Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6834/2023/1
Works approval holder	Dampier (Plutonic) Pty Ltd
ACN	131 670 963
Registered business address	Level 1 30 Richardson Street WEST PERTH WA 6005
DWER file number	DER2023/000508
Duration	23/05/2024 to 22/05/2027
Date of issue	23/05/2024
Date of amendment	22/01/2025
Premises details	Marymia Gold Project – Trident Project Mining Tenements M52/217 and M52/218 MEEKATHARRA WA 6642 As defined by the Premises Map in Schedule 1

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed design capacity**
Category 6: Mine dewatering	236,500 tonnes per annum
Assessed activities directly related to the above categories	
Clearing of 0.8 hectares of native vegetation.	

This works approval is granted to the works approval holder, subject to the attached conditions, on 22 January 2025, by:

Sonya Poor
Digitally signed by Sonya Poor
Date: 2025.01.22 08:01:36 +08'00'

A/MANAGER, RESOURCE INDUSTRIES
INDUSTRY REGULATION (STATE-WIDE DELIVERY)

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

Works approval history

Date	Reference number	Summary of changes
23/05/2024	W6834/2023/1	Works approval granted.
10/09/2024	W6834/2023/1	Works Approval transferred.
22/01/2025	W6834/2023/1	Works approval amended in response to the Minister's appeal determination to modify conditions 1 and 6 to add further controls to the dewatering infrastructure.

Interpretation

In this works approval:

(a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;

(b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;

(c) where tables are used in a condition, each row in a table constitutes a separate condition;

(d) any reference to an Australian or other standard, guideline, or code of practice in this works approval:

  (i) if dated, refers to that particular version; and

  (ii) if not dated, refers to the latest version and therefore may be subject to change over time;

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

(f) unless specified otherwise, all definitions are in accordance with the EP Act.

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

Works approval conditions

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

Construction phase

Infrastructure and equipment

1. The works approval holder must:

(a) construct and install the infrastructure and equipment;

(b) in accordance with the corresponding design, construction and installation requirements; and

(c) at the corresponding infrastructure location.

as set out in Table 1.

Table 1: Design and construction and installation requirements

Item	Infrastructure	Design and construction and installation requirements	Infrastructure location
1.	Underground sumps	• 4.5 m x 4.2 m and between 6 m and 9 m in depth, with a 1:6 gradient; • Spaced every 150 m to 250 m lateral decline where needed; and • Each fitted with an 8 kW submersible pump, pumping water at a maximum rate of 2 to 7 L/s.	As shown in Schedule 1, Figure 1, Proposed Trident UG
2.	Marwest Pit-lake dewatering pump(s)	• Pump infrastructure to be located along a section of the existing pit ramp where safe access is feasible and where suction lines/submersible pumps have sufficient water depth without 'bottoming out'.	As shown in Schedule 1, Figure 1 and Figure 2 (within the Marwest Pit)
3.	Dewatering pipeline	• Installed within a spill containment V notch bund within the current disturbed road access between Trident and Mareast Pit; • The bund must be at least 30 cm in height and thickness and must be graded such that any spills are gravity fed back into the containment area; • 200 mm HDPE polypipe capable of carrying 60 L/s flow; • The pipeline connections will be polywelded, with steel flange fittings; • Fitted with gate valves for isolation and flow metres for measuring flow rate; • Fitted with telemetry for leak detection; • End supported on a floating barge in the Mareast Pit and fitted with a diffuser 10 m long with a series of discharge holes for erosion control; and	As shown in Schedule 1, Figure 1, Proposed Dewatering Pipeline Along Existing Road

Item	Infrastructure	Design and construction and installation requirements	Infrastructure location
		• Wet commissioning to commence pumping to test integrity of pipeline and function of flow and pressure gauges. Confirm flow meters or pressure gauges do not detect any leaks.	
4.	Staging station(s)	• Staging tanks fitted with a submersible 90 kW pump to pump water at a maximum flow rate of 60 L/s through a series of PN16 poly pipes.	As shown in Schedule 1, Figure 1, Trident UG
5.	Turkeys nest	• HDPE lined; • 50 m x 50 m wide and 1.5 m vertical in height; • Approximate capacity of 3,000 m^3 with 300 mm freeboard; and • Connected to the main manifold pipeline to Mareast Pit via an automated diversion T-Piece.	As shown in Schedule 1, Figure 2, Proposed turkeys nest
6.	2 x 50kL poly tanks	• May be installed as a substitute to the turkeys nest (item 5); or • May be installed in addition to the turkeys nest (item 5) for extra storage requirements.	To be located in the general footprint area of the proposed turkeys nest shown in Schedule 1, Figure 2 (either within the footprint or directly adjacent, within 40m).
7.	Mareast Pit	• Storage capacity of 1,258,382 m^3; and • 5 m freeboard.	As shown in Schedule 1, Figure 2, Mareast Pit

Compliance reporting

2. The works approval holder must within 30 calendar days of an item, or of all items, of infrastructure or equipment required by condition 1 being constructed or installed:

(a) undertake an audit of their compliance with the requirements of condition 1; and

(b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.

3. The Environmental Compliance Report required by condition 2, must include as a minimum the following:

(a) certification by a suitably qualified engineer that the dewatering infrastructure and component(s) thereof, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1;

(b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1; and

(c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

Time limited operations phase

Commencement and duration

4. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 1 upon the submission of the report required by condition 2 and 3.

5. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 6:

(a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 4 for that item of infrastructure; or

(b) until such time as a licence for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*, if one is granted before the end of the period specified in condition 5(a).

Time limited operations requirements and emission limits

6. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 2 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 2.

Table 2: Infrastructure and equipment requirements during time limited operations

	Site Infrastructure and equipment	**Operational requirements**	**Infrastructure location**
1.	Marwest pit-lake and Trident UG sumps pumping infrastructure	If a leak is identified, pumping is to cease and repairs made prior to pumping recommencing.	As shown in Schedule 1, Figure 1 and 2; Marwest Pit and Trident UG
2.	Turkeys nest	Freeboard of 300 mm maintained	As shown in Schedule 1, Figure 2, Proposed turkeys nest
3.	Dewatering pipeline	Daily visual inspections. Pipeline telemetry system to be maintained and monitored for leak detection. If a leak is identified, pumping is to cease immediately, pipeline to be isolated and repairs will be made prior to pumping recommencing.	As shown in Schedule 1, Figure 1, Proposed Dewatering Pipeline Along Existing Road
4.	Mareast Pit	Daily visual inspections. Freeboard of 5m maintained	As shown in Schedule 1, Figure 2, Mareast Pit

7. During time limited operations, the works approval holder must ensure that the emission(s) specified in Table 3 are discharged only from the corresponding discharge point(s) and only at the corresponding discharge point location(s).

Table 3: Authorised discharge points

	Emission	Discharge point	Discharge point location
1.	Mine dewatering water from Marwest Pit and Trident UG	Mareast Pit	As shown in Schedule 1, Figure 2, Mareast Pit

8. During time limited operations, the works approval holder must ensure that the emissions from the discharge point listed in Table 4 do not exceed the corresponding limit(s) when monitored in accordance with condition 11.

Table 4: Emission and discharge limits during time limited operations

	Discharge point	Parameter	Limit
1.	Mareast Pit	Volume of mine dewatering water	236,500 tonnes per annum

Monitoring requirements

9. Where specified in conditions, the works approval holder must ensure that:

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

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

10. The works approval holder must ensure that all monitoring equipment used on the premises to comply with the conditions of this works approval is calibrated in accordance with the manufacturer's specifications and the requirements of the works approval.

11. The works approval holder must monitor emissions during time limited operations in accordance with Table 5.

Table 5: Emissions and discharges monitoring

Discharge and Monitoring location	Parameter	Unit	Frequency	Averaging Period	Method	
					Sampling	Analysis
Mareast Pit - dewater discharge to pit	Volumetric flow rate (cumulative)	kL	Continuous (flowmeter)	Monthly	N/A	N/A
	pH[1]	pH units	Monthly (while dewatering)	Spot sample	AS/NZS 5667.1 AS/NZS 5667.10	Tested by a laboratory with current NATA accreditation [1] In-field non-NATA accredited analysis permitted
	Electrical conductivity[1]	µS/cm				
	Total dissolved solids	mg/L				
	Total suspended solids					
	Hardness as $CaCO_3$		Quarterly (while dewatering)	Spot sample	AS/NZS 5667.1 AS/NZS 5667.10	Tested by a laboratory with current NATA accreditation
	Sulphate as SO_4^{2-}					
	Total Alkalinity					
	Total phosphorus					
	Total nitrogen					
	Aluminium					
	Arsenic					
	Calcium					
	Cadmium					
	Chromium III					
	Iron					
	Mercury					
	Potassium					
	Magnesium					
	Manganese					
	Sodium					
	Lead					
	Tin					
	Selenium					
	Zinc					

Ambient Groundwater Monitoring

12. The works approval holder must monitor the groundwater for baseline results and during time-limited operations in accordance with Table 6.

Table 6: Monitoring of groundwater

Monitoring location	Parameter	Unit	Frequency	Averaging Period	Method	
					Sampling	Analysis
Mareast Groundwater monitoring bores: • Test Hole No1 • Test Hole No2 • ME003 • ME004 • ME016 • MER0097 • ME100 As depicted in Figure 3	Standing water levels	mBGL	Baseline (at least once prior to discharges occurring) Monthly (once dewatering discharges occur)	N/A	AS/NZS 5667.11	N/A
	pH[1]	pH units	Baseline (at least once prior to discharges occurring) Monthly (while dewatering)	Spot sample	AS/NZS 5667.1 AS/NZS 5667.11	Tested by a laboratory with current NATA accreditation [1] In-field non-NATA accredited analysis permitted
	Electrical conductivity[1]	µS/cm				
	Total dissolved solids	mg/L				
	Total suspended solids					
	Hardness as $CaCO_3$		Baseline (at least once prior to discharges occurring) Quarterly (while dewatering)	Spot sample	AS/NZS 5667.1 AS/NZS 5667.11	Tested by a laboratory with current NATA accreditation
	Sulphate as SO_4^{2-}					
	Total Alkalinity					
	Total phosphorus					
	Total nitrogen					
	Aluminium					
	Arsenic					
	Calcium					
	Cadmium					
	Chromium III					
	Iron					
	Mercury					
	Potassium					
	Magnesium					
	Manganese					
	Sodium					
	Lead					
	Tin					
	Selenium					
	Zinc					

13. Where monitoring bores specified in condition 12 are found to be inoperable, the works approval holder must design, construct, and install replacement groundwater monitoring wells in accordance with the requirements specified in Table 7.

Table 7: Infrastructure requirements – groundwater monitoring wells

Infrastructure	Design, construction, and installation requirements	Monitoring well location(s)	Timeframe
Monitoring well network for Mareast Pit	Well design and construction: • Designed and constructed in accordance with relevant standards: ASTM D5092/D5092M-16: *Standard practice for design and installation of groundwater monitoring bores*[1]. • Well screens must target the part, or parts, of the aquifer most likely to be affected by contamination[2].	As depicted in Schedule 1, Figure 3: Map of groundwater monitoring well locations.	Must be constructed, developed (purged), and determined to be operational with 6 months of discharges occurring to Mareast Pit
	Logging of borehole: • Soil samples must be collected and logged during the installation of the monitoring wells. • A record of the geology encountered during drilling must be described and classified in accordance with the Australian Standard Geotechnical Site Investigations AS1726. • Any observations of staining / odours or other indications of contamination must be included in the bore log.		
	Well construction log: • Well construction details must be documented within a well construction log to demonstrate compliance with ASTM D5092/D5092M-16. The construction logs shall include elevations of the top of casing position to be used as the reference point for water-level measurements, and the elevations of the ground surface protective installations.		
	<u>Well development:</u> • All installed monitoring wells must be developed after drilling to remove fine sand, silt, clay and any drilling mud residues from around the well screen to ensure the hydraulic functioning of the well. A detailed record should be kept of well development activities and included in the well construction log.		
	<u>Installation survey:</u> • The vertical (top of casing) and horizontal position of each monitoring well must be surveyed and subsequently mapped by a suitably qualified surveyor.		

Note 1: Suitable alternative standard: *Minimum construction requirements for water bores in Australia* 4th Ed. (National Uniform Drillers Licensing Committee (NUDLC), 2020).

Note 2: refer to Section 8 of Schedule B2 of the Assessment of Site Contamination NEPM for guidance on well screen depth and length.

14. The works approval holder must, within 60 calendar days of the monitoring wells being constructed, submit to the CEO a well construction report evidencing compliance with the requirements of condition 13.

Records and reporting

Compliance reporting

15. The works approval holder must submit to the CEO a report on the time limited operations within 60 calendar days of the completion date of time limited operations or 30 calendar days before the expiration date of the works approval, whichever is the sooner.

16. The works approval holder must ensure the report required by condition 15 includes the following:

(a) a summary of the time limited operations, including timeframes and amount of dewater discharged;

(b) a summary of discharge monitoring obtained during time limited operations under condition 11;

(c) a summary of ambient groundwater monitoring results obtained during time limited operations under condition 12;

(d) a summary of the environmental performance of all infrastructure as constructed or installed (as applicable);

(e) a review of performance and compliance against the conditions of the works approval; and

(f) where conditions have not been met, measures proposed to address compliance, together with timeframes for implementing the proposed measures.

Record keeping

17. The works approval holder must record the following information in relation to complaints received by the works approval holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:

(a) the name and contact details of the complainant, (if provided);

(b) the time and date of the complaint;

(c) the complete details of the complaint and any other concerns or other issues raised; and

(d) the complete details and dates of any action taken by the works approval holder to investigate or respond to any complaint.

18. The works approval holder must maintain accurate and auditable books including the following records, information, reports, and data required by this works approval:

(a) the works conducted in accordance with condition 1;

(b) any maintenance of infrastructure that is performed in the course of complying with condition 1 and 6;

(c) monitoring programmes undertaken in accordance with condition 10, 11 and 12; and

(d) complaints received under condition 17.

19. The books specified under condition 18 must:

(a) be legible;

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

(c) be retained by the works approval holder for the duration of the works approval; and

(d) be available to be produced to an inspector or the CEO as required.

Definitions

In this works approval, the terms in Table 8 have the meanings defined.

Table 8: Definitions

Term	Definition
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples.
AS/NZS 5667.10	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.
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
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.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure has been installed in accordance with the works approval.
EP Act	*Environmental Protection Act 1986* (WA).
EP Regulations	*Environmental Protection Regulations 1987* (WA).
HDPE	High density polyethylene
kL/d	Kilolitres per day
kW	kilowatt
L/s	litres per second
LOM	Life of Mine
m	metres
mBGL	Metres below ground level

Term	Definition
mg/kg	Milligrams per kilogram
µS/cm	Microsiemens per centimeter
mm	millimetres
ML	Million litres
m^3	cubic metres
N/A	Not applicable
NATA	means the National Association of Testing Authorities, Australia
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis
PN	pressure nominal
premises	the premises to which this works approval applies, as specified at the front of this works approval and as shown on the premises map (Figure 1) in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
SWL	means standing water level.
suitably qualified	Means a person who: a) holds a relevant tertiary academic qualification; b) has a minimum of five years of experience working in the relevant area/field of expertise; and c) holds membership in a relevant professional body.
time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
tpa	Tonnes per annum
WRD	Waste Rock Dump
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises and proposed infrastructure layout is shown in the map below (Figure 1).

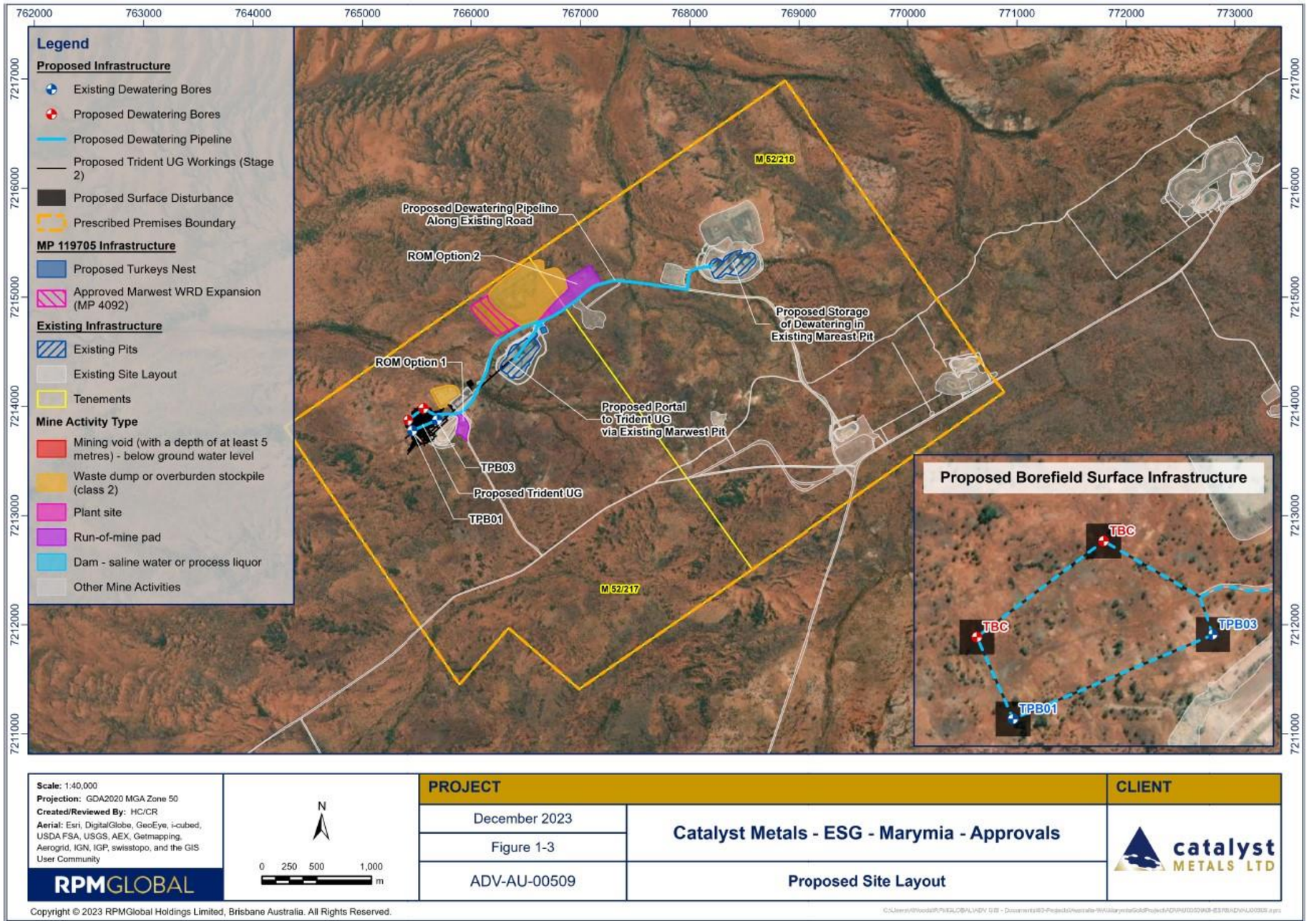

Figure 1: Map of the boundary of the prescribed premises and proposed infrastructure layout

The layout of the existing site and the proposed decline and turkeys nest is shown in the map below (Figure 2).

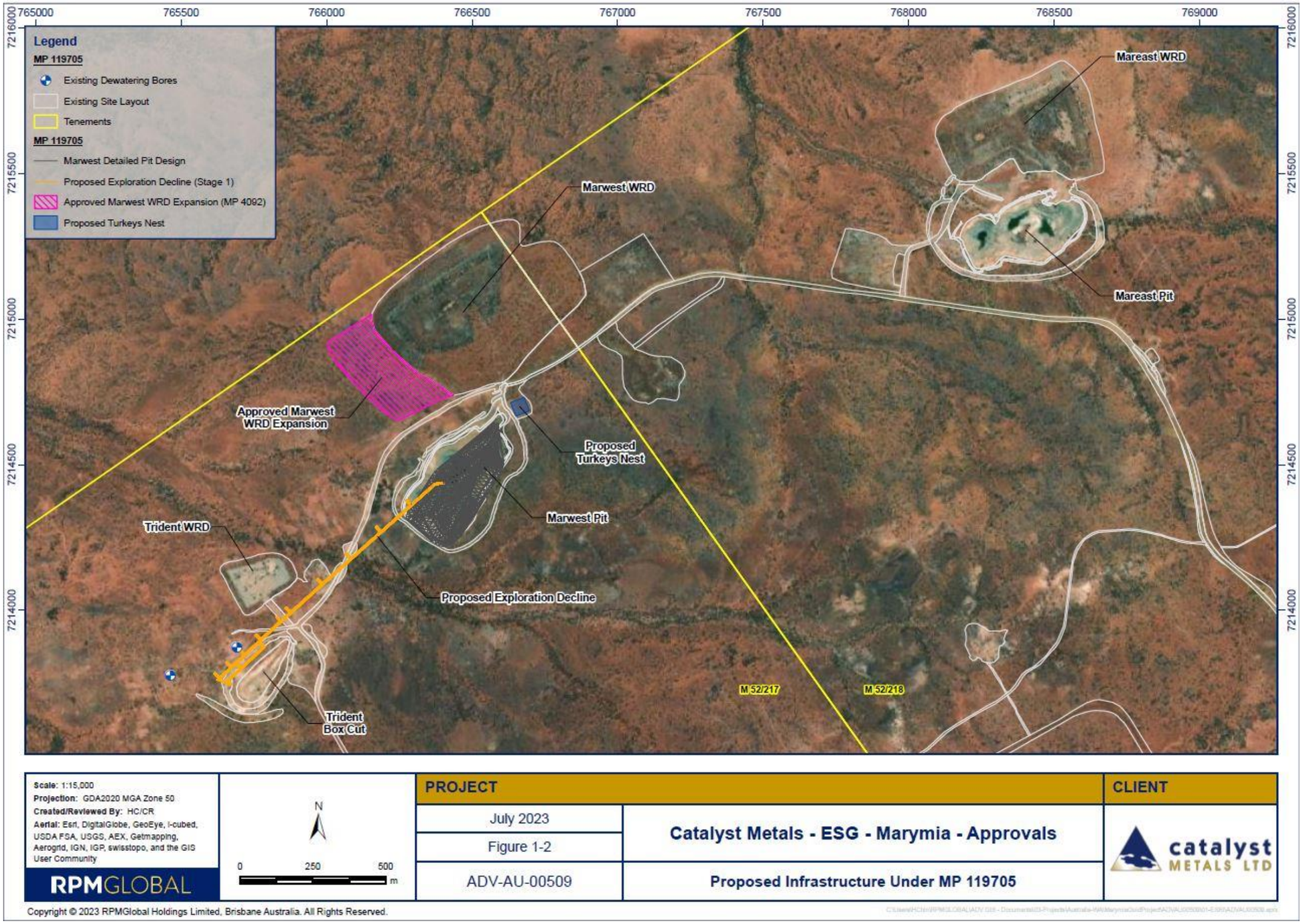

Figure 2: Existing site layout with proposed decline and turkeys nest

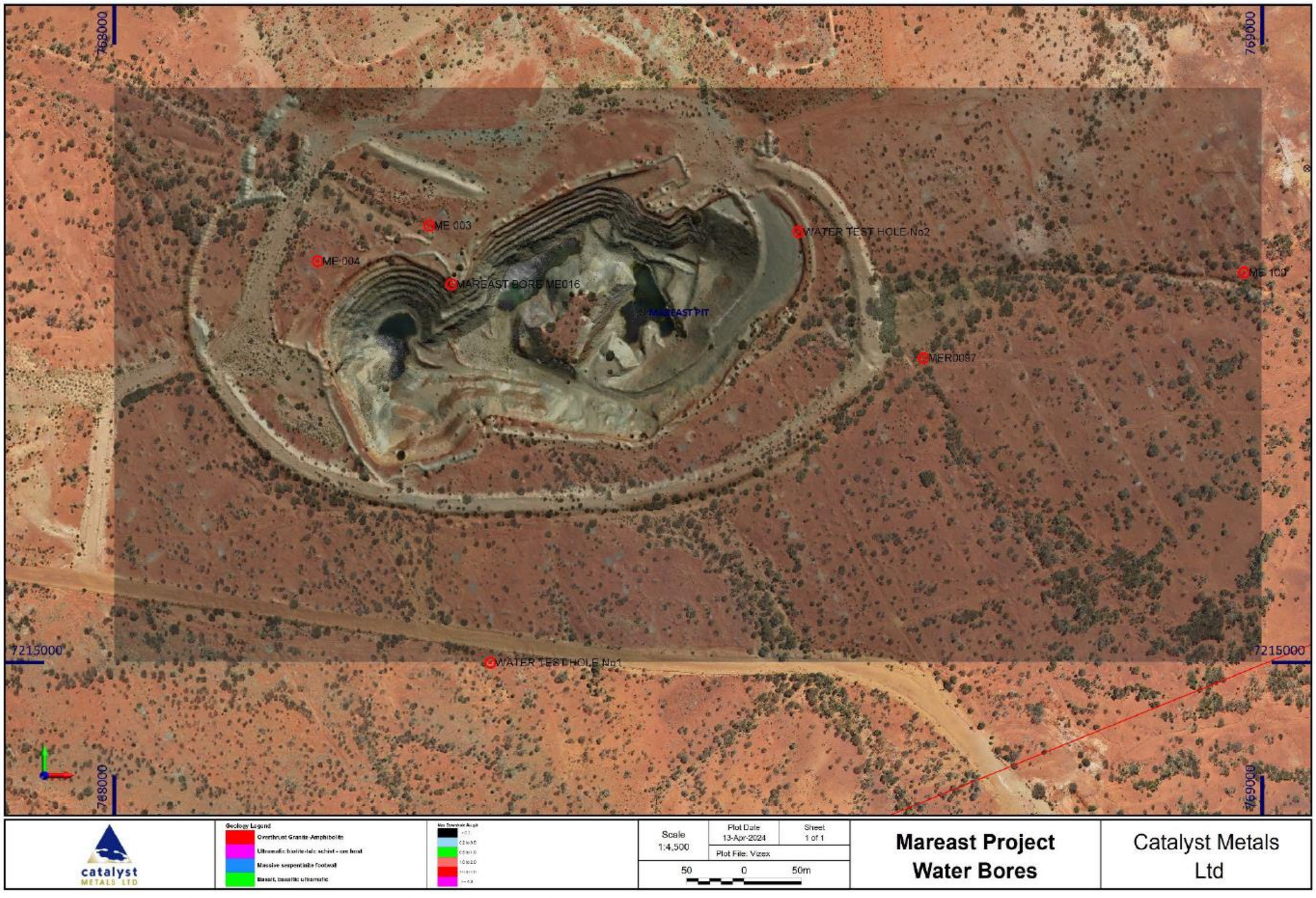

Figure 3: Proposed groundwater monitoring bore network around Mareast Pit.