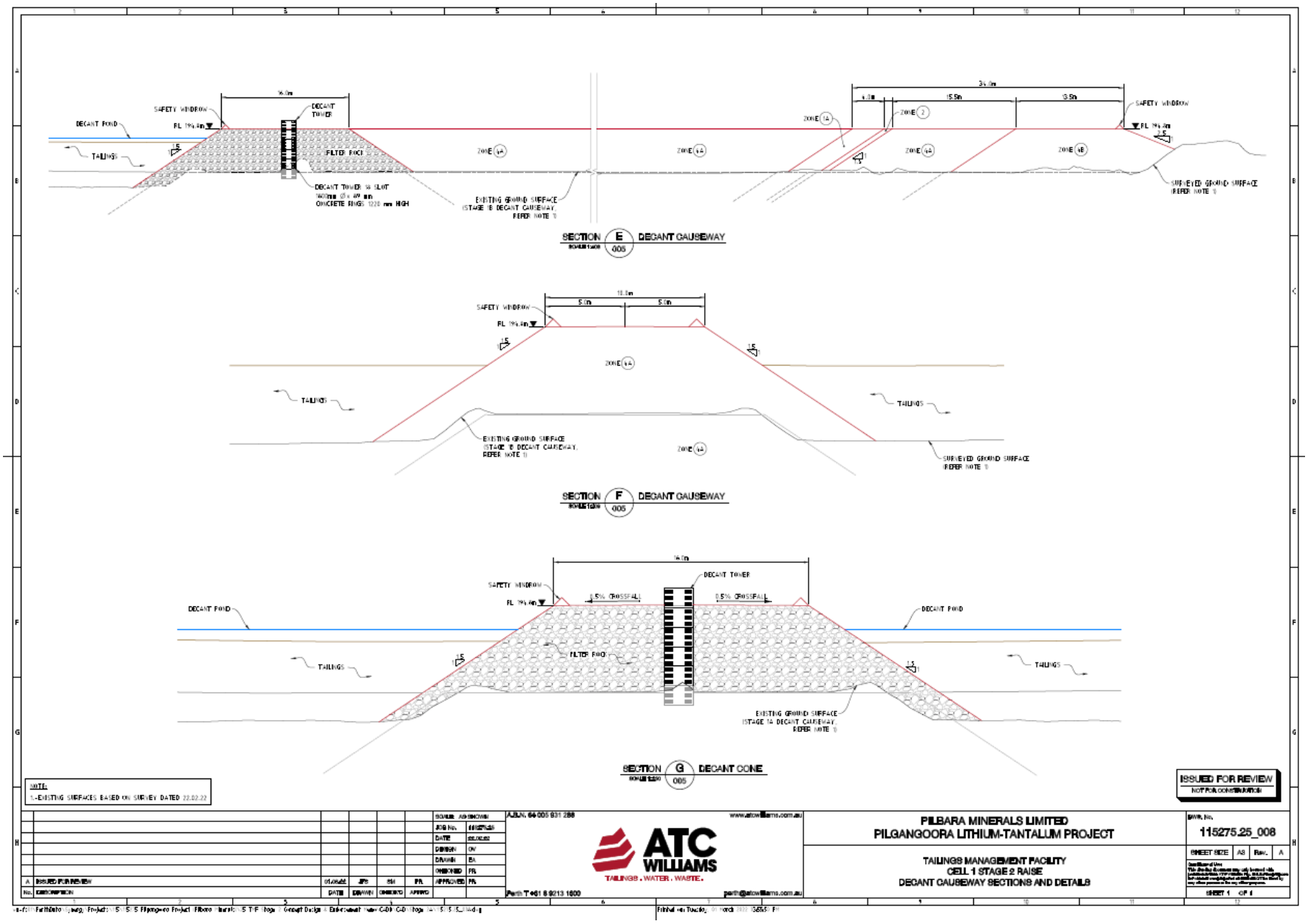
EMBANKMENT SECTIONS AND DETAILS
DWG. No. 115275.25_007
SHEET SIZE A3 Rev. B
SHEET 1 OF 1


SECTION E DEGANT GAUSEWAY
SECTION F DEGANT GAUSEWAY
SECTION G DECANT CONE
NOTE:
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CELL 1 STAGE 2 RAISE
DECANT GAUSEWAY SECTIONS AND DETAILS
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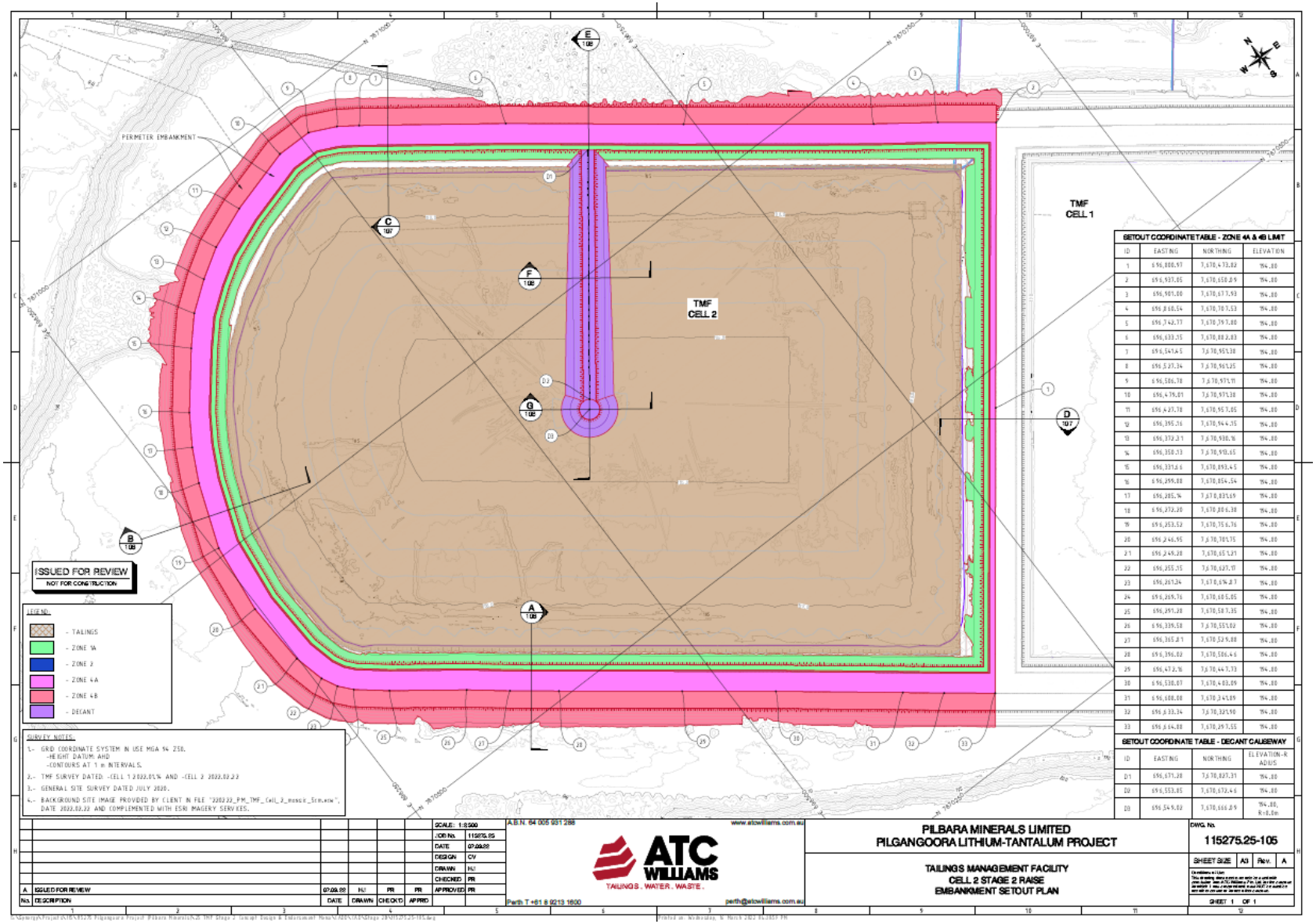
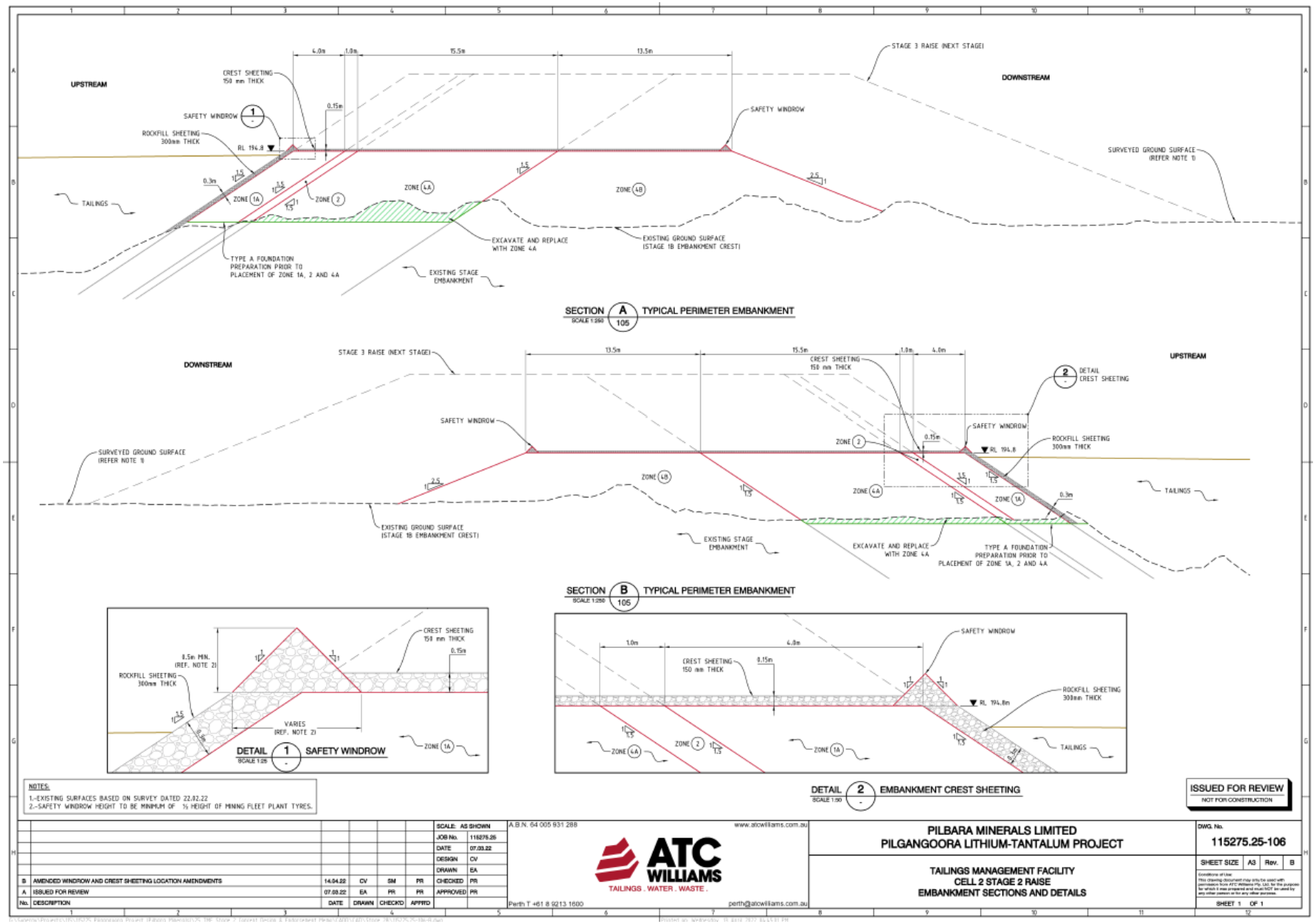
Cell 2 – Stage 2 raise




UPSTREAM
DOWNSTREAM
CREST SHEETING 150 mm THICK
SAFETY WINDROW
ROCKFILL SHEETING 300mm THICK
RL 194.8
TAILINGS
ZONE 1A
ZONE 2
ZONE 4A
ZONE 4B
STAGE 3 RAISE (NEXT STAGE)
SURVEYED GROUND SURFACE (REFER NOTE 1)
EXCAVATE AND REPLACE WITH ZONE 4A
EXISTING GROUND SURFACE (STAGE 1B EMBANKMENT CREST)
TYPE A FOUNDATION PREPARATION PRIOR TO PLACEMENT OF ZONE 1A, 2 AND 4A
EXISTING STAGE EMBANKMENT
SECTION A 105 TYPICAL PERIMETER EMBANKMENT
SECTION B 105 TYPICAL PERIMETER EMBANKMENT
DETAIL 1 SAFETY WINDROW
DETAIL 2 EMBANKMENT CREST SHEETING
NOTES:
1.-EXISTING SURFACES BASED ON SURVEY DATED 22.02.22
2.-SAFETY WINDROW HEIGHT TO BE MINIMUM OF ½ HEIGHT OF MINING FLEET PLANT TYRES.
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DWG. No. 115275.25-106
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SHEET 1 OF 1
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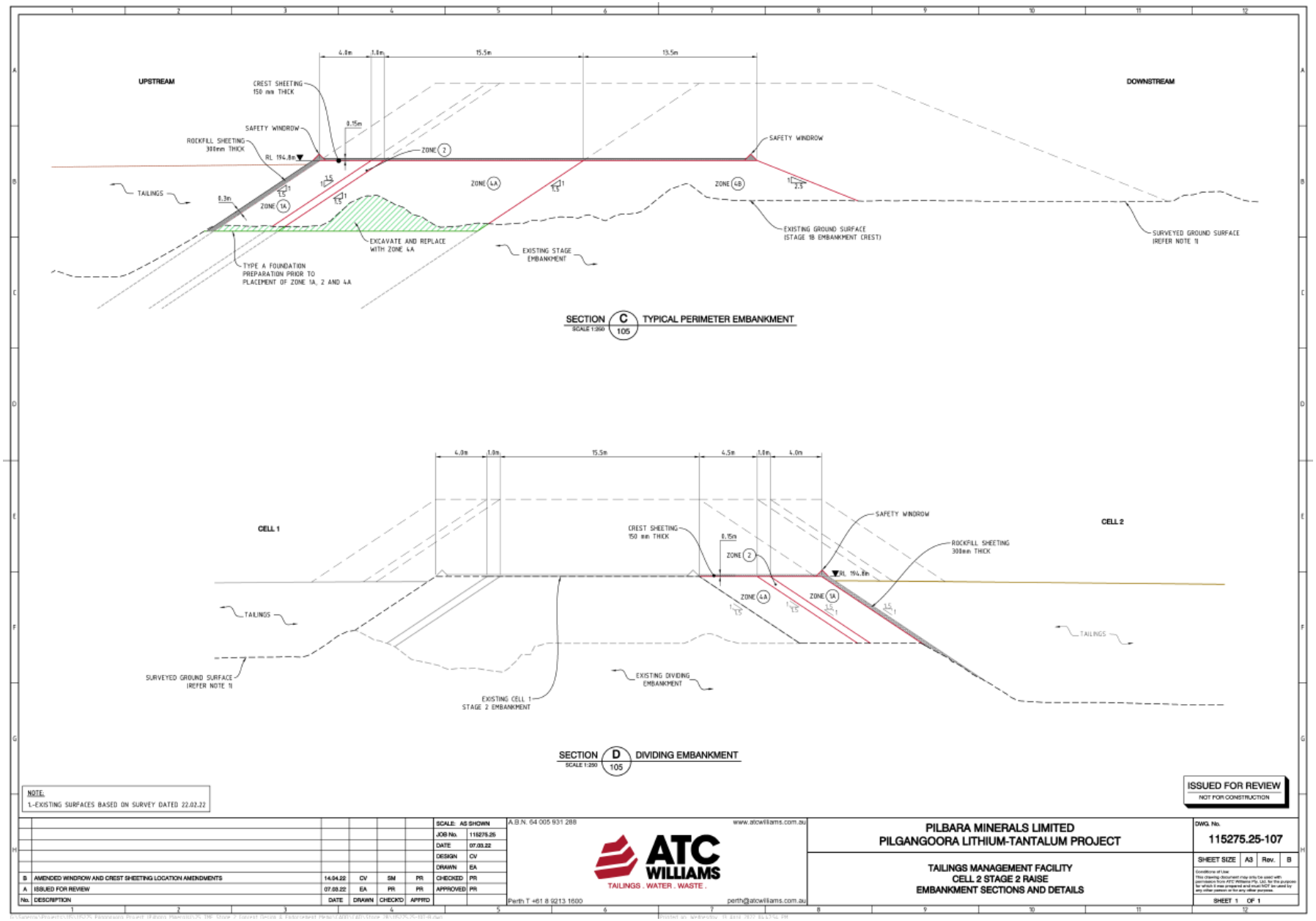
UPSTREAM
DOWNSTREAM
CREST SHEETING 150 mm THICK
SAFETY WINDROW
ROCKFILL SHEETING 300mm THICK
RL 194.8m
ZONE 2
ZONE 1A
ZONE 4A
ZONE 4B
TAILINGS
EXCAVATE AND REPLACE WITH ZONE 4A
TYPE A FOUNDATION PREPARATION PRIOR TO PLACEMENT OF ZONE 1A, 2 AND 4A
EXISTING STAGE EMBANKMENT
EXISTING GROUND SURFACE (STAGE 1B EMBANKMENT CREST)
SURVEYED GROUND SURFACE (REFER NOTE 1)
SECTION C 105 TYPICAL PERIMETER EMBANKMENT
CELL 1
CELL 2
SURVEYED GROUND SURFACE (REFER NOTE 1)
EXISTING CELL 1 STAGE 2 EMBANKMENT
EXISTING DIVIDING EMBANKMENT
SECTION D 105 DIVIDING EMBANKMENT
NOTE:
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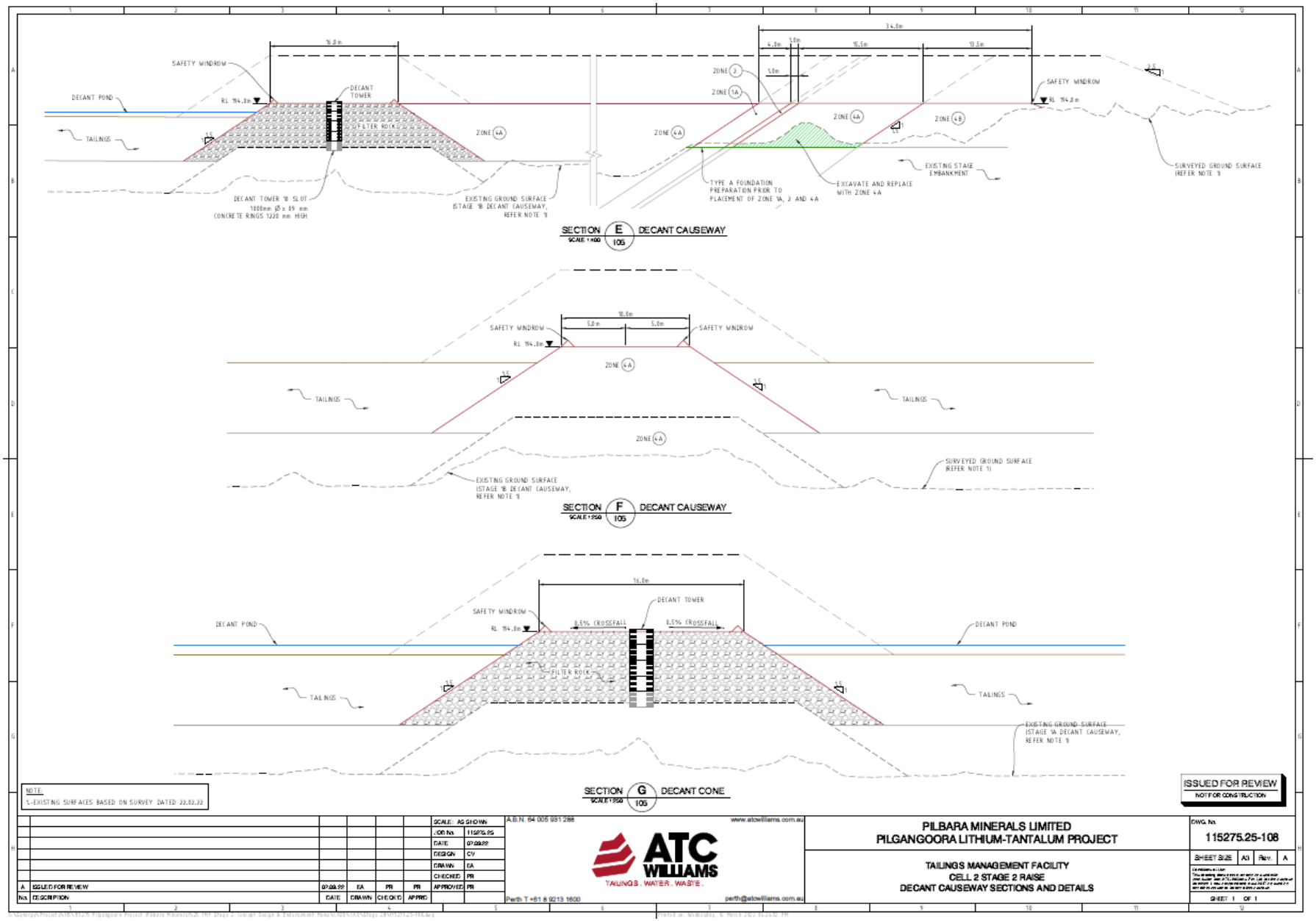
SAFETY WINDROW
DECANT POND
RL 194.8m
DECANT TOWER
TAILINGS
ZONE 4A
DECANT TOWER 'B' SLOT
1000mm Ø x 89 mm
CONCRETE RINGS 1220 mm HIGH
EXISTING GROUND SURFACE
(STAGE 'B' DECANT CAUSEWAY,
REFER NOTE 1)
ZONE 2
ZONE 1A
ZONE 4B
TYPE A FOUNDATION
PREPARATION PRIOR TO
PLACEMENT OF ZONE 1A, 2 AND 4A
EXCAVATE AND REPLACE
WITH ZONE 4A
EXISTING STAGE
EMBANKMENT
SURVEYED GROUND SURFACE
(REFER NOTE 1)
SECTION E DECANT CAUSEWAY
SCALE 1:400
SAFETY WINDROW
RL 194.8m
ZONE 4A
TAILINGS
EXISTING GROUND SURFACE
(STAGE 'B' DECANT CAUSEWAY,
REFER NOTE 1)
SURVEYED GROUND SURFACE
(REFER NOTE 1)
SECTION F DECANT CAUSEWAY
SCALE 1:250
DECANT TOWER
SAFETY WINDROW
RL 194.8m
0.5% CROSSFALL
DECANT POND
TAILINGS
EXISTING GROUND SURFACE
(STAGE 'A' DECANT CAUSEWAY,
REFER NOTE 1)
SECTION G DECANT CONE
SCALE 1:250
NOTE:
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115275.25-108
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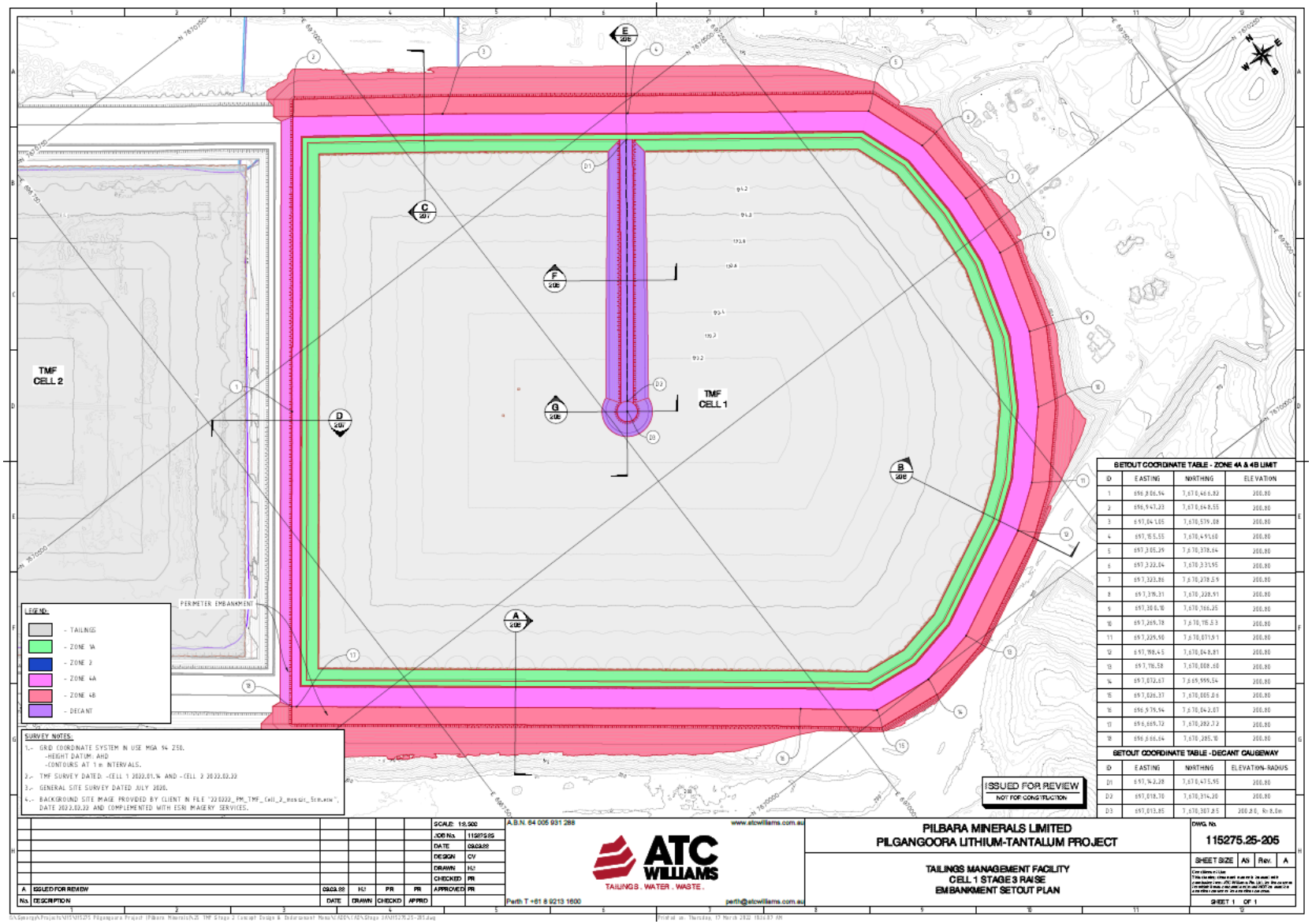
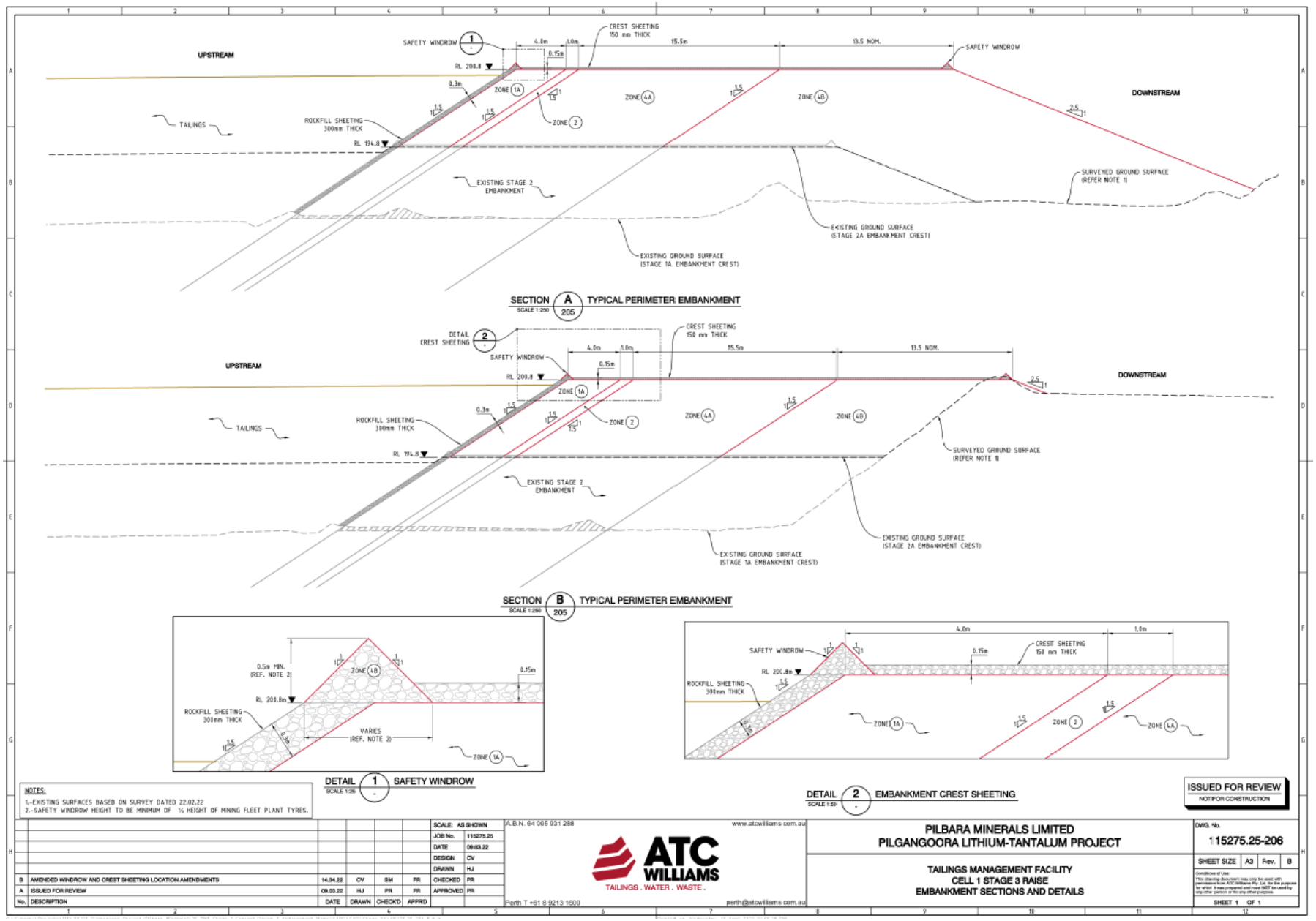
SHEET 1 OF 1

Cell 1 – Stage 3 raise

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SCALE 1:250
UPSTREAM
DOWNSTREAM
SAFETY WINDROW
CREST SHEETING 150 mm THICK
4.0m
1.0m
0.15m
15.5m
13.5 NOM.
RL 209.8
0.3m
ZONE 1A
ZONE 2
ZONE 4A
ZONE 4B
TAILINGS
ROCKFILL SHEETING 300mm THICK
RL 194.8
EXISTING STAGE 2 EMBANKMENT
SURVEYED GROUND SURFACE (REFER NOTE 1)
EXISTING GROUND SURFACE (STAGE 2A EMBANKMENT CREST)
EXISTING GROUND SURFACE (STAGE 1A EMBANKMENT CREST)
SECTION B 205 TYPICAL PERIMETER EMBANKMENT
SCALE 1:250
DETAIL 2 CREST SHEETING
0.5m MIN. (REF. NOTE 2)
RL 208.8m
VARIES (REF. NOTE 2)
DETAIL 1 SAFETY WINDROW
SCALE 1:25
RL 210.8m
DETAIL 2 EMBANKMENT CREST SHEETING
SCALE 1:50
NOTES:
1.-EXISTING SURFACES BASED ON SURVEY DATED 22.02.22
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DWG. No. 115275.25-206
SHEET SIZE A3
Rev. B
SHEET 1 OF 1
SCALE: AS SHOWN
JOB No. 115275.25
DATE 09.03.22
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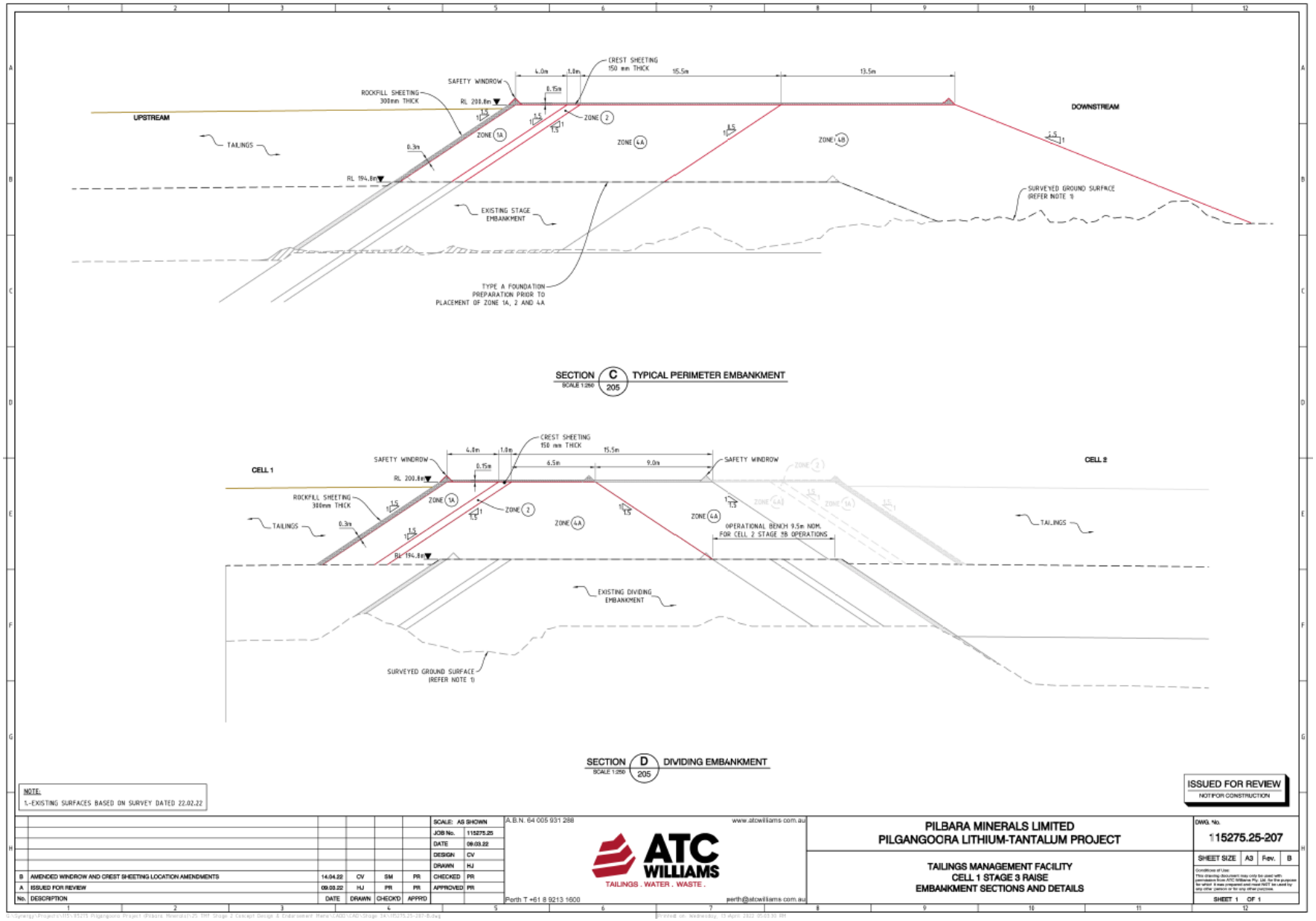
SECTION C 205 TYPICAL PERIMETER EMBANKMENT
SCALE 1:250
SECTION D 205 DIVIDING EMBANKMENT
SCALE 1:250
UPSTREAM
DOWNSTREAM
CELL 1
CELL 2
CREST SHEETING 150 mm THICK
SAFETY WINDROW
ROCKFILL SHEETING 300mm THICK
TAILINGS
EXISTING STAGE EMBANKMENT
EXISTING DIVIDING EMBANKMENT
SURVEYED GROUND SURFACE (REFER NOTE 1)
TYPE A FOUNDATION PREPARATION PRIOR TO PLACEMENT OF ZONE 1A, 2 AND 4A
OPERATIONAL BENCH 9.5m NOM. FOR CELL 2 STAGE 1B OPERATIONS
NOTE:
1.-EXISTING SURFACES BASED ON SURVEY DATED 22.02.22
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EMBANKMENT SECTIONS AND DETAILS
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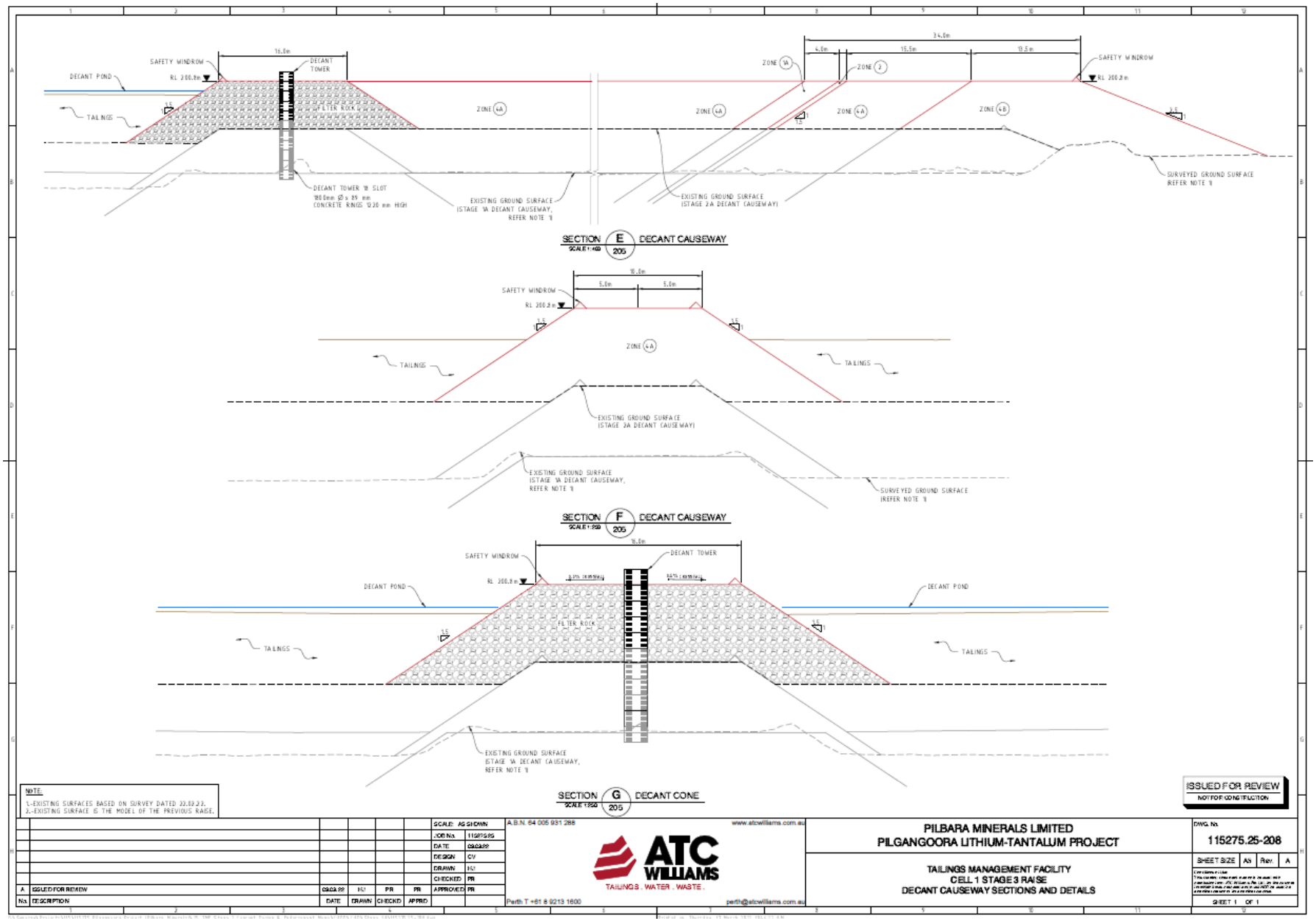
B AMENDED WINDROW AND CREST SHEETING LOCATION AMENDMENTS 14.04.22 CV SM PR
A ISSUED FOR REVIEW 09.03.22 HJ PR PR


SAFETY WINDROW
DECANT POND
TAILINGS
DECANT TOWER
FILTER ROCK
DECANT TOWER 'B' SLOT
ZONE 4A
ZONE 1A
ZONE 2
ZONE 4B
EXISTING GROUND SURFACE (STAGE 1A DECANT CAUSEWAY, REFER NOTE 1)
EXISTING GROUND SURFACE (STAGE 2A DECANT CAUSEWAY)
SURVEYED GROUND SURFACE (REFER NOTE 1)
SECTION E DECANT CAUSEWAY
SECTION F DECANT CAUSEWAY
SECTION G DECANT CONE
NOTE:
1.-EXISTING SURFACES BASED ON SURVEY DATED 22.03.22.
2.-EXISTING SURFACE IS THE MODEL OF THE PREVIOUS RAISE.
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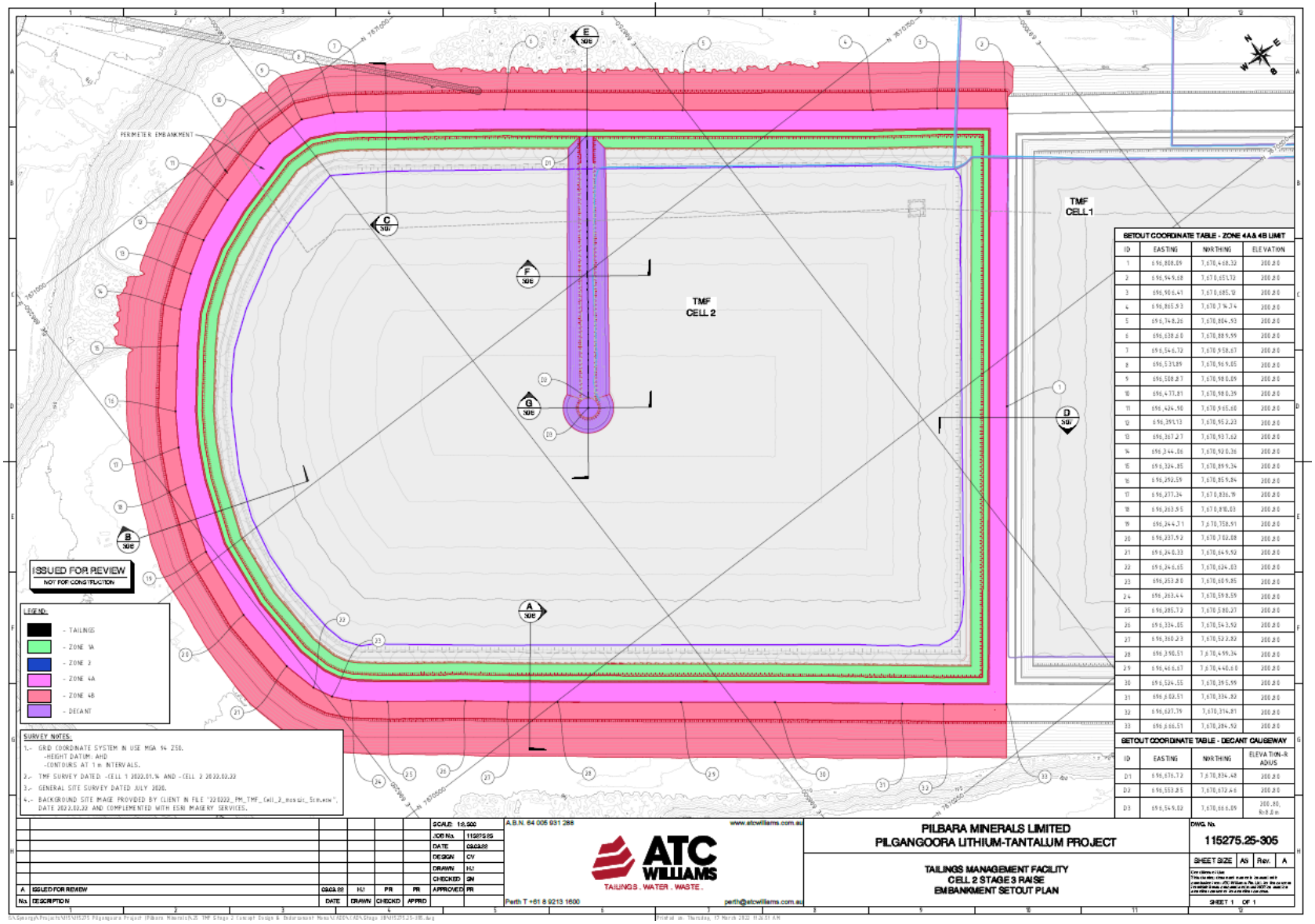
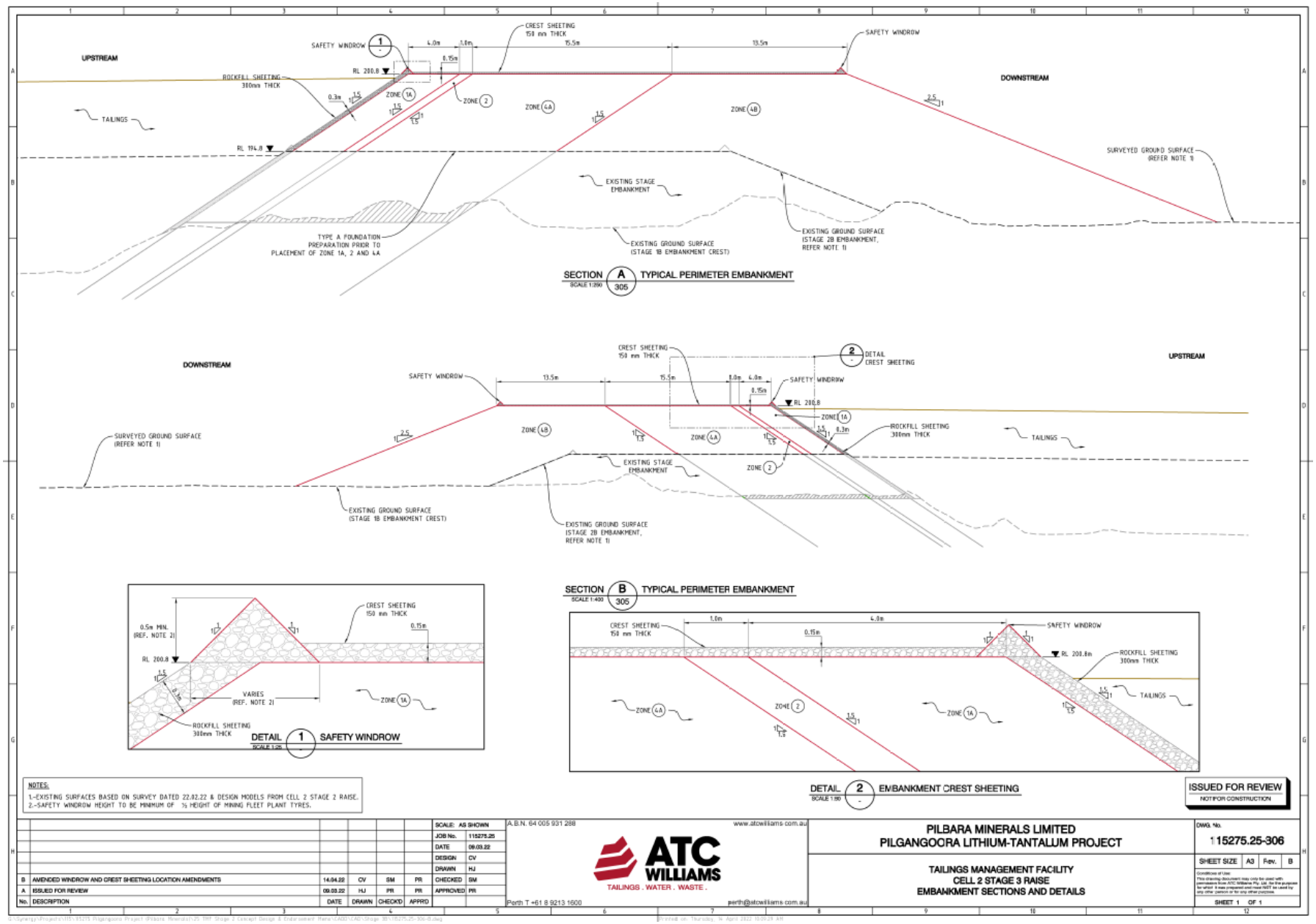
PILGANGOORA LITHIUM-TANTALUM PROJECT
TAILINGS MANAGEMENT FACILITY
CELL 1 STAGE 3 RAISE
DECANT CAUSEWAY SECTIONS AND DETAILS
DWG. No. 115275.25-208
SHEET SIZE A3 Rev. A
SHEET 1 OF 1

Cell 2 – Stage 3 raise




UPSTREAM
DOWNSTREAM
SAFETY WINDROW
CREST SHEETING 150 mm THICK
ROCKFILL SHEETING 300mm THICK
RL 200.8
RL 194.8
TAILINGS
ZONE 1A
ZONE 2
ZONE 4A
ZONE 4B
SURVEYED GROUND SURFACE (REFER NOTE 1)
EXISTING STAGE EMBANKMENT
TYPE A FOUNDATION PREPARATION PRIOR TO PLACEMENT OF ZONE 1A, 2 AND 4A
EXISTING GROUND SURFACE (STAGE 1B EMBANKMENT CREST)
EXISTING GROUND SURFACE (STAGE 2B EMBANKMENT, REFER NOTE 1)
SECTION A 305 TYPICAL PERIMETER EMBANKMENT
DETAIL 2 CREST SHEETING
SECTION B 305 TYPICAL PERIMETER EMBANKMENT
0.5m MIN. (REF. NOTE 2)
VARIES (REF. NOTE 2)
DETAIL 1 SAFETY WINDROW
DETAIL 2 EMBANKMENT CREST SHEETING
NOTES:
1.-EXISTING SURFACES BASED ON SURVEY DATED 22.02.22 & DESIGN MODELS FROM CELL 2 STAGE 2 RAISE.
2.-SAFETY WINDROW HEIGHT TO BE MINIMUM OF ½ HEIGHT OF MINING FLEET PLANT TYRES.
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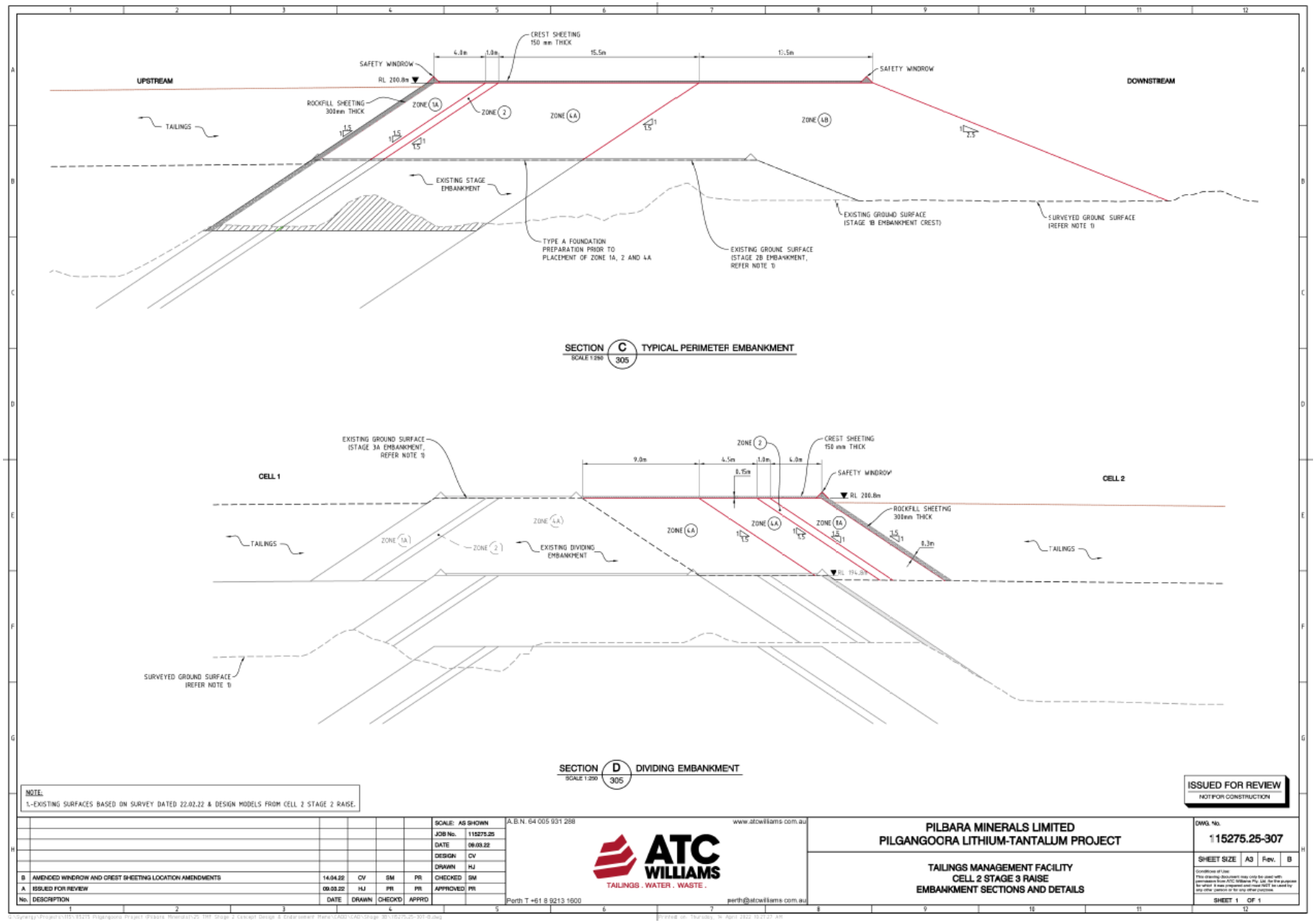
CELL 2 STAGE 3 RAISE
EMBANKMENT SECTIONS AND DETAILS
DWG. No. 115275.25-306
SHEET SIZE A3 Rev. B
SHEET 1 OF 1
B AMENDED WINDROW AND CREST SHEETING LOCATION AMENDMENTS 14.04.22 CV SM PR
A ISSUED FOR REVIEW 09.03.22 HJ PR PR
SCALE: AS SHOWN
JOB No. 115275.25
DATE 09.03.22
DESIGN CV
DRAWN HJ
CHECKED SM
APPROVED PR


CREST SHEETING
150 mm THICK
SAFETY WINDROW
RL 200.8m
UPSTREAM
DOWNSTREAM
ROCKFILL SHEETING
300mm THICK
ZONE 1A
ZONE 2
ZONE 4A
ZONE 4B
TAILINGS
EXISTING STAGE
EMBANKMENT
EXISTING GROUND SURFACE
(STAGE 1B EMBANKMENT CREST)
SURVEYED GROUND SURFACE
(REFER NOTE 1)
TYPE A FOUNDATION
PREPARATION PRIOR TO
PLACEMENT OF ZONE 1A, 2 AND 4A
EXISTING GROUND SURFACE
(STAGE 2B EMBANKMENT,
REFER NOTE 1)
SECTION C 305
SCALE 1:250
TYPICAL PERIMETER EMBANKMENT
EXISTING GROUND SURFACE
(STAGE 3A EMBANKMENT,
REFER NOTE 1)
CELL 1
CELL 2
EXISTING DIVIDING
EMBANKMENT
SURVEYED GROUND SURFACE
(REFER NOTE 1)
SECTION D 305
SCALE 1:250
DIVIDING EMBANKMENT
NOTE:
1.-EXISTING SURFACES BASED ON SURVEY DATED 22.02.22 & DESIGN MODELS FROM CELL 2 STAGE 2 RAISE.
ISSUED FOR REVIEW
NOT FOR CONSTRUCTION
B AMENDED WINDROW AND CREST SHEETING LOCATION AMENDMENTS 14.04.22 CV SM PR
A ISSUED FOR REVIEW 09.03.22 HJ PR PR
No. DESCRIPTION DATE DRAWN CHECKD APPRD
SCALE: AS SHOWN
JOB No. 115275.25
DATE 09.03.22
DESIGN CV
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CHECKED SM
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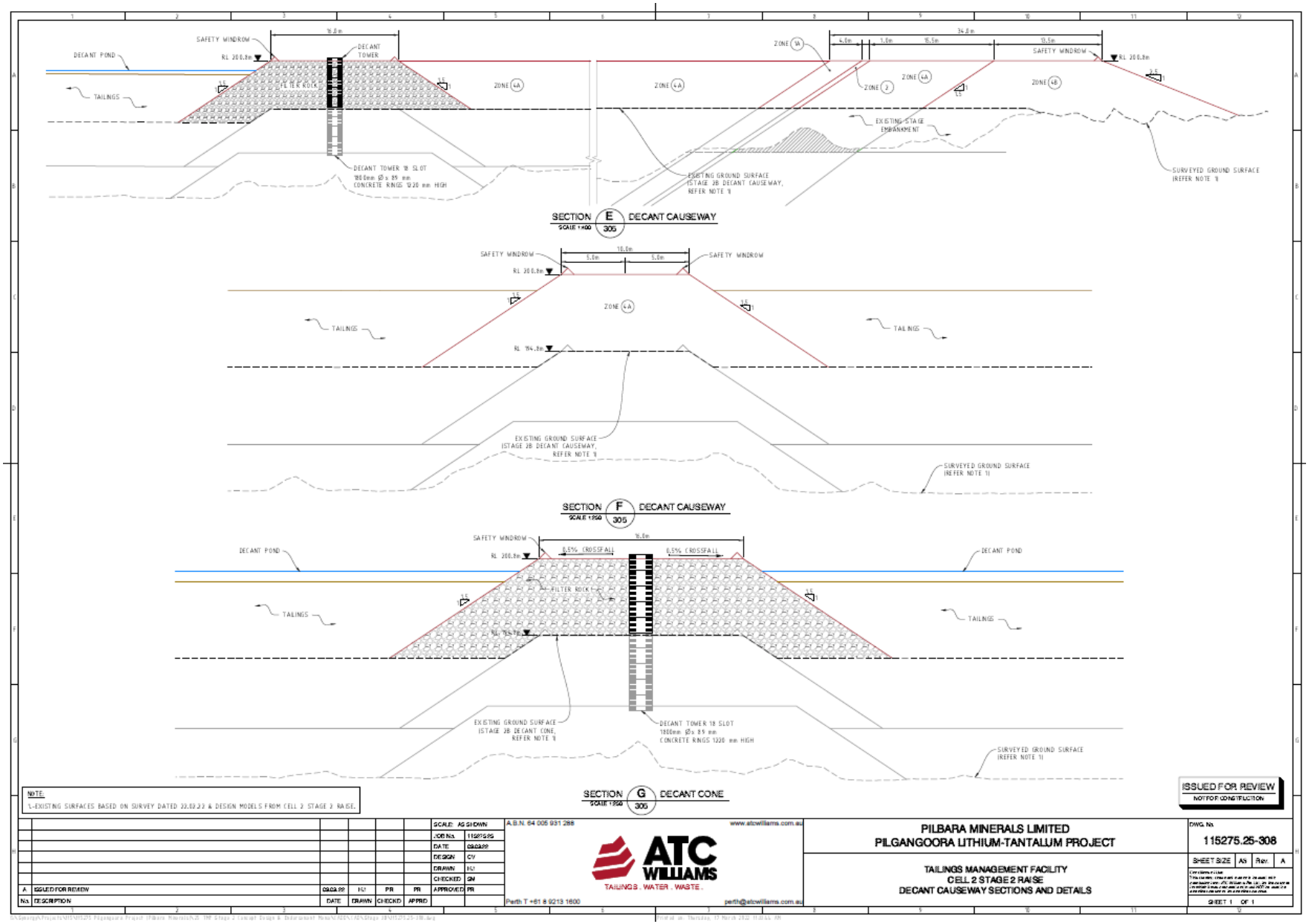
EMBANKMENT SECTIONS AND DETAILS
DWG. No.
115275.25-307
SHEET SIZE A3 Rev. B
SHEET 1 OF 1


SECTION E DECANT CAUSEWAY
SECTION F DECANT CAUSEWAY
SECTION G DECANT CONE
SAFETY WINDROW
DECANT POND
TAILINGS
FILTER ROCK
DECANT TOWER
ZONE 4A
ZONE 1A
ZONE 2
ZONE 4B
EXISTING STAGE EMBANKMENT
EXISTING GROUND SURFACE (STAGE 2B DECANT CAUSEWAY, REFER NOTE 1)
SURVEYED GROUND SURFACE (REFER NOTE 1)
EXISTING GROUND SURFACE (STAGE 2B DECANT CONE, REFER NOTE 1)
DECANT TOWER 18 SLOT
1800mm Ø x 89 mm CONCRETE RINGS 1220 mm HIGH
0.5% CROSSFALL
NOTE:
1.-EXISTING SURFACES BASED ON SURVEY DATED 22.02.22 & DESIGN MODELS FROM CELL 2 STAGE 2 RAISE.
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A ISSUED FOR REVIEW 09.03.22 HJ PR PR
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CELL 2 STAGE 2 RAISE
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