Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6862/2023/1
Works approval holder	Evolution Mining (Mungari) Pty Ltd
ACN	002 124 745
Registered business address	Level 24, 175 Liverpool Street SYDNEY NSW 2000
DWER file number	DER2023/000674
Duration	26/04/2024 to 25/04/2027
Date of issue	26/04/2024
Premises details	Mungari Gold Operations Kundana Road, Kalgoorlie WA 6430 Legal description Part of mining tenements: L15/228, L15/246, L15/387, M15/688, M15/829, M15/830, M15/1287, M15/1407, M15/1741 and M15/1827 As defined by the coordinates in Schedule 2

Prescribed premises category description **(Schedule 1, *Environmental Protection Regulations 1987*)**	**Assessed production / design capacity**
Category 5: Processing and beneficiation of metallic or non-metallic ore	2,500,000 tonnes per annum

This works approval is granted to the works approval holder, subject to the attached conditions, on 26 April 2024, by:

Timothy Moran

Digitally signed by Timothy Moran
Date: 2024.04.26 09:41:09 +08'00'

Timothy Moran
A/MANAGER, RESOURCE INDUSTRIES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Works approval history

Date	Reference number	Summary of changes
26/04/2024	W6862/2023/1	Works approval granted.

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

Infrastructure and equipment

1. The works approval holder must:

(a) construct and/or install the infrastructure and/or equipment;

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

(c) at the corresponding infrastructure location

as set out in Table 1.

Table 1: Design and construction / installation requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location
1.	Surface water management infrastructure: • Safety/flood protection bund	• Installed around the pit crest in the locations specified on Figure 3 and in accordance with the design specifications in Figure 8.	Figure 3
2.	Tailings pipeline and decant return pipeline	• Constructed along the alignment displayed in Figures 3, 4 and 5 • Pipeline corridor including scour pits to have a minimum containment capacity to contain 24 hours of flow • Constructed in containment trench • Telemetered flow meters on both the decant and tailings slurry lines • Pipeline to be double walled along sections where seasonal flooding is possible as per Figure 10. • Scour sumps along the length of the pipeline with sufficient volume to contain 24 hrs of flow in combination with containment trench. • Discharge spigots constructed per design drawings in Figure 8	Figure 3, Figure 4, and Figure 5
3.	TSF pond decant system	• Stage 2 pit system to comprise a floating pontoon-mounted pump deployed from the ramp • Stage 3 pit system to comprise a floating pontoon-mounted pump deployed from the ramp	Figure 6 and Figure 7

Construction of groundwater monitoring wells

2. The works approval holder must design, construct, and install groundwater monitoring wells in accordance with the requirements specified in Table 2.

Table 2: Infrastructure requirements – groundwater monitoring wells

Infrastructure	Design, construction, and installation requirements	Monitoring well locations	Timeframe
Groundwater monitoring wells: MB01 to MB06	Well design and construction: Designed and constructed in accordance with ASTM D5092/D5092M-16: Standard practice for design and installation of groundwater monitoring bores and Figure 9. Well screens must target the part, or parts, of the aquifer most likely to be affected by contamination[1]. Where temporary/seasonal perched features are present, wells must be nested, and the perched features individually screened.	As depicted in Figure 2: Location of monitoring bores	Must be constructed, developed (purged), and determined to be operational prior to the commencement of construction of works specified in condition 1.
	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 Minimum Construction Requirements for Water Bores in Australia. 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 the Minimum Construction Requirements for Water Bores in Australia. 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.		
	Well development: 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.		
	Installation survey: The vertical (top of casing) and horizontal position of each monitoring well must be surveyed and subsequently mapped by a suitably qualified surveyor.		
	Well network map:		

	A well location map (using aerial image overlay) must be prepared and include the location of all monitoring wells in the monitoring network and their respective identification numbers.		

Note 1: refer to Section 8 of Schedule B2 of the Assessment of Site Contamination NEPM for guidance on well screen depth and length.

Compliance reporting

3. The works approval holder must within 30 calendar days of an item of infrastructure or equipment required by condition 1 being constructed and/or installed:

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

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

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

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

(b) as constructed 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.

5. The works approval holder must, within 30 calendar days of the monitoring wells being constructed, submit to the CEO a well construction report evidencing compliance with the requirements of condition 2.

Time limited operations phase

Time limited operations - commencement and duration

6. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 1 where the Environmental Compliance Report as required by condition 3 has been submitted by the works approval holder for that item of infrastructure.

7. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 8 (as applicable):

(a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 1 or 6 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 7(a).

Time limited operations – infrastructure and equipment

8. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 3 and located at the corresponding infrastructure location is maintained and operated in accordance with

the corresponding operational requirement set out in Table 3.

Table 2: Infrastructure and equipment requirements during time limited operations

	Site infrastructure and equipment	Infrastructure requirements	Infrastructure location
1.	Cutters Ridge In-Pit Tailings Storage Facility (CRIPTSF): ○ Stage 2 Pit ○ Stage 3 Pit	(a) Maintain a minimum total freeboard of 500mm from the decant pond water level to the top of pit rim	As depicted in Figure 6 and Figure 7
2.	Tailings and decant return pipeline corridor	(a) Maintained within a containment trench including scour pits with sufficient total volume to contain 24 hours of flow.	Figure 3, Figure 4, and Figure 5

Monitoring during time limited operations

9. The Licence Holder must:

(a) undertake inspections as detailed in Table 3; and

(b) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and

(c) maintain a record of all inspections undertaken.

Table 3: Inspection of infrastructure

Scope of inspection	Type of inspection	Frequency of inspection
Tailings pipelines	Visual integrity	Daily
Return water lines	Visual integrity	Daily

10. The works approval holder must conduct a groundwater monitoring program in accordance with the requirements specified in Schedule 3 and record the results of all monitoring activity conducted under that program.

11. The works approval holder must adhere to the field quality assurance and quality control procedures specified in Schedule 3 for the monitoring required by condition 10.

12. All sample analysis must be undertaken by laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters, unless otherwise specified in Schedule 3.

Compliance reporting

13. The works approval holder must submit to the CEO a report on the time limited operations within 30 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.

14. The works approval holder must ensure the report required by Condition 13 includes the following:

(a) a summary of the time limited operations, including timeframes and amount of material processed;

(b) a summary of groundwater monitoring results obtained during time limited operations under condition 10;

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

(d) where the manufacturer's design specifications and the conditions of this works approval have not been met, what measures will the works approval holder take to meet them, and what timeframes will be required to implement those measures.

Records and reporting (general)

15. 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.

16. 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 and 2;

(b) any maintenance of infrastructure that is performed in the course of complying with condition 8;

(c) monitoring programmes undertaken in accordance with condition 9 and 10; and

(d) complaints received under condition 15.

17. The books specified under condition 16 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 4 have the meanings defined.

Table 4: Definitions

Term	Definition
AEP	Means annual exceedance probability
AS/NZS 5667.11.	means the Australian Standard AS/NZS 5667.11 (R2016) Water quality – sampling – guidance on sampling groundwater, as amended from time to time.
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 and/or equipment has been constructed and/or installed in accordance with the works approval.
EP Act	*Environmental Protection Act 1986* (WA).
EP Regulations	*Environmental Protection Regulations 1987* (WA).
monthly period	means a one-month period commencing from the first day of a month until the last day of the month.
premises	the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map Figure 1 in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
Suitably qualified and experienced Engineer	means a person who: a) holds a Bachelor's degree recognised by Engineers Australia; and

Term	Definition
	b) has a minimum of five years of experience working in a supervisory role in civil or structural engineering; and c) is employed by an independent third party external to the Works Approval Holder's business; or is otherwise approved in writing by the CEO to act in this capacity.
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.
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 is shown in the map below (**Error! Reference source not found.**).

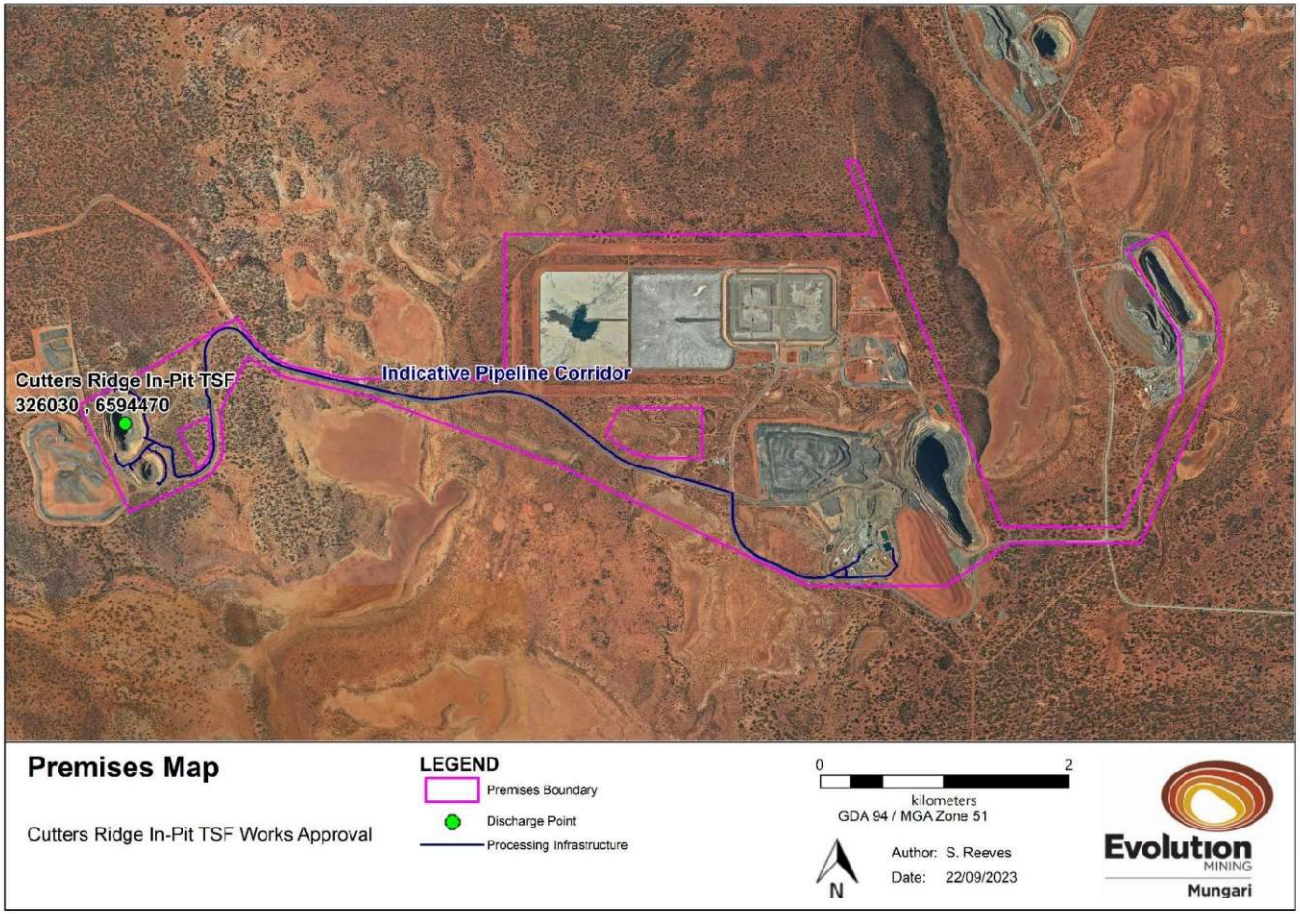

Figure 1: Map of the boundary of the prescribed premises

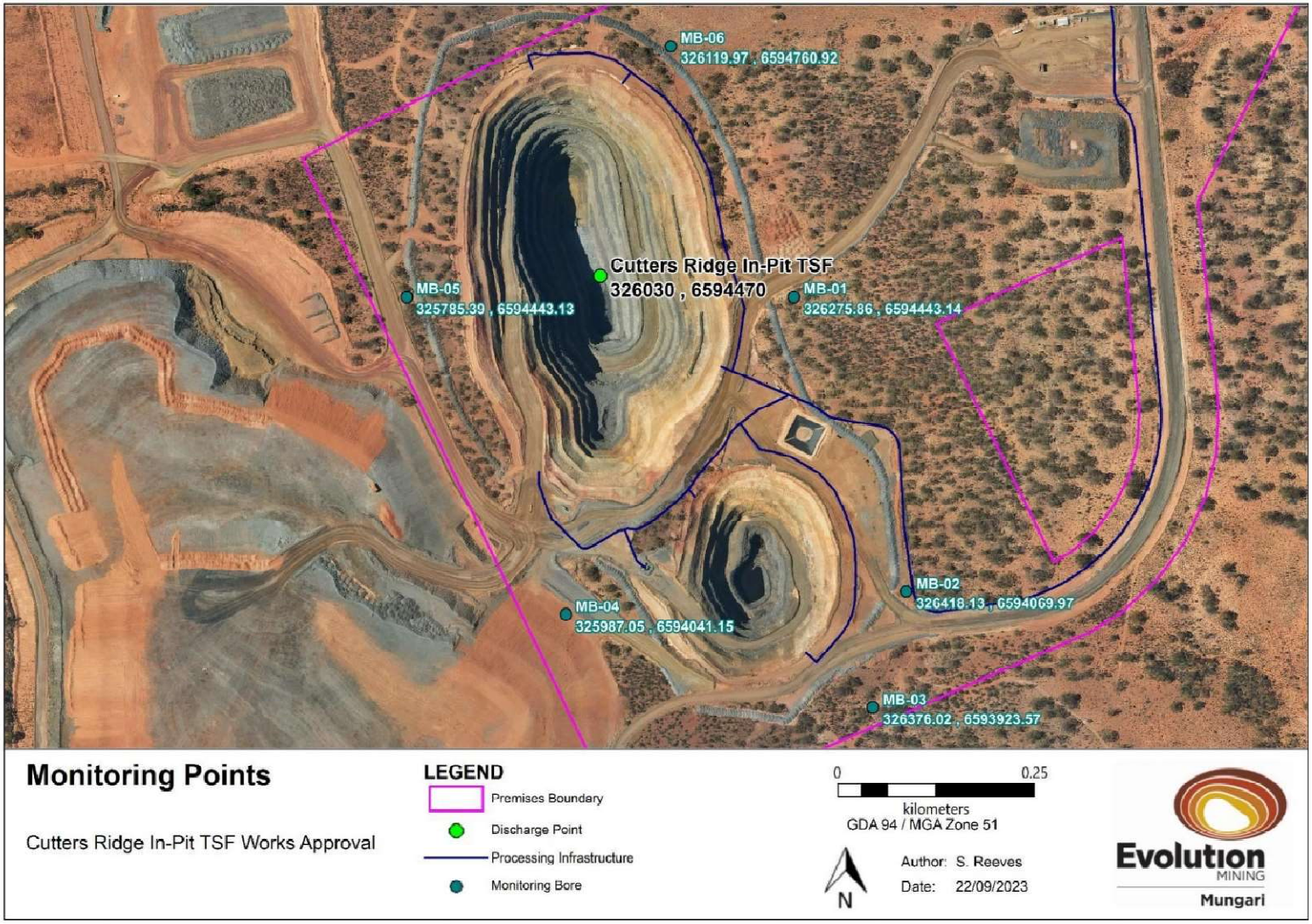

Figure 2: Location of monitoring bores

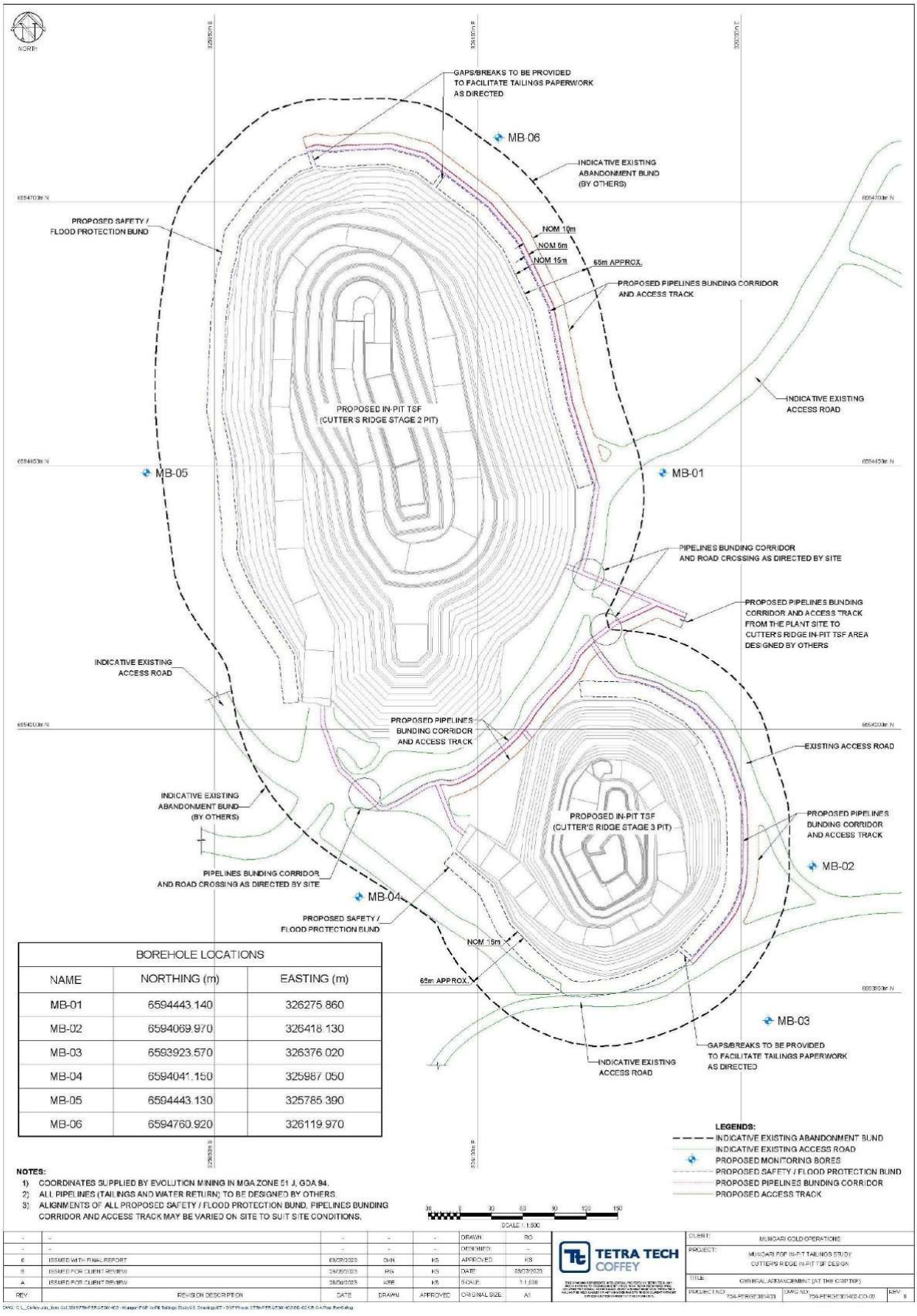

Figure 3: Cutters Ridge In-Pit TSF design

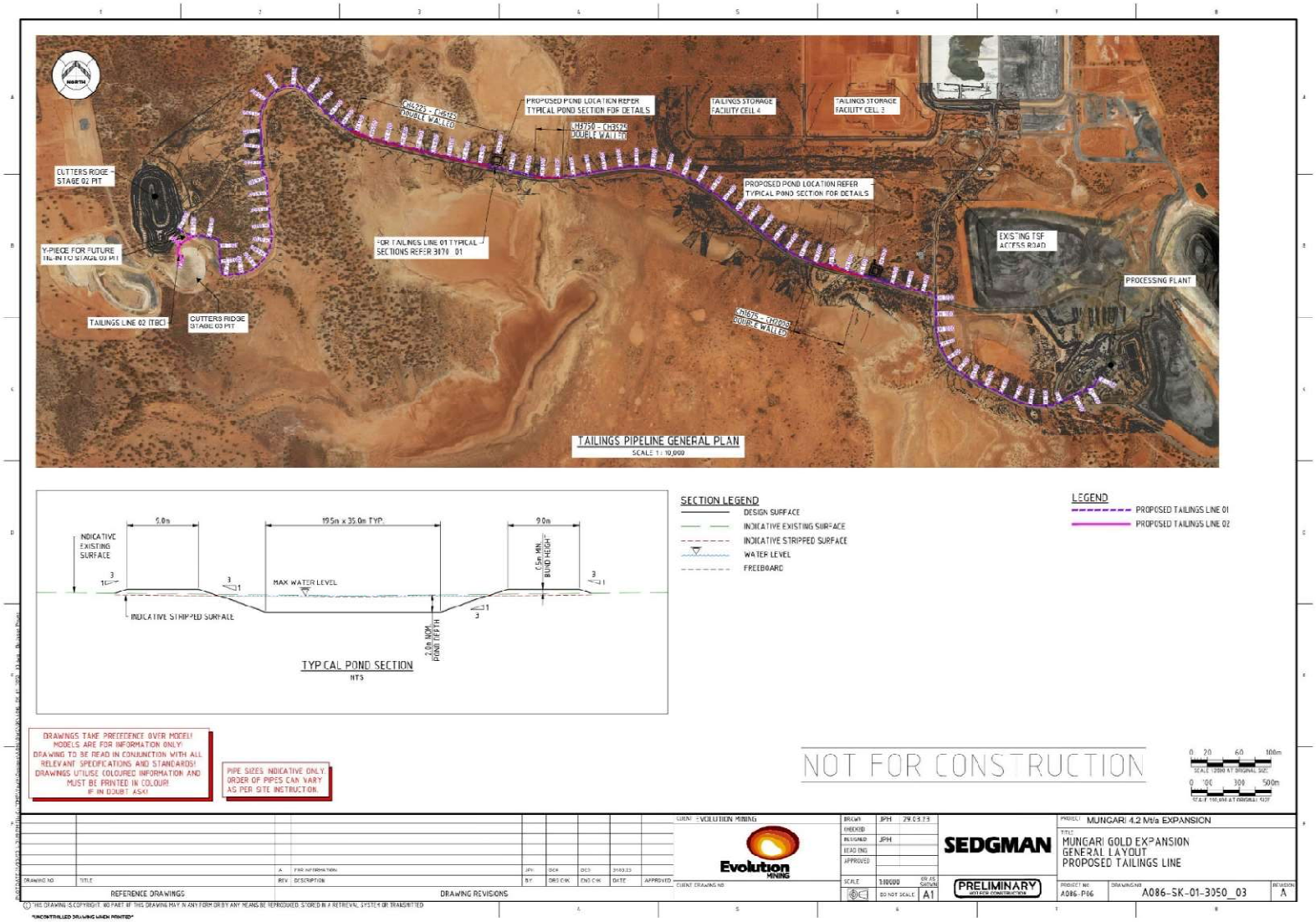

Figure 4: Location of tailings pipelines

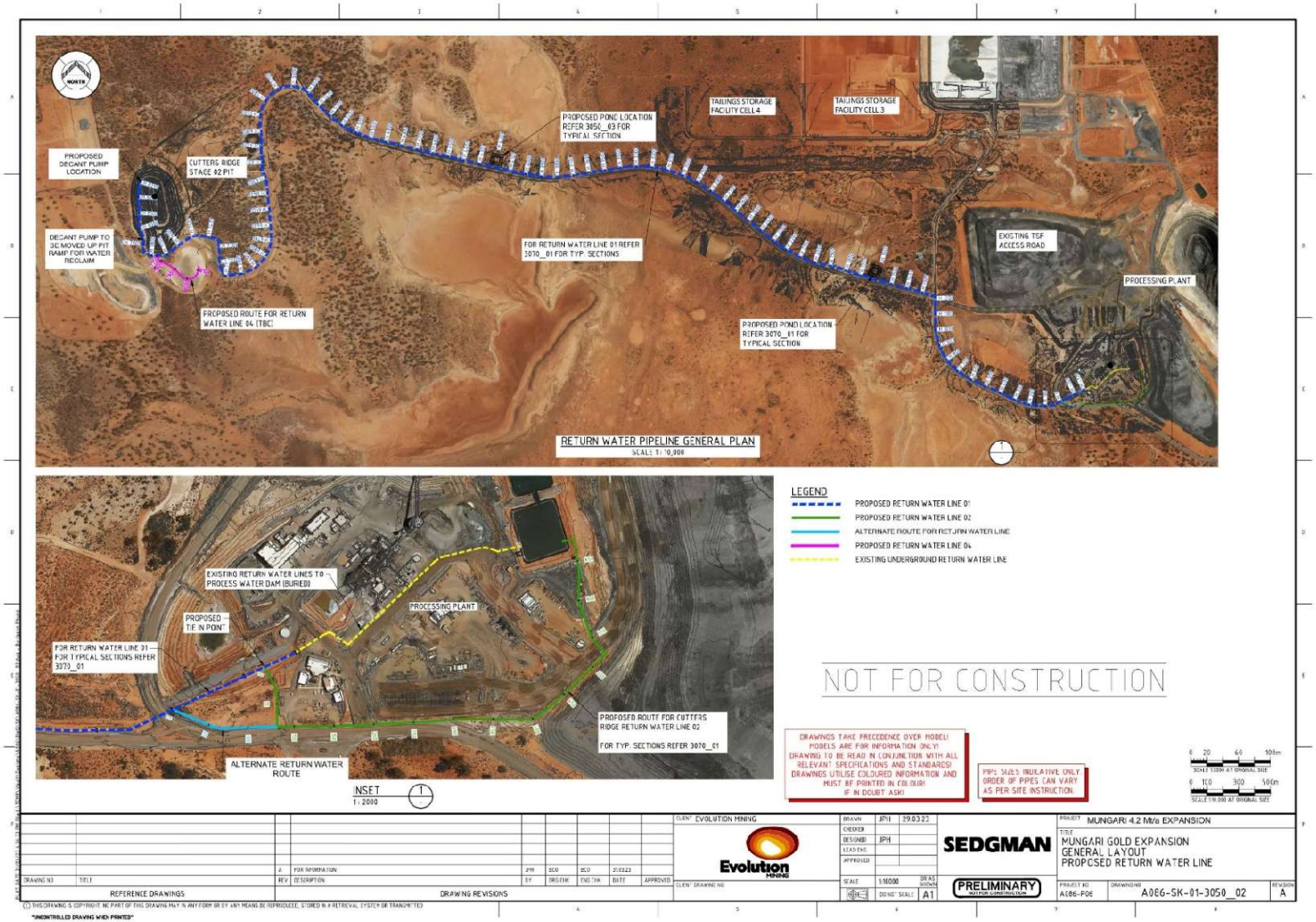

Figure 5: Location of return water pipeline

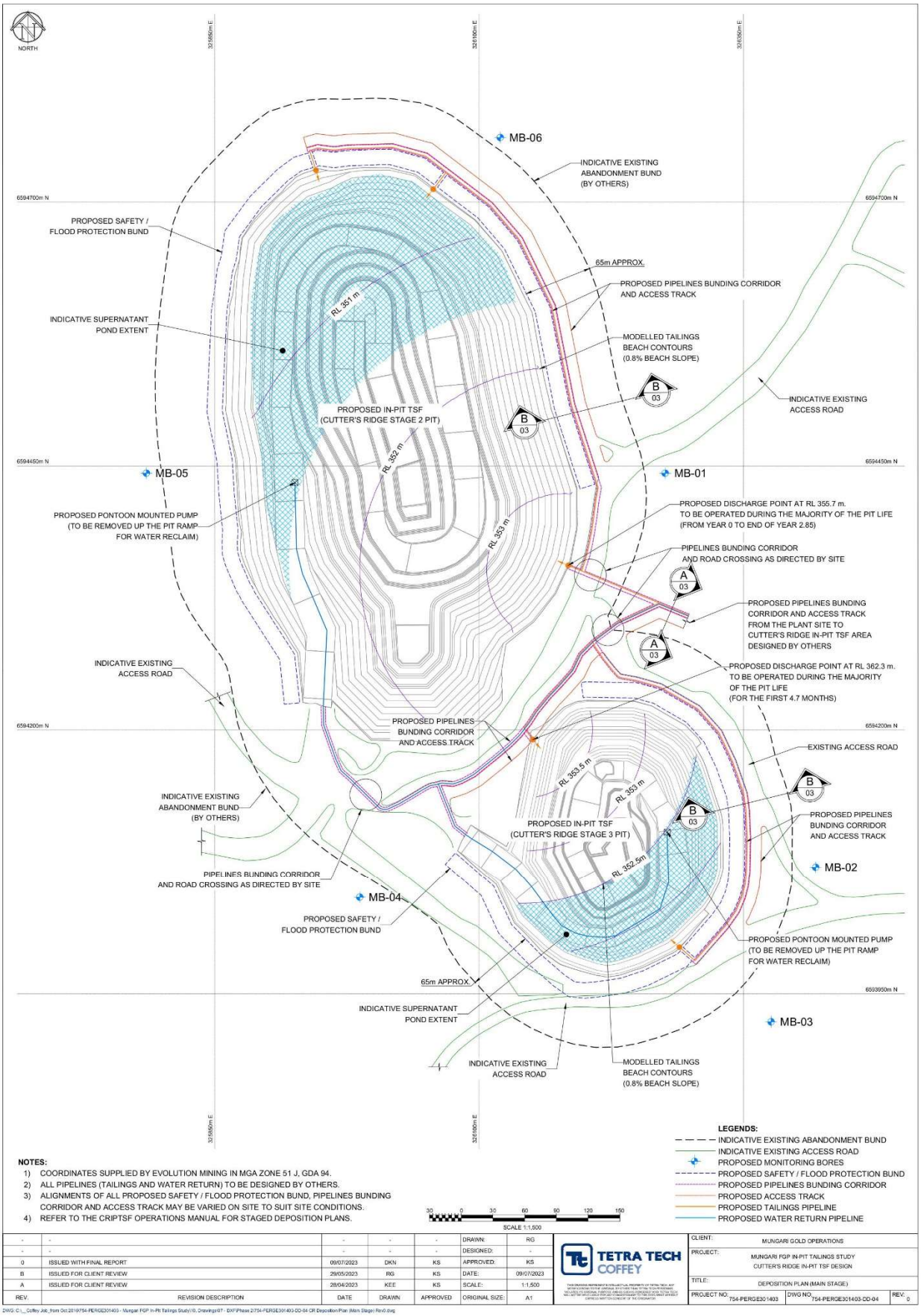

Figure 6: Deposition plan and discharge points (main stage)

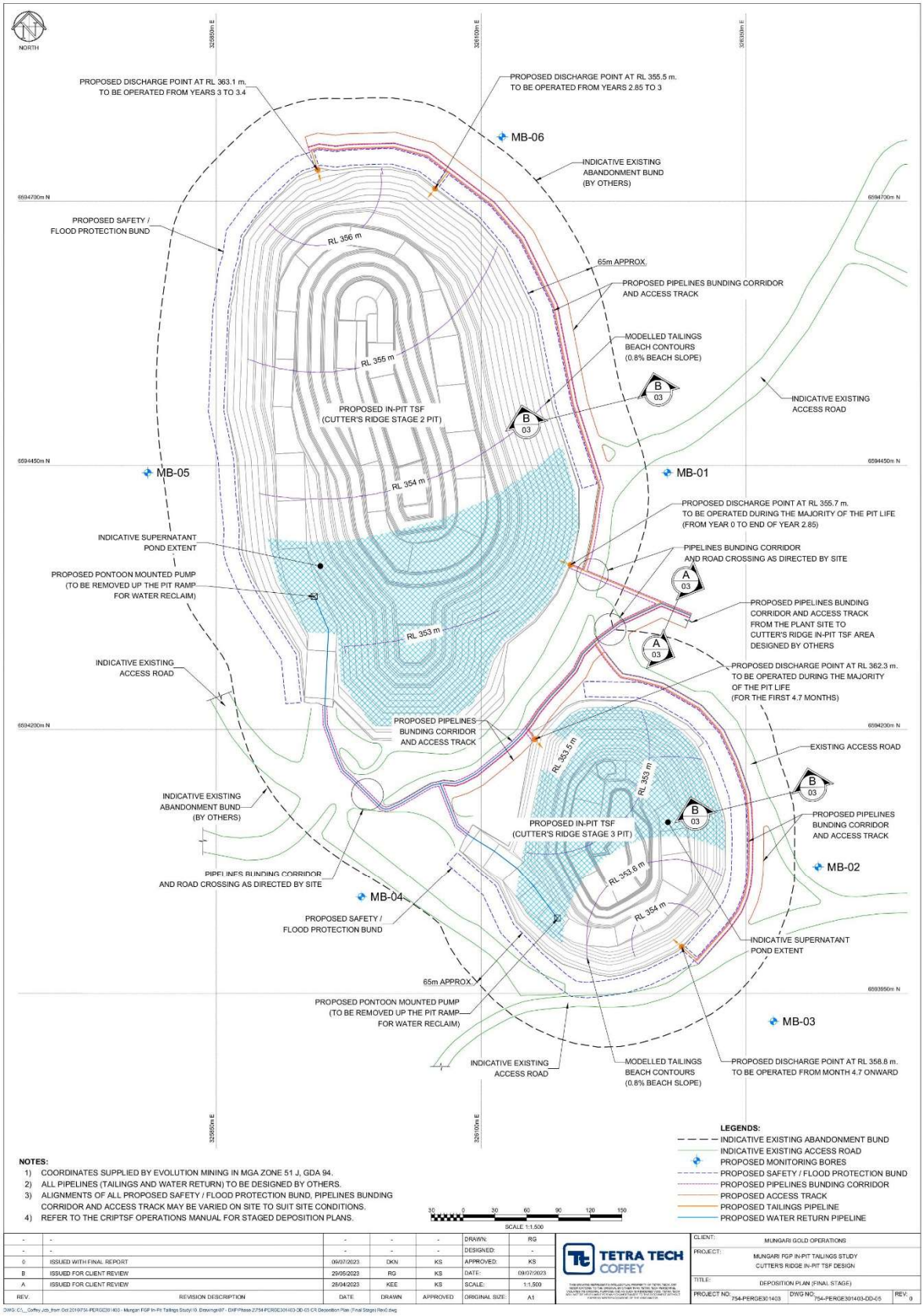

Figure 7: Deposition plan (final stage)

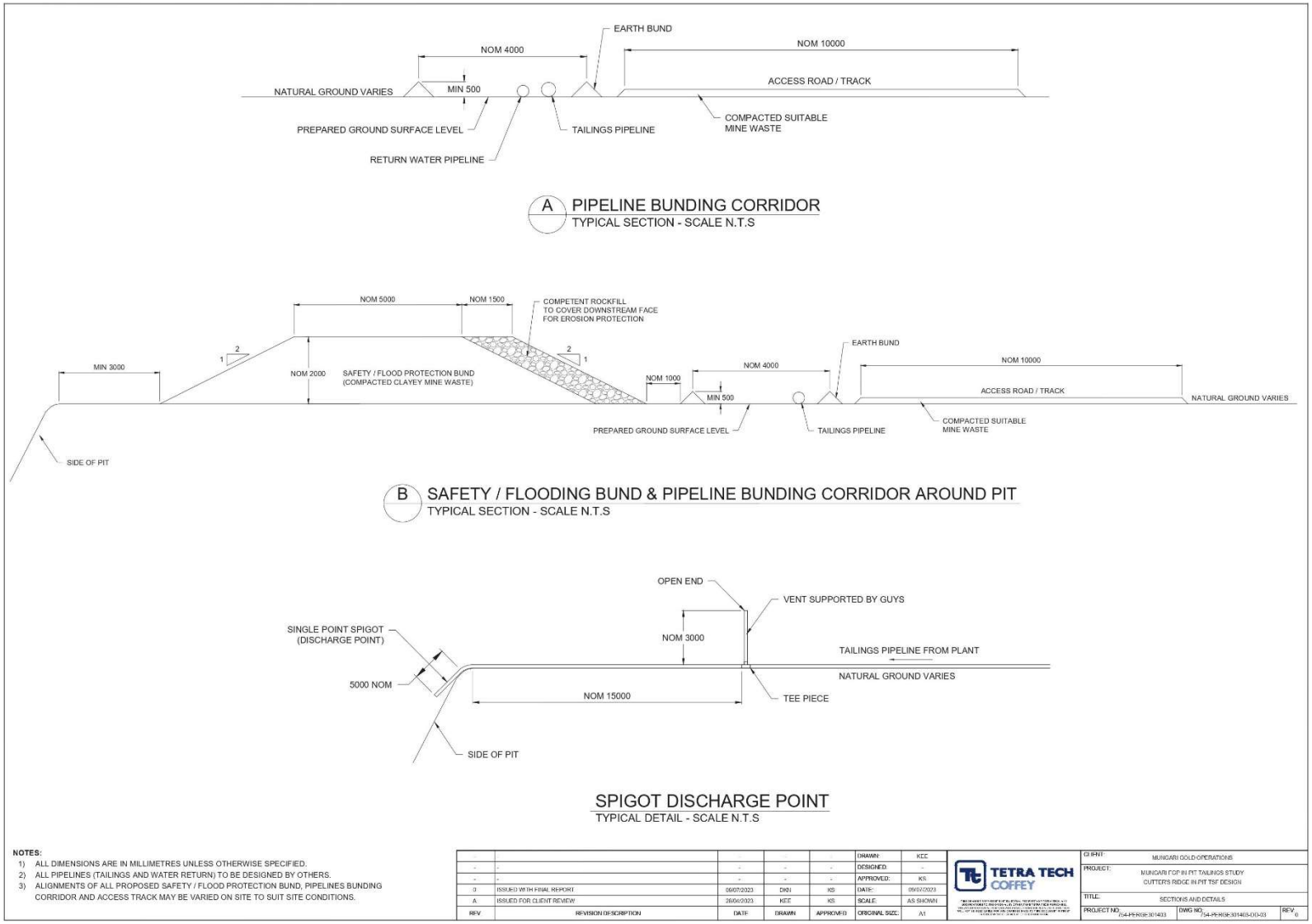

Figure 8: Pipeline bunding corridor and safety / flooding bund

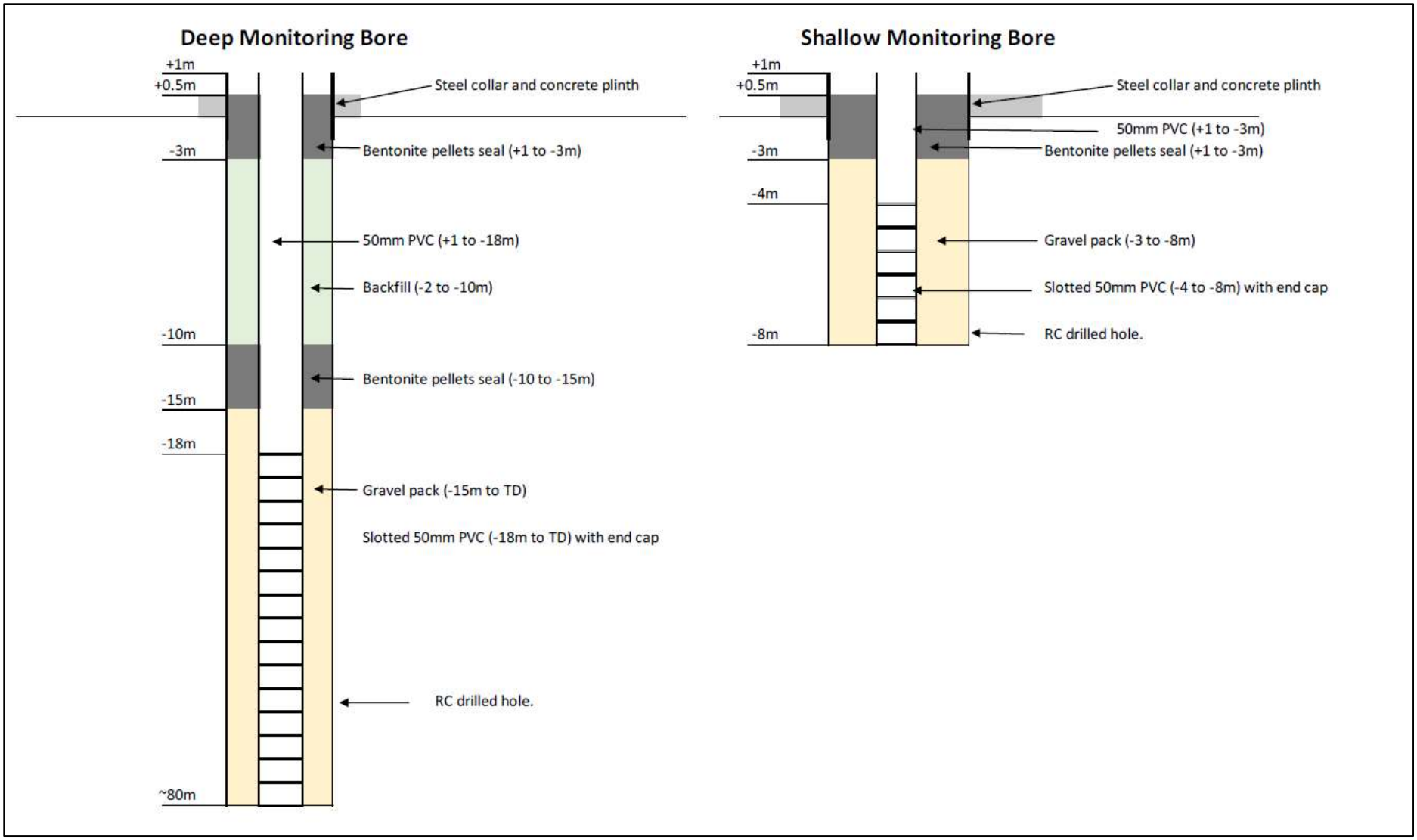

Figure 9: Nominal bore design

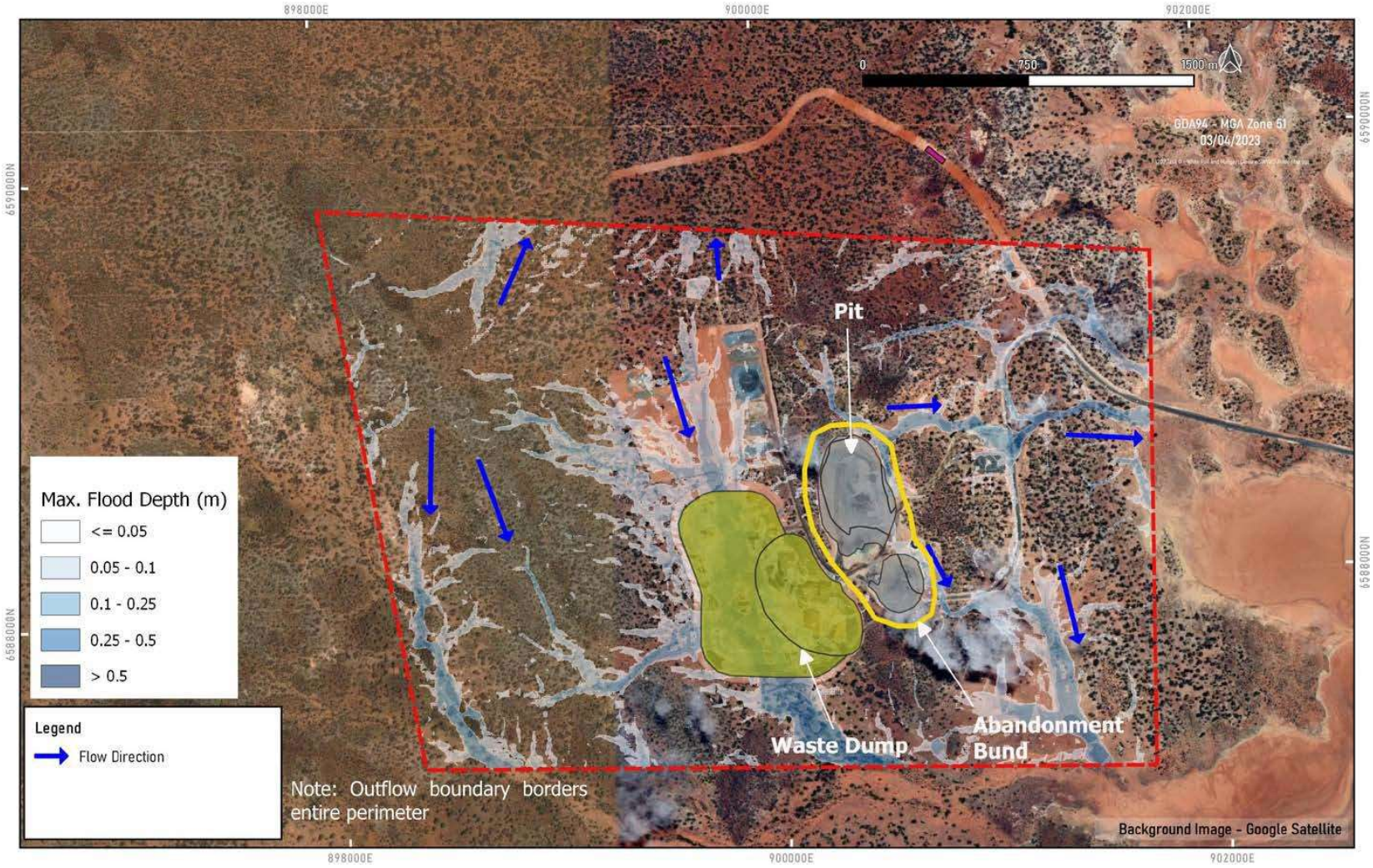

Figure 10: Cutters Ridge 1% AEP Flood Map

Schedule 2: Premises boundary

The corners of the premises boundary are the coordinates listed in Table 5.

Table 5: Premises boundary coordinates (GDA2020)

	Easting	Northing	Zone
1.	334080	6595863	51
2.	334389	6596011	51
3.	334800	6595424	51
4.	334846	6594989	51
5.	334194	6593509	51
6.	333139	6593508	51
7.	332631	6593167	51
8.	331532	6593167	51
9.	329521	6594134	51
10.	327983	6594692	51
11.	326990	6595015	51
12.	326788	6594565	51
13.	326650	6594019	51
14.	326065	6593763	51
15.	326934	6595321	51
16.	327824	6594829	51
17.	329082	6594829	51
18.	329082	6595994	51
19.	332062	6595994	51
20.	331827	6596582	51
21.	331904	6596581	51
22.	333086	6593639	51
23.	334041	6593632	51
24.	334530	6594719	51
25.	334503	6595192	51
26.	325653	6594621	51
27.	326057	6594823	51

Schedule 3: Monitoring

Groundwater monitoring

1. The works approval holder must monitor groundwater for concentrations of the identified parameter(s) in accordance with Table 1.

Table 1: Groundwater monitoring of ambient concentrations

Monitoring well location	Parameter	Unit	Frequency	Method
Groundwater monitoring wells: MB01 to MB06 as shown on Figure 2 of Schedule 1	Standing water level (SWL)[1]	mgbl	A single sampling event prior to the deposition of tailings into the CRIPTSF, then each monthly period	Spot sample, in accordance with AS/NZS 5667.11.
	pH[1]	pH unit		
	Electrical conductivity[1]	µcm/S		
	Total dissolved solids[1]	mg/L		
	WAD cyanide	mg/L	A single sampling event prior to the deposition of tailings into the CRIPTSF, then each quarterly period	
	Total cyanide	mg/L		
	Aluminum (Al), Arsenic (As), Bicarbonate alkalinity (HCO3), Cadmium (Cd), Calcium (Ca), Carbonate (CO3), Chloride (Cl), Chromium (Cr), Cobalt (Co), Copper (Cu), Iron (Fe), Lead (Pb), Magnesium (Mg), Manganese (Mn), Nickel (Ni), Potassium (K), Selenium (Se), Sodium (Na), Sulphate ($SO4_{2-}$), Zinc (Zn).	mg/L	A single sampling event prior to the deposition of tailings into the CRIPTSF, then one sampling event at least 45 days after the commencement of time limited operations	

Note 1: In-field non-NATA accredited analysis

Quality assurance and quality control requirements

2. The works approval holder must adhere to the following field quality assurance and quality control procedures, as specified in Schedule B2 of the Assessment of Site Contamination NEPM, and must include as a minimum:

(a) decontamination procedures for the cleaning of tools and sampling equipment before sampling and between samples;

(b) field instrument calibration for instruments used on site;

(c) blind replicate samples and rinsate blanks must be collected in the field and sent to the primary laboratory to determine the precision of the field sampling and laboratory analytical program;

(d) completed field monitoring sheets / sampling logs for each sample collected, showing:

  (i) time of collection;

  (ii) location of collection;

  (iii) initials of sampler;

  (iv) sampling method;

  (v) field analysis results;

  (vi) duplicate type / location (if relevant);

  (vii) site observations and weather conditions; and

(e) chain-of-custody documentation must be completed which details the following information:

  (i) site identification;

  (ii) the sampler;

  (iii) nature of the sample;

  (iv) collection time and date;

  (v) analyses to be performed;

  (vi) sample preservation method;

  (vii) departure time from site;

  (viii) dispatch courier(s);

  (ix) arrival time at the laboratory.