Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W3048/2025/1
Works approval holder	Murrin Murrin Operations Pty Ltd
ACN	076 717 505
Registered business address	Level 3, 30 The Esplanade PERTH WA 6000
DWER file number	INS-0003048, APP-0029923
Duration	7/01/2026 to 6/01/2031
Date of issue	7 January 2026
Premises details	Murrin Murrin Nickel Cobalt Project Mining tenements M39/343, M39/420, M39/421, M39/423, M39/424, M39/553 As defined by the premises maps in Schedule 1

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production / design capacity**
Category 5: Processing and beneficiation of metallic and non-metallic ore	4,620,000 tonnes per annual period

This works approval is granted to the works approval holder, subject to the attached conditions, on 7 January 2026, by:

Cathie Derrington

Digitally signed by Cathie Derrington
Date: 2026.01.07 07:37:10 +08'00'

Cathie Derrington
Senior Environmental Officer, Green Energy
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Works approval history

Date	Reference number	Summary of changes
7/01/2026	W3048/2025/1	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 phase

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

Item	Infrastructure	Design and construction / installation requirements	Infrastructure location
1.	8 Series Inpit TSF	(a) Must be designed to contain no greater than 17,800,000 tonnes of dry tailings.	As shown in Schedule 1, Figure 1 as: 8 Series Inpit TSF
2.	Tailings and decant pipelines, pipeline corridor	(a) Pipelines must be constructed according to Australian Standards AS/NZS 2033, 4129, 4130 and 4131 for polyethylene pipes and capable of containing corrosive liquids. (b) Pipelines must be equipped with leakage detection systems, including telemetry and pressure sensors, and incorporate manual mechanical valve shut-off mechanisms in the event of a pipeline failure. (c) Two scour sumps must be constructed along the pipeline and capable of holding a minimum of 360 metres cube of tailings / wastewater each. (d) Pipelines must be installed within bunded corridors, with bunds on both sides constructed to a minimum height of 600 millimetres, designed to provide secondary containment for any potential spillage. (e) Scour sumps and pipeline bunds must be constructed in accordance with the specifications provided in Schedule 1, Figure 3. (f) Water carts must be used to minimise dust lift.	As shown in Schedule 1 Figure 1 as: Deposition pipeline Decant pipeline and Figure 3 as: Pipeline bunding Scour sump and Discharge point.

Compliance reporting

2. The works approval holder must within 30 calendar days of all items of infrastructure or equipment required by each condition 1 and 4 being constructed and/or installed:

(a) undertake an audit of their compliance with the requirements of conditions 1 and 4; and

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

3. The Environmental Compliance Report(s) required by conditions 2, must include as a minimum the following:

(a) certification by a suitably qualified engineer that the items of infrastructure or component(s) thereof, as specified in conditions 1 and 4, have been constructed in accordance with the relevant requirements specified in conditions 1 and 4;

(b) as constructed plans, bore logs, well construction logs, and a detailed site plan for each item of infrastructure or component of infrastructure specified in conditions 1 and 4;

(c) groundwater monitoring bore details as specified in condition 5 including:

(i) copies of the field monitoring records and field QA/QC documentation;
(ii) an assessment of reliability of field procedures and laboratory results;
(iii) a tabulated summary of results, as well as all raw data provided in an accompanying Microsoft Excel spreadsheet digital document/file (or a compatible equivalent digital document/file), with all results being clearly referenced to laboratory certificates of analysis; and
(iv) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the *Guideline: Assessment and management of contaminated sites*, and

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

Construction of groundwater monitoring wells

4. 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 location(s)	Timeframe
New groundwater monitoring wells: 8-1 8-2 8-3 8-4 8-5	Well design and construction: Designed and constructed in accordance with *ASTM D5092/D5092M-16: Standard practice for design and installation of groundwater monitoring bores*. Well screens be constructed with a screened interval not exceeding 6 metres. Logging of borehole: Soil samples must be collected and logged during the installation of the monitoring wells.	As depicted in Schedule 1, Figure 1 as: 8-1 8-2 8-3 8-4 8-5 8-6	Must be constructed, developed (purged), and determined to be operational by no later than 30 calendar days prior to the commencement

Infrastructure	Design, construction, and installation requirements	Monitoring well location(s)	Timeframe
8-6 8-7	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.	8-7	of time limited operations under condition 8.
	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.		
	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.		

Groundwater monitoring - construction

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

Table 3: Groundwater monitoring of ambient concentrations

Monitoring location	Parameter	Unit	Frequency	Method
New groundwater monitoring wells: 8-1 8-2	Standing water level[1]	mbgl	A single sampling event undertaken prior to construction phases, and a single sampling event prior to the	AS/NZS 5667.1 AS/NZS 5667.11
	pH[1]	pH units		
	Total dissolved solids (TDS)	mg/L		

Monitoring location	Parameter	Unit	Frequency	Method
8-3 8-4 8-5 8-6 8-7 as depicted in Figure 1 of Schedule 1	Aluminium		commencement of time limited operations	
	Cadmium			
	Copper			
	Lead			
	Mercury			
	Silicon			
	Zinc			
	Arsenic			
	Sodium			
	Cobalt			
	Nickel			

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

6. 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 5.

7. All sample analysis undertaken in accordance with condition 5 must be undertaken by laboratories with current NATA accreditation for the relevant parameters, unless otherwise specified.

Time limited operations phase

Commencement and duration

8. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 10 where:

(a) The Environmental Compliance Report(s) as required by condition 2 has been submitted by the works approval holder for the items of infrastructure, and

(b) Initial baseline groundwater monitoring required by condition 5 has been performed.

9. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 10 (as applicable):

(a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 8 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.*

Time limited operations requirements and emission limits

10. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 4 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 4.

Table 4: Infrastructure and equipment requirements during time limited operations

Item	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	8 Series Inpit TSF	(a) No more than 2,310,000 tonnes of dry tailings deposited during time limited operations. (b) TSF must maintain a minimum freeboard of 1.9 metres from the vertical height between the normal operating pond and minimum pit rim level. (c) Must undertake inspections of the freeboard, decant pumps, pit wall integrity, spigots of the decant pond and associated infrastructure every 12 hours. (d) Damp tailings beaches must be maintained by reducing drying time cycles between depositions. (e) Dust generation must be minimised using dust suppressants, silt fences and windbreaks. (f) Any overtopping or defects to the TSF pit walls must be reported within 24 hours to the CEO in writing. (g) During high rainfall events inspection frequency for the freeboard must be increased to prevent spills and overtopping. (h) Stormwater must be directed away from the TSF by roads and trenches.	As shown Schedule 1, Figure 1, labeled as: 8 Series Inpit TSF
2.	Tailings and decant pipelines, pipeline corridor and scour sumps.	(a) Inspections must be undertaken of the pipeline integrity and for signs of leaks every 12 hours. (b) Transfer of tailings or decant water must cease when pipelines are damaged and / or when leaks are detected. (c) All pipelines fitted with leakage detection systems, including telemetry and pressure sensors, must be maintained in full working order to ensure the functionality of automatic shut-off mechanisms in the event of a pipeline failure. (d) Bunding around the tailings and decant pipelines must be maintained and capable of capturing all pipeline spills and leaks.	As shown in Schedule 1, Figure 1, labeled as: Deposition pipeline Decant pipeline

Item	Site infrastructure and equipment	Operational requirement	Infrastructure location
		(e) Scour sumps must be cleared in the event of a pipeline breach or in-fill with surrounding material. (f) Must maintain scour sumps at a minimum capacity of 360 cubic metres.	
3.	Groundwater monitoring bores	(a) Must be maintained in operable condition to allow groundwater samples to be taken.	As shown in Schedule 1, Figure 1, labelled as: 8-1, 8-2, 8-3, 8-4, 8-5, 8-6, and 8-7.

11. During time limited time operations, the works approval holder must ensure that the emission(s) specified in Table 5 are discharged only from the corresponding discharge point(s) and only at the corresponding discharge point location(s).

Table 5: Emission and discharge points during time limited operations

Item	Emission	Discharge point	Discharge point location
1.	Tailings and decant liquor	8 Series Inpit TSF	8 Series Inpit TSF, as shown in Figure 1 of Schedule 1
2.	Decant liquor	8 Series Inpit TSF; and Evaporation Pond: Cell 1 Cell 2 Cell 3 Cell 4	Evaporation Pond Cells 1-4, as shown in Figure 2 of Schedule 1
3.	Seepage recovery water		

12. In the event that the trigger level for nickel outlined in Table 7 is exceeded in any of the bores monitored in Table 7, the works approval holder must undertake the response action defined for each of the trigger levels defined in Table 6.

Table 6: Trigger levels and response actions for nickel concentrations

Trigger level	Response action
1 mg/L	1. Review decant pond size, beaching and deposition strategy.
10 mg/L	1. Prepare and submit a Nickel Management Plan following the first instance of an exceedance of this trigger level at any affected bore (this action is not required for subsequent trigger exceedances). The Nickel Management Plan must be submitted within 90 days of the first trigger exceedance and detail additional response actions to reduce nickel concentrations in affected bores. 2. Implement response actions identified in the Nickel Management Plan within 90 days of submission of the Nickel Management Plan.
25 mg/L	3. Install seepage recovery bores in the vicinity of the impacted bore/s within 90 days.

13. In the event that the trigger level for standing water level outlined in Table 7 is exceeded at any bore outlined in Table 7, within 90 days of the exceedance occurring, the works approval holder must:

(a) undertake a review of existing geological information from the site to identify bedrock structural features that are potential conduits for groundwater flow from the 8 Series Inpit TSF;

(b) carry out a ground-based geophysical investigation using electrical or electromagnetic techniques to determine the likely lateral extent of seepage from the 8 Series Inpit TSF and identify suitable locations for siting an appropriate number of additional monitoring bores; and

(c) provide the CEO with a report outlining the results of the works required under this condition.

14. The works approval holder must install additional monitoring bores in the locations outlined in the report required under condition 13 within 60 days of submission of the report.

15. In the event that the limit for standing water level outlined in Table 7 is exceeded at any bore outlined in Table 7, within 90 days of the exceedance occurring, the works approval holder must:

(a) undertake the works outlined under condition 13 and condition 14, if not already undertaken for the bore the exceedance was recorded at;

(b) install an appropriate number of seepage recovery bores at suitable locations informed by the works undertaken under condition 13.

Monitoring during time limited operations

16. The works approval holder must monitor groundwater during time limited operations for concentrations of the identified parameters in accordance with Table 7.

Table 7: Monitoring of ambient concentrations during time limited operations

Monitoring location	Parameter	Trigger level	Limit	Unit	Frequency	Method
New groundwater monitoring wells: 8-1 8-2 8-3 8-4 8-5 8-6 8-7 as depicted in Figure 1 of Schedule 1	Standing water level[1]	10	5	mbgl	A single sampling event undertaken between 30 and 60 calendar days following commencement of time limited operations AND A single sampling event undertaken between 120 and 180 calendar days following commencement of time limited operations	AS/NZS 5667.1 AS/NZS 5667.11
	pH[1]	-	-	pH units		
	Total dissolved solids (TDS)	-	-	mg/L		
	Aluminium					
	Cadmium					
	Copper					
	Lead					
	Mercury					
	Silicon					
	Zinc					
	Arsenic					
	Sodium					
	Cobalt					
	Nickel	1[2]	50			

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

Note 2: Additional trigger levels for nickel concentrations are listed in Table 6 under condition 1.

17. The works approval holder must record the results of all monitoring activity required by condition 16.

18. 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 16.

19. All sample analysis undertaken in accordance with condition 16 must be undertaken by laboratories with current NATA accreditation for the relevant parameters, unless otherwise specified.

Compliance reporting

20. 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.

21. The works approval holder must ensure that the report required by condition 20 includes the following:

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

(b) a summary of the monitoring results obtained during time limited operations under conditions 5 and 16;

(c) a summary of any actions undertaken during time limited operations under conditions 13, 14, 15, and 1;

(d) a summary of the environmental performance of all infrastructure as constructed or installed (as applicable), which includes records detailing the:

(i) amount of ore processed;

(ii) amount of dry tailings produced;

(iii) tailings density (solid vs water content);

(iv) amount of dry tailings deposited into the 8 Series Inpit TSF;

(v) volume of tailings slurry deposited into the 8 Series Inpit TSF;

(vi) volume of decant water directed to the evaporation ponds;

(vii) volume of decant water directed to the processing plant for reuse; and

(viii) volume of seepage recovery water directed to the evaporation ponds.

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

(f) where the manufacture'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)

22. 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.

23. 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 conditions 1 and 4;

(b) any maintenance of infrastructure that is performed in the course of complying with conditions 1 and 4;

(c) monitoring programmes undertaken in accordance with conditions 5 and 16;

(d) actions undertaken in accordance with conditions 13, 14, 15, and 1; and

(e) complaints received under condition 22.

24. The books specified under condition 23 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
AS1726	means the Australian Standard AS1762 *Geotechnical site investigations*, as amended from time to time.
AS/NZS 2033	means the *Australian Standard AS/NZS 2033 Installation of polyethylene pipe systems*, as amended from time to time.
AS/NZS 4129	means the *Australian Standard AS/NZS 4129 Fittings for polyethylene (PE) pipes for pressure applications*, as amended from time to time.
AS/NZS 4130	means the *Australian Standard AS/NZS 4130 Polyethylene pipes (PE) for pressure applications*, as amended from time to time.
AS/NZS 4131	means the *Australian Standard AS/NZS 4131 Polyethylene (PE) compounds for pressure pipes and fittings*, as amended from time to time.
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 sample*, as amended from time to time.
AS/NZS 5667.11	means the *Australian Standard AS/NZS 5667.11 Water Quality - Sampling Guidance on sampling of groundwaters*, as amended from time to time.
ASTM D5092/D5092M-16	means the ASTM international standard for *Standard practice for design and installation of groundwater monitoring wells (Designation: ASTM D5092/D5092M-16)*, 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	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been constructed and/or installed in accordance

Term	Definition
Compliance Report	with the works approval.
EP Act	*Environmental Protection Act 1986* (WA).
EP Regulations	*Environmental Protection Regulations 1987* (WA).
NATA	National Association of Testing Authorities
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.
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.
TSF	tailings storage facility
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 (Figure 1).

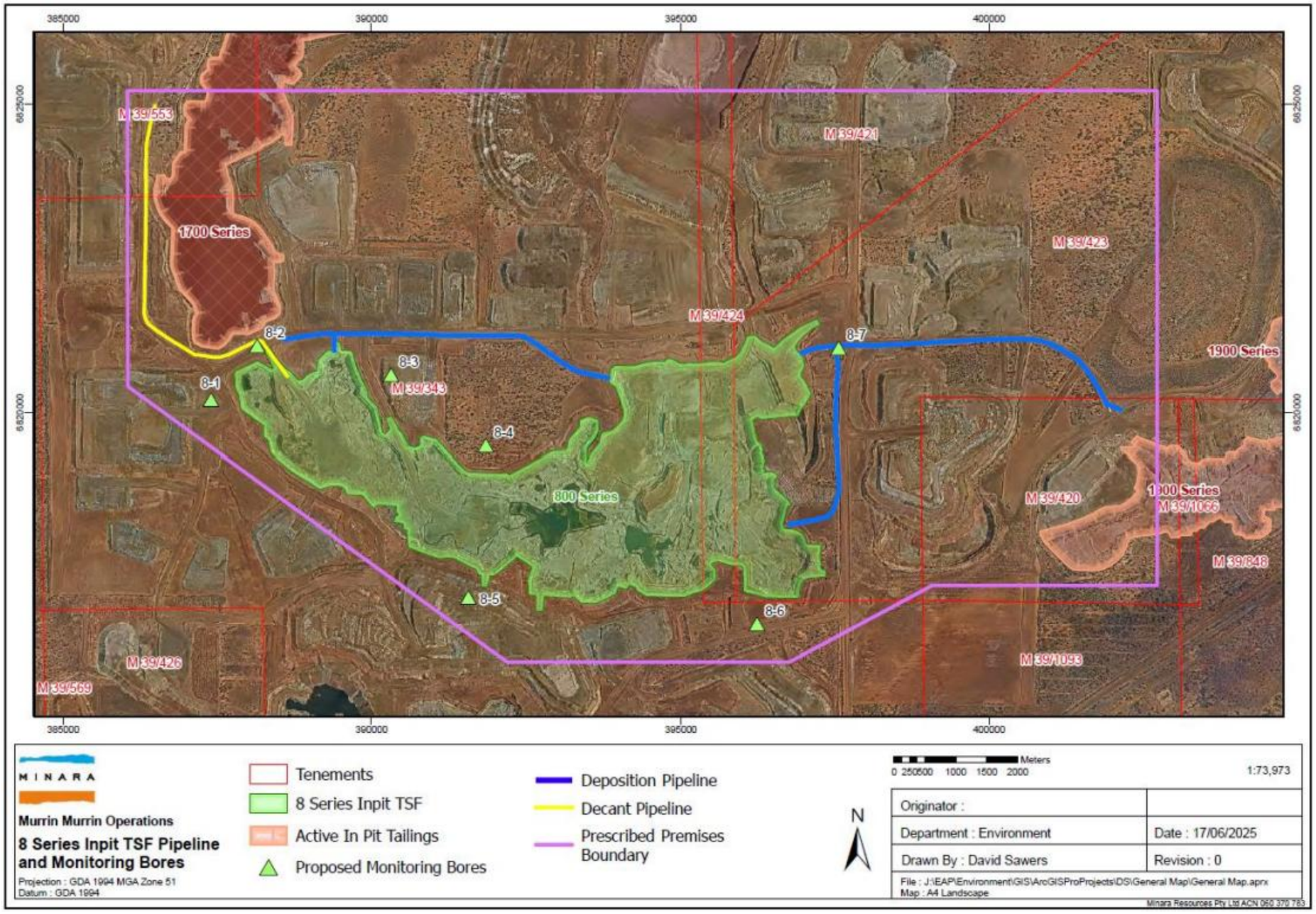

Figure 1: Map of the boundary of the prescribed premises

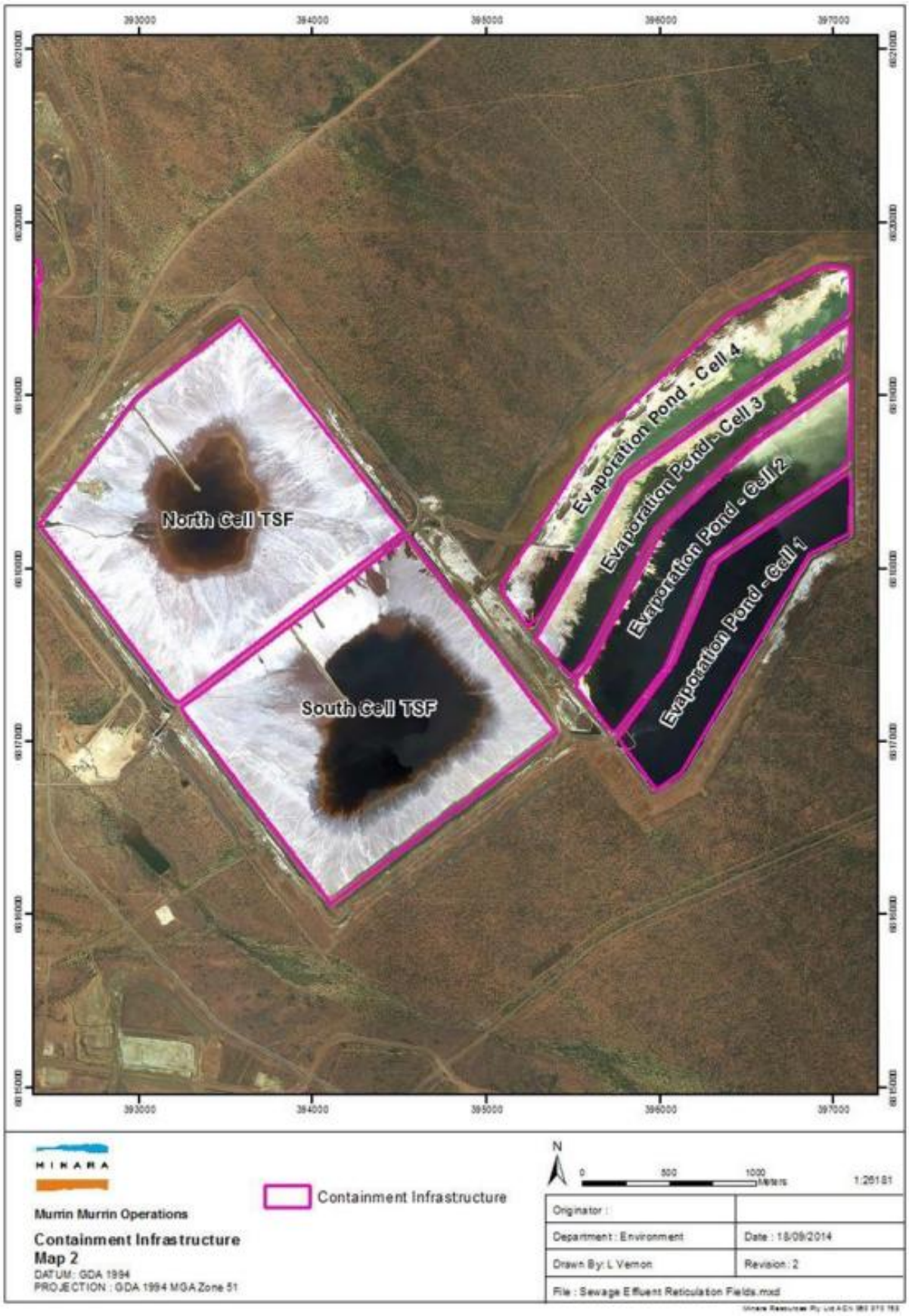

Figure 2: Location of evaporation ponds

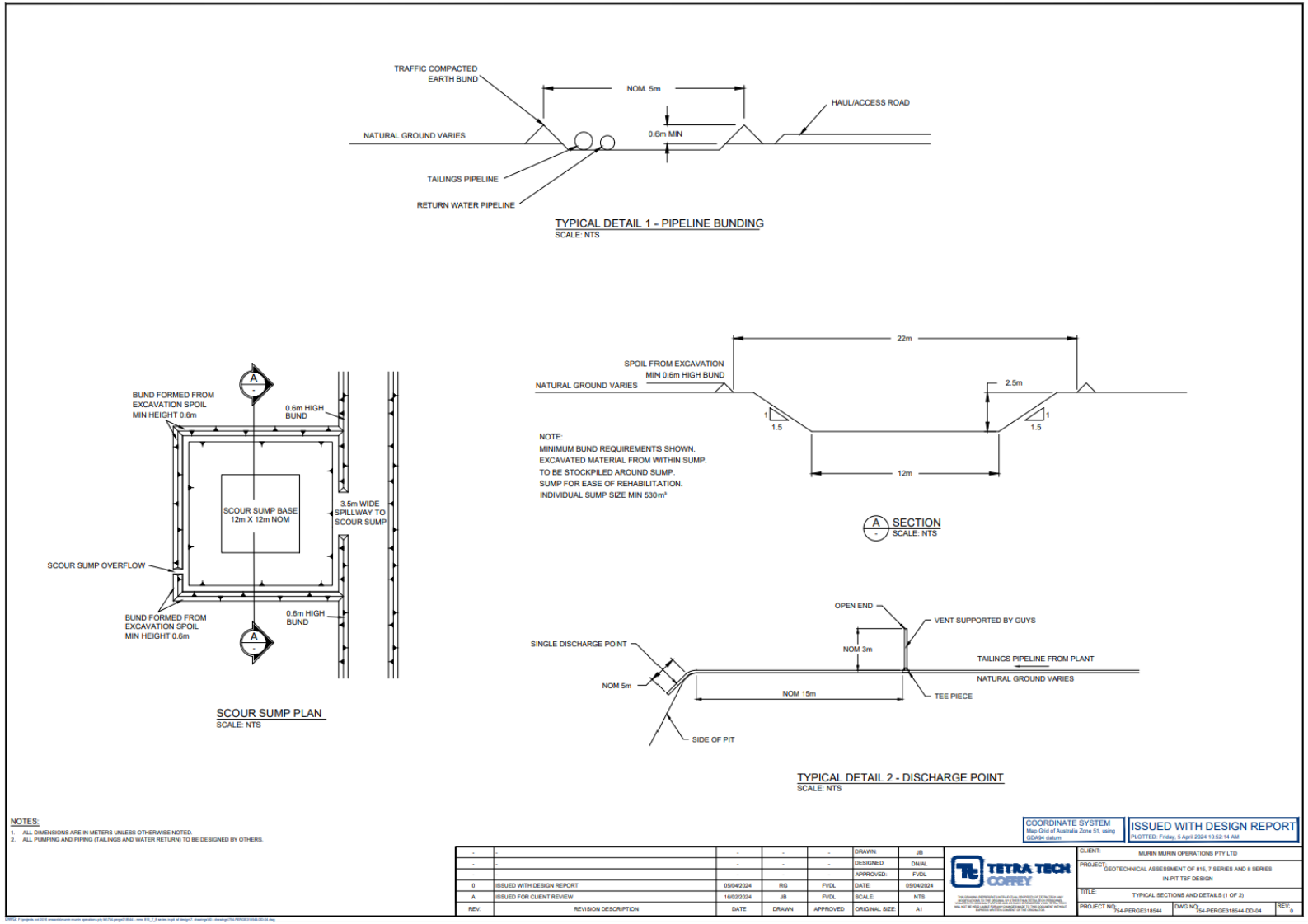

Figure 3: Pipeline and scour sump general arrangement

Schedule 2: Premises boundary

The corners of the premises boundary are the coordinates listed in Table 9.

Table 9: Premises boundary coordinates (GDA2020, Zone 51)

	Easting	Northing
1.	387312	6814474
2.	387312	6813394
3.	388706	6812383
4.	389723	6812383
5.	390265	6812665
6.	391088	6812665
7.	391088	6814471

Schedule 3: Quality assurance and quality control requirements

The licence 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); and

  (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); and

  (ix) arrival time at the laboratory.