Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W3015/2025/1
Works approval holder	Boab Metals Limited
ACN	107 159 713
Registered business address	4 Clive St WEST PERTH WA 6005
DWER file number	INS-0003015 & APP-0027616
Duration	06/02/2026 to 05/02/2029
Date of issue	06/02/2026
Premises details	Sorby Hills Project Part Mining Leases M80/286, M80/197 and M80/196 KUNUNURRA WA 6743 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 or beneficiation of metallic or non-metallic ore	2,500,000 tonnes per year
Category 6: Mine dewatering	3,000,000 tonnes per year
Category 63: Class I inert landfill site	1,500 tyres
Category 85: Sewage facility	45m^3 per day
Category 89: Putrescible landfill site	1,000 tonnes per year

This works approval is granted to the works approval holder, subject to the attached conditions, on 06 February 2026, by:

Jarrod Abrahams
Digitally signed by Jarrod Abrahams
Date: 2026.02.06 14:56:13 +08'00'

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
06/02/2026	W3015/2025/1	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 (non CCI)

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.

2. The works approval holder must use water carts, sprinklers and/or other dust suppression measures to prevent dust lift-off from active construction areas and/or works specified in Table 1.

Table 1: Design and construction / installation requirements

	Facility	Infrastructure	Design and construction / installation requirements	Infrastructure location / design drawings
Category 5				
1.	Ore Processing Facility	Process Plant	• Installed as per the general arrangement depicted in Schedule 1: Maps, Figure 4; and • Bunded to ensure stormwater is collected in sumps for collection/removal as required.	Schedule 1: Maps, Figure 1 and Figure 4
2.		Dust Control Systems	• Install high-pressure water fogging sprays over ROM bin (automatic activation when loader tips); • Install dust collector fans throughout process plant circuit (as required); • Install dust collector unit at primary crusher drawing air from ore impact points and conveyor skirting; • Enclose all drop points, conveyors, and transfer points; • Install foggers at transfer points; • Install conveyor scrapers to prevent carryback and spillage; • Fully enclosed concentrate storage shed with ventilation and dust management; • Enclosed Rotabox or equivalent for transport and storage; • Ceramic filter press for product drying (not ovens or kilns); and • Crushing Dust Collection Piping and Instrumentation	Schedule 1: Maps, Figure 4

	Facility	Infrastructure	Design and construction / installation requirements	Infrastructure location / design drawings
			Diagram depicted in Schedule 1, Figure 5.	
3.		Stormwater Management	• OPF constructed on a fill platform to reduce flood risk; • Install diversion drains around plant site; • Bund processing plant infrastructure to contain potentially contaminated runoff; • Install lined drainage channels to intercept ROM runoff/seepage; • Bund flotation circuit and filter press within covered concrete areas; • Bund grinding and classification circuit with concrete slab and sump pumps; • Install wheel wash to prevent concentrate tracking onto roads; and • Install sump pumps in bunded areas for slurry recovery to process circuit.	N/A
4.		Hydrocarbon and Chemical Storage	• Storage areas constructed in accordance with AS/NZS 1940:2017 and AS3833:2024; • Bund hydrocarbon and chemical storage areas; • Fuel stored in self-bunded tanks; • Fuel transfer points secondarily contained; • Spill kits installed in all chemical and fuel storage areas; • Service vehicles fitted with spill kits; and • Construct bioremediation facility for disposal of hydrocarbon-impacted soils.	N/A
5.		Raw Water Tank Process Water Tank	• 1,000 m^3 Raw Water Tank; and • 2,400 m^3 Process Water Tank.	Schedule 1: Maps, Figure 4
6.	Concentrate Storage and Loading Enclosed Shed	Concentrate Storage and Loading	• Construct a fully enclosed shed with automatic doors; • Install dust collectors (baghouse or insertable type) with ducting, ID fan, discharge stack, air pulsation system, and hopper discharge system; • Install sump collection system to capture washdown water and pump to concentrate thickener; • Provide covered concrete bunded areas for flotation circuit and filter press; • Install designated drive-through wash bay for trucks;	Schedule 1: Maps, Figure 4

	Facility	Infrastructure	Design and construction / installation requirements	Infrastructure location / design drawings
			wastewater directed back to process circuit; • Install bottom-dumping hopper for container loading; • Ensure no open stockpiles; concentrate packaged directly into sealed containers; • Provide Rotabox or equivalent enclosed transport and storage system; • Install ventilation and dust management systems within the shed; and • Ensure dust collector discharge system recycles dust slurry back into process (no external discharge).	
Category 6				
7.	Mine Dewatering	Dewatering Pipelines	• Pipelines shall be placed within a bund sufficient to retain the volume between inspections: 5-m wide trench with 1-m high berms; • Bunded pipeline corridors or inside abandonment bund to minimize discharge outside project footprint; • Where water is discharged into evaporation basins or pits, pipes shall be underlain with HDPE liner or disused conveyor to dissipate velocity and minimize erosion scour; and • All discharge points shall be fitted with flow meters for monitoring.	Schedule 1: Maps, Figure 7
8.		Mine Water Settling Pond	• Pond design and layout as per Schedule 1, Figure 16 and Figure 17; • Three cells: Cell 1 and 2 ~29,500 m³ each; Cell 3 ~55,000 m³; • Above-ground facility with footprint of approx. 11.795 ha; • Construct perimeter and common embankments to crest RL 24.5 m using suitable clayey mine waste;Maximum embankment height: 3.5 m; • Designed to include 1.2 m freeboard to accommodate a 1:1000-year AEP, 72-hour rainfall event (0.7 m) plus 0.5 m dry freeboard for wave run-up; • Maximum Operating Level (MOL): RL 23.3 m; and • The basin will be reworked to a depth of 0.3 m (ripped, moisture conditioned, and compacted) and lined with a 0.3 m thick clay layer[1]. Note 1: Laboratory testing of remoulded compacted samples indicates very low permeability, with saturated hydraulic conductivity in the range of 1×10^{-11} to 1×10^{-10} m/s, consistent with triaxial test results (typically 1.9 ×	Schedule 1: Maps, Figure 1

	Facility	Infrastructure	Design and construction / installation requirements	Infrastructure location / design drawings
			10^{-11} to 8.1 × 10^{-11} m/s).	
9.		Evaporation Basin	• Preferential disposal pathway for surplus water (up to 250 ML/month, annualised to 3 GL/a); • Basin footprint: 90 ha (uncleared area between crests and perimeter embankment); • Perimeter embankments constructed to nominal height of 1 m; • Basin grubbed of vegetation (topsoil retained); • Basin not lined, allowing point source infiltration within footprint; • Discharge via open pipe fitted with magnetic magflow meter; • Rip-rap installed at discharge point to reduce velocity and allow sediment settlement; and • Consisting of in-situ heavy clays soils which exhibit low permeability: ➢ Upper 1 m cracking clays: ~2.66 × 10^{-8} m/s; and ➢ Deeper clays (>1.1 m): ~3.82 × 10^{-8} m/s;	Schedule 1: Maps, Figure 1
10.		Pit Voids	• Designated disused pits identified for contingency discharge; and • Ensure geotechnical stability and containment within project footprint.	Schedule 1: Maps, Figure 8
11.		Mechanical Evaporation	• Installed on prepared pads within containment areas; and • Electrical and pump systems compliant with safety standards.	Schedule 1: Maps, Figure 9
Category 63				
12.	Integrated Waste Landform	Class I Inert Landfill (Tyre Landfill)	• Located within the footprint of the Integrated Waste Landform; • Capacity: 1,500 tyres per annum; • Landfilling area ≥3 m above groundwater level; GPS coordinates recorded; • Stormwater management infrastructure installed to contain within landfill footprint or redirect to containment sump; and • Establish firebreak around landfill site.	Schedule 1: Maps, Figure 1.
Category 85				
13.	WWTP	WWTP tanks and associated	• Production capacity of 45 m^3/day; • The WWTP tanks and container will be constructed	Schedule 1: Maps, Figure 1.

	Facility	Infrastructure	Design and construction / installation requirements	Infrastructure location / design drawings
		infrastructure	on a raised, compacted and stabilised earth pad; • Pipelines fitted with leak detection and telemetry; • Raw wastewater / balance tank; • Sequencing Batch Reactor contained within a sea container; • Treated wastewater tanks; • Sludge tanks; • Series of pumps, screens, diffusers, blowers and mixers to transfer and process the wastewater; • Provides sufficient volume to store 4 days of wastewater; • Bunded to store a minimum of the maximum tank volume within the area (being 48,000L); with an approximate 0.5m high berm; • Alarmed for any of the following potential failures: ➢ High-high, High, Low, and Low-low alarm levels in all tanks; ➢ Chlorine failure (low/high); and ➢ pH failure (low/high); and • Designed with effluent output specification of: ➢ BOD <5 mg/L; ➢ *E.coli* <1000 mg/L; ➢ TN <15 mg/L; ➢ TP <8 mg/L; ➢ TSS <5 mg/L; ➢ pH units 6.5-8.5 pH units; ➢ EC <1,500 mg/L; and ➢ Residual chlorine 0.2 – 1 mg/L.	
14.	Irrigation Area	Irrigation Area and associated infrastructure	• 1.5 hectare Irrigation Area; • Elevate Irrigation Area 1.1 m above natural ground level using uncrushed rock to meet 10% AEP rainfall event requirement; • Install cattle-proof fencing around the Irrigation Area perimeter; • Place treated water warning signs at 40 m intervals along the fence line; • Install wobbler sprinklers mounted on 900 mm x 25NB risers, supported by star pickets; • Clear only the designated Irrigation Area footprint; retain remnant vegetation where possible; and	Schedule 1: Maps, Figure 1.

	Facility	Infrastructure	Design and construction / installation requirements	Infrastructure location / design drawings
			• Implement erosion and sediment control measures during earthworks.	
Category 89				
15.	Integrated Waste Landform	Putrescible Landfill	• Located within the footprint of the Integrated Waste Landform; • Capacity: 1,000 tonnes per annum; • Trench base ≥3 m above groundwater table (8–13 mBGL); • Signposted to indicate allowable waste types; • Barricades (windrows or fencing) installed to restrict fauna and stock access; • Location above natural topography, outside flood risk areas; and • Stormwater management integrated with IWL drainage features, directing water to seepage pond.	Schedule 1: Maps, Figure 1.
Other infrastructure				
16.	Depositional dust monitors and real time ambient dust monitors	Dust deposition gauges and real-time ambient dust monitors	• Install dust deposition gauges and real-time ambient dust monitors in accordance with the Ambient Air Quality Monitoring Plan required by Condition 10; • General layout for depositional monitors are depicted in Schedule 1, Figure 6; and • Real time dust monitors (particle monitor / dust track or similar) to be installed at Dust 1 and Dust 5 locations in Figure 6 for continuous monitoring of PM2.5 and PM10 in ambient air.	Schedule 1: Maps, Figure 6
17.	Multimedia Filtration Units	Multimedia Filtration Units – Water Treatment System	• Media Filtration Unit able to treat up to 395m^3/hr; • Designed to remove suspended solids and metal ions present in feed water; and • Designed with effluent output specification of: ➢ TDS <1000 mg/L; ➢ Pb <0.0001 mg/L; ➢ Zn <0.005 mg/L; ➢ Fe (tot) <0.005 mg/L; ➢ Mn <0.010 mg/L; ➢ Mo <0.010 mg/L; and ➢ Cl <300 mg/L.	None-specified
18.	Reverse Osmosis Plant	Reverse Osmosis Plant	• Designed to process 0.15 GL/a for potable and fire water purposes; • Designed to reduce suspended solids and metal ions	None-specified

	Facility	Infrastructure	Design and construction / installation requirements	Infrastructure location / design drawings
			present in feed water; and • Designed with effluent output specification of: ➢ TDS <250 mg/L; ➢ Pb <0.0001 mg/L; ➢ Zn <0.0005 mg/L; ➢ Fe (tot) <0.001 mg/L; ➢ Mn <0.005 mg/L; ➢ Mo <0.005 mg/L; and ➢ Cl <130 mg/L.	
19.	Integrated Waste Landform	Bioremediation facility	• Lined with HDPE liner or clay liner (≥ 0.5m) to provide a sealed containment dam with a permeability of ≤ $1x10^{-9}$ m/s; • Base of pad to be rolled prior to liner installation to ensure no rocks, sticks or sharp items are present that could potentially impact the integrity of the liner; • Floor to be constructed with a minimum gradient of 2% so that the final floor level has a gradient sufficient to enable surface water and leachate to drain to a suitably lined sump area (for containment and evaporation); • Landfarming area is to be surrounded by a bund constructed to ensure containment of stormwater and leachate and to divert external stormwater; and • Signage; site to be appropriately marked with signage to prevent unauthorised access and include contacts in the event of an incident or emergency.	Schedule 1: Maps, Figure 1 (IWL)

Infrastructure and equipment (CCI)

3. The works approval holder must:

(a) construct the critical containment infrastructure;

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

(c) at the corresponding infrastructure location

as set out in Table 2.

Table 2: Critical containment infrastructure design and construction requirements

	Facility	Infrastructure	Design and construction / installation requirements	Infrastructure location / design drawings
Category 5				
1.	TSF	Tailings storage facility	• Installed as per the general arrangement depicted in Schedule 1: Maps, Figure 11. • Constructed in stages (x8), with the construction of the Stage 1 perimeter embankment to crest RL 26m (depicted in Schedule 1: Maps, Figure 12 and raising to the proposed final Stage 8 crest RL 52m (depicted in Schedule 1: Maps, Figure 12) – comprising 6x4m lift and 1x2m lift by downstream construction techniques; and • Developed with the planned final Stage 8 footprint area of approximately 102 ha.	Schedule 1: Maps, Figure 1, and Figure 11.
2.		Pipeline and services corridor (Processing Plant to TSF and TSF Evaporation Pond)	• Use appropriate standard pipe and fittings; • Locate pipeline inside a bunded open trench to contain any spillage from leaks or bursts; • Install automatic cutoffs in the event of a pressure drop in the pipeline; • Pressure drop in delivery line must trigger hazard alert to control room instrumentation; • Provide designated release valves with erosion controls in situ; and • Dedicated pumping system at central decant area to transfer water to the TSF Evaporation Pond.	
3.		TSF perimeter embankment (Stage 1)	• Construct to crest elevation RL 52 m AHD; • Downstream slope 1V:4H; • Compacted mine waste zone for low permeability barrier; and • TSF must provide temporary storage for a 1:1,000-year AEP, 72-hour storm event plus wave run-up from a 1:50-year AEP wind event, with an additional freeboard of 0.5 m.	
4.		Clay liner	• Minimum 0.5 m thick;	

	Facility	Infrastructure	Design and construction / installation requirements	Infrastructure location / design drawings
Category 5				
		(basin)	• Hydraulic conductivity ≤ 1 × 10^{-9} m/s; and • Installed over prepared basin area.	
5.		Upstream embankment liner	• Roller-compacted zone of inactive clayey mine waste forming a lower permeability zone on upstream face of perimeter embankment.	
6.		Cut-off trench	• Minimum 4 m wide base beneath the Stage 1 perimeter embankment (Zone A) and backfilled with compacted clayey mine waste to capture horizontal seepage through the TSF; • Depth ≥ 2 m below stripped ground; • Backfill with compacted clayey mine waste; and • Side batters 1V:1.5H.	
7.		Under-drainage system	• Gravity-driven composite drains (central near decant and perimeter drains ~10 m from upstream toe) to be installed over compacted clay liner; and • Underdrainage water routed via solid outfall pipes to lined return water pond (capacity ~900 m^3, freeboard 0.8 m).	
8.		Embankment raises	• Eight raises using downstream construction method; material placed and compacted to design specifications.	
9.		Groundwater monitoring bores	• Install groundwater monitoring network surrounding the TSF in accordance with Condition 4.	
10.	TSF Evaporation Pond	TSF Evaporation Pond	• Constructed with compacted clay base (basal zone and side slopes) with minimum 0.5 m thickness and a hydraulic conductivity ≤ 1 × 10^{-9} m/s; • Outer embankments will comprise a roller-compacted zone of inactive clayey mine waste, forming an additional low permeability zone; • Designed to temporarily store rainfall from a 1:10,000-year AEP, 72-hour storm event; • Constructed to allow an operational freeboard of 2.0 m; • Install and maintain fencing around the pond to restrict access; and • Placement of predatory bird deterrents (decoys, cannon blasts) prior to commissioning.	Schedule 1: Maps, Figure 1, 10 and 11.

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 3.

Table 3: Infrastructure requirements – groundwater monitoring wells

Infrastructure	Design, construction, and installation requirements	Monitoring well locations	Timeframe
Groundwater monitoring network for - Detection of contamination in the vicinity of the TSF and TSF evaporation pond: • TSF Ambient groundwater monitoring bores MB01 to MB07 (x7 bores) • Shallow monitoring bores respectively nested at MB01-MB07 to assess the risk of lateral seepage bypassing the cut-off trench Detection of contamination in the vicinity of the Mine Water Settling Pond (MWSP) • MWSP-North • MWSP-East • MWSP-South • MWSP-West Detection of contamination in the vicinity of irrigation sprayfield and landfill: • Sprayfield North • Sprayfield South	<u>Well design and construction:</u> Designed and constructed in accordance with ASTM D5092/D5092M-16: Standard practice for design and installation of groundwater monitoring bores. 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. Shallow monitoring bores must comprise of short-screened intervals (≤ 4m) to detect potential seepage impacts from the TSF. <u>Logging of borehole:</u> 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 logs. <u>Well construction log:</u> 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 measurement, and the revelations 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.	Figure 2 and Figure 3	Must be constructed, developed (purged), and determined to be in operational order to meet monitoring requirements specified in conditions of this works approval (Baseline requirements set in Condition 9)

Infrastructure	Design, construction, and installation requirements	Monitoring well locations	Timeframe
	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.		

Environmental Compliance Reporting

5. The works approval holder must within 60 calendar days of an item of infrastructure or equipment required by Condition 1 and 4 being constructed and/or installed:

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

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

6. The Environmental Compliance Report required by Condition 5, must include as a minimum the following:

(a) certification by a suitably qualified person 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;

(c) photographic evidence of the installation of the infrastructure; and

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

Critical Containment Infrastructure Reporting

7. The works approval holder must within 60 calendar days of the critical containment infrastructure identified by Condition 3 being constructed:

(a) undertake an audit of their compliance with the requirements of Condition 3; and

(b) prepare and submit to the CEO a Critical Containment Infrastructure Report on that compliance.

8. The Critical Containment Infrastructure Report required by Condition 7 must include as a minimum the following:

(a) certification by a suitably qualitied engineer or accredited testing authority that each item of critical containment infrastructure or component thereof, as specified in Condition 3, as been built and installed in accordance with the requirements specified in Condition 3;

(b) as constructed plans and a detailed site plan showing the location and dimensions for each item of critical containment infrastructure or component thereof, as specified in Condition 3;

(c) photographic evidence of the installation of the infrastructure;

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

(e) monitoring data indicating the baseline ambient environmental conditions at the premises prior to the construction of the items of infrastructure; and

(f) a Quality Control / Quality Assurance Certificate from an independent third party which demonstrates that the infrastructure has been constructed correctly.

Baseline environmental monitoring requirements

9. The works approval holder must conduct baseline ambient groundwater monitoring in accordance with Table 4.

Table 4: Determination of baseline ambient environmental conditions

Monitoring location	Parameter	Unit	Frequency	Averaging period	Method for Sampling and Analysis
Ambient groundwater monitoring bores and shallow monitoring bores installed in accordance with Condition 4 Regional water monitoring bores: • MB_A (deep) • MB_B (deep) • MB-C (deep and shallow) • MB_D (deep and shallow) • MB_E • MB_F • MB_G (existing shallow bore) • MB_H • MB_I • SHM_B07 (MB8) (existing shallow bore)	Standing water level (SWL)[1]	µS/cm	TSF and TSF Evaporation Basin bores: at least two monthly sampling events collected prior to tailings deposition Mine Water Settling Pond (MWSP): at least two monthly sampling events collected prior to water deposition Regional water monitoring bores: at least two	Spot Sample	Sampling carried out in accordance with AS/NZS 5667.1 and AS/NZS 5667.11 Analysis must be undertaken by laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters, unless otherwise specified
	pH[2]	pH units			
	Electrical Conductivity[2]	µS/cm			
	Temperature[2]	°C			
	Dissolved Oxygen[2]	mg/L			
	Redox Potential (ORP)[2]	mV			
	Total Suspended Solids	mg/L			
	Metals: • Aluminum • Arsenic • Cadmium • Chromium (III+VI) • Lead • Mercury • Magnesium • Manganese • Selenium	mg/L			

Monitoring location	Parameter	Unit	Frequency	Averaging period	Method for Sampling and Analysis
• SHM_B08 (MB8) (existing shallow bore) • SHM_B10 (MB10) As depicted in Figure 2 • MB_Regional-01 and 01S • MB_Regional-02 and 02S • MB_Regional-03 and 03S • MB_Regional-42 and 04S As depicted in Figure 3	• Zinc • Silver • Iron		monthly sampling events collected prior to water deposition into the evaporation basin Irrigation spray field and landfill bores: at least two monthly sampling events collected prior to operations		
	Major Ions: • Calcium (Ca) • Chloride (Cl) • Potassium (K) • Sodium (Na) • Sulfate • Bicarbonate	*mg/L*			
	Other: • Ionic Balance • Silicon as SiO_2 • Silicon • Hardness as $CaCO_3$ • Ammonia as N • Nitrate as N • Nitrogen (Total) • Phosphate	*mg/L*			

Note 1: Standing water level shall be determined prior to the collection of other water samples.

Note 2: In-field non-NATA accredited analysis permitted.

Dust and Air Quality Monitoring Plan

10. The works approval holder must prepare and implement a Dust and Air Quality Monitoring Plan in accordance with the requirements specified in Table 5.

Table 5: Ambient Air Quality Monitoring Plan Requirements

Requirements	***Details***
Submission Timeframe	The works approval holder must submit an Ambient Air Quality Monitoring Plan to the CEO within 90 days of commencement of construction activities.

Requirements	***Details***
Monitoring Objectives	Assess ambient dust levels and deposition rates for relevant parameters, including but not limited to Lead (Pb), Zinc (Zn), Silver (Ag), Cadmium (Cd), Copper (Cu), Arsenic (As), Nickel (Ni), Chromium (Cr), and any other metals identified as a risk through site-specific assessment. Evaluate potential dust deposition impacts on vegetation and crops within the Ord River Irrigation Area (ORIA).
Monitoring Design	• Include a combination of real-time ambient dust monitors and dust deposition gauges; • Monitors must be located based on wind direction, sensitive receptors, and agricultural areas, not just the site boundary; • Monitoring locations must represent potential fallout near the different stages of the ORIA (approx. 5 km or more from the site); • General layout for depositional monitors are depicted in Schedule 1, Figure 6. Real time dust monitors (particle monitor / dust track or similar) to be installed at Dust 1 and Dust 5 locations; • Consideration for additional monitoring locations to be considered to account for the above factors (potentially in the south of the site, or other locations); and • Trigger and threshold levels and related management action responses to be clearly defined for all monitoring locations (including investigation, reporting and notification details).
Baseline Data	Baseline monitoring must be undertaken for a minimum of three months prior to commencement of commissioning to allow comparison with operational data.
Program Review	The monitoring program must be reviewed and endorsed by an independent air quality specialist to confirm adequacy and compliance with relevant standards.
Applicable Guidelines and Standards	• NEPM Ambient Air Quality Standards; • Relevant Australian standards for methods for sampling and analysis of ambient air for monitored parameters. • DWER Guideline: Dust emissions; and • WHO/FAO guidelines for heavy metals in crops and soils (for interpretation of deposition impacts).
Reporting	Results must be reported annually and include trend analysis comparing baseline and operational data, with interpretation of potential impacts on agricultural land.

Environmental commissioning phase

11. The works approval holder may only commence environmental commissioning of an item of infrastructure identified in Condition 1 once the Environmental Compliance Report has been submitted for that item of infrastructure in accordance with Condition 5 and 6 of this works approval.

12. The works approval holder may only commence environmental commissioning of an item of infrastructure identified in Condition 3 once the Critical Containment Infrastructure Report has been submitted for that item of infrastructure in accordance with Condition 7 and 8 of this works approval.

13. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 6 may only be carried out:

(a) in accordance with the corresponding commissioning requirements; and

(b) for the corresponding authorised commissioning duration.

Table 6: Environmental commissioning requirements

	Facility	Infrastructure	Commissioning requirements	Authorised commissioning duration
Category 5				
1.	Ore Processing Facility	Dust Control Systems	• Test high-pressure fogging sprays over ROM bin for automatic activation; • Verify dust collector units at primary crusher and other locations are operational and drawing air from impact points; • Confirm dust collector fans installed and functioning; • Inspect enclosure of all drop points, conveyors, and transfer points; • Test foggers at transfer points; • Confirm ceramic filter press operational for product dryin; • Ensure concentrate storage shed ventilation and dust management systems are functional; and • Verify Rotabox or equivalent enclosed transport system ready for use.	Six months
2.		Stormwater Management	• Test diversion drains and lined drainage channels for flow direction; • Verify bund integrity around processing plant and circuits; • Test sump pumps in bunded areas for slurry recovery; and • Confirm automatic shut-down system on pumps for leak detection; and • Ensure wheel wash system operational.	Six months
3.		Hydrocarbon and Chemical	• Confirm bunding installed and meets AS/NZS 1940:2017 and	Six months

	Facility	Infrastructure	Commissioning requirements	Authorised commissioning duration
		Storage	AS3833:2024 standards; • Verify self-bunded fuel tanks and secondary containment at transfer points; • Ensure spill kits are in place at all designated areas; and • Confirm bioremediation facility ready for contaminated soil disposal.	
4.		Commissioning Inspections	• Twice daily visual inspections during commissioning to confirm dust, stormwater, and hydrocarbon controls functioning; and • Maintain daily logs of reagent/process solution lines, tanks, bund integrity, spills and clean-up, pond freeboard levels, ore/water/reagent input volumes, and tailings discharge volume/density.	Six months
5.	Dust collectors	• Primary Crusher Dust Collector (Ducted system to reverse pulse dust collector); • Crushed Ore Bin Dust Collector 1 (Horizontal Insertable Dust Collector); • Crushed Ore Bin Dust Collector 2 (Ducted system to reverse pulse dust collector); and • Concentrate Shed Dust Collector (Ducted system to reverse pulse dust collector).	Following maintenance schedule to be implemented - Daily: • Visual inspection: check for abnormal operation, dust leaks, or unusual noises, differential pressure (dp); • Dust discharge system: ensure proper operation of hoppers and discharge valves; • Cleaning system: confirm pulse-jet or shaker systems are functioning correctly; and • Compressed air: check air pressure, filters, and dryers. Weekly: • Filter bags: inspect for tears, holes, or improper seating; • Valves: verify all cleaning valves are cycling and seating properly; • Fans and drives: check for wear, alignment, and unusual vibrations;	Six months

	Facility	Infrastructure	Commissioning requirements	Authorised commissioning duration
			• Air lines and hoses: inspect for leaks or damage; and • Discharge equipment: ensure screw conveyors and rotary valves are operating smoothly. Monthly: • Fans: inspect for corrosion, buildup, and belt tension; • Housing: check for corrosion or structural damage; • Instrumentation: verify accuracy of gauges and sensors; and • Spot check for leaks: use leak detection methods (e.g., fluorescent powder or smoke testing). Quarterly to Biannual: • Filter bag condition: perform a more thorough inspection or partial bag replacement if needed; • Cleaning system calibration: adjust pulse duration and frequency if required; and • Structural integrity: inspect support structures, access doors, and gaskets. Annual: • Full filter bag replacement: typically every 1–3 years depending on application, dust type, and operating conditions; • Leak testing: conduct a full leak test to identify any compromised bags or seals; and • System audit: review performance data, maintenance logs, and emissions compliance.	
6.	Pipeline and	Pipelines	• Pipelines are tested using water where possible;	Six months

	Facility	Infrastructure	Commissioning requirements	Authorised commissioning duration
	services corridor (Processing Plant to TSF)		• Dedicated discharge points (sumps) established for test water; and • Twice daily inspections of tailings lines: ➢ External damage, potential fractures, stress due to temperature extremes; and ➢ Welds, flange gasket leaks, joint leaks and valve failures.	
7.	TSF	General	• Wet commissioning to occur in conjunction with the overall Processing Plant commissioning process; • Delivery and return pipelines tested; • Tailings pumps, spigots, valves tested; • Maintain freeboard of 0.5 m; • Tailings discharge up to 625,000 tonnes (1,250,000 tpa); • Tailings thickened to >65% w/w solids; and • Decant pond maintained at minimum size necessary.	Six months
8.		Daily Inspections	• Pipelines (delivery/discharge lines and water return); • Leak detection systems; • Tailings pumps, spigots, valves; • Tailings deposition and beaching characteristics; • Supernatant/decant pond size and location; • TSF decant area and return water pump; • Embankment integrity (erosion, cracking, seepage); • Freeboard and seepage; • Dust generation from tailings and dust suppression measures;	Six months

	Facility	Infrastructure	Commissioning requirements	Authorised commissioning duration
			and • Fauna observations twice daily; implement deterrents as required.	
9.		Dust Management	• Implement dust monitoring program, Condition 10, Table 5; and • Dust suppression using water carts as required.	Six months
10.		Fauna Management	• Beach management via spigot placement to avoid ponding outside decant.	Six months
11.	TSF Evaporation Pond	General	• Maintain operational freeboard of 2.0 m at all times during commissioning; • Confirm fencing and bird deterrents working correctly; • Commission pumping system and verify transfer of water from TSF decant to TSF Evaporation Pond; • Test underdrainage system and return water pond functionality; • Twice daily inspections for embankment integrity, seepage, vegetation, burrowing animals, and operational pond level; • Implement fauna deterrents and record observations; and • Dust suppression and monitoring as required.	Six months
12.	Concentrate Storage and Loading Enclosed Shed	Concentrate Storage and Loading	• Verify shed enclosure and automatic door functionality; • Test dust collectors for proper operation: ➢ Check ID fan, ducting, discharge stack, valves; and ➢ Confirm air pulsation system and compressed air supply; • Conduct initial leak test on dust collector system; • Test sump collection system and confirm washdown water	Six months

	Facility	Infrastructure	Commissioning requirements	Authorised commissioning duration
			returns to concentrate thickener; • Verify wash bay system operational and wastewater directed to process circuit; • Inspect bottom-dumping hopper for correct operation; • Confirm Rotabox or equivalent enclosed transport system ready for use; • Ensure packaging process works: container entry, lid removal, loading, lid replacement, container washdown; and • Daily during commissioning: Inspect dust collectors for abnormal operation, leaks, and differential pressure.	
13.	Depositional dust monitoring	Dust Deposition Gauges and Real-time Ambient Dust Monitors	• Confirm correct location and functionality of monitors; • Commissioning and maintenance of dust monitors in accordance with the Ambient Air Quality Monitoring Plan required by Condition 10; and • Ensure baseline data collected for at least 3 months prior to commissioning.	Six months
Category 6 – N/A				
Category 63 - N/A				
Category 85				
14.	WWTP and Irrigation Area	WWTP and Irrigation Area	• Validation monitoring will be carried out to ensure the treatment system is functioning properly and achieving target effluent specifications; • Samples will be tested for the parameters and compared against commissioning specific compliance values in Condition	Three months

	Facility	Infrastructure	Commissioning requirements	Authorised commissioning duration
			1Table 1; • The WWTP will begin routine operations once the validation testing is completed and it has been demonstrated to reliably meet effluent compliance requirements; • Validate that TN and TP concentrations in treated effluent and calculated loading rates for the Irrigation Area meet the design and performance specifications listed in Condition 1 before routine operations commence; and • At least weekly inspections of facility.	
Category 89 – N/A				
Other infrastructure				
15.	Multimedia Filtration Units	Multimedia Filtration Units	• Validation monitoring will be carried out to ensure the treatment system is functioning properly and achieving target effluent specifications (as specified in Table 1). • Treatment unit to begin routine operations once the validation testing is completed and it has been demonstrated to reliably meet effluent compliance requirements; • Backwash water to be returned to the Process Plant tailings hopper for discharge with the tailings; and • At least weekly inspections of facility.	Three months
16.	Reverse Osmosis Plant	Reverse Osmosis Plant	• Validation monitoring will be carried out to ensure the treatment system is functioning properly and achieving target effluent specifications (as specified in Table 1). • Treatment plant to begin routine operations once the validation testing is completed and it has been demonstrated to reliably meet effluent compliance requirements;	Three months

	Facility	Infrastructure	Commissioning requirements	Authorised commissioning duration
			• Brine (reject) water to be diluted with raw dewatering water and used for dust suppression purposes within active mining areas; and • At least weekly inspections of facility	

14. During environmental commissioning, the works approval holder must ensure that the emissions from the discharge point listed in Table 7 do not exceed the corresponding limits when monitored in accordance with Condition 15 and 24.

Table 7: Emissions and discharges limits during environmental commissioning and time limited operations

	Discharge point	Parameter	Limit
1.	Water from stormwater sumps within OPF to Evaporation Basin, Disused Pit or TSF Evaporation Pond	pH	Between 5.5 to 8.5 Note 1
		TDS	<15,000 mg/l Note 1
		Turbidity	446 NTU Note 2
		Surfactants (detergents)	5 mg/L (maximum) Note 1
		Petroleum hydrocarbons	15 mg/L (maximum) Note 1
		Benzene, toluene, ethyl benzene, xylene (BTEX)	10 ug/L (cumulative maximum) Note 1
		Lead (dissolved)	10 ug/L Note 3
		Nickel (dissolved)	80 ug/L Note 3
		Zinc (dissolved)	24 ug/L Note 3
		Silver (dissolved)	0.2 ug/L Note 3
		Major cations and anions	No limits: for interpretation purposes only

Note 1: Taken from WQPN 68 Mechanical Equipment Wash-down (Department of Water, 2013)
Note 2: Turbidity limit set as the upper interim local trigger value recommended by Bennett and George (2014) for the lower Keep River.
Note 3: Discharge limits set as ten times the 99th percentile freshwater ecosystem guideline value in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 (as recommended in WQPN 68).

Monitoring during commissioning

15. The works approval holder must monitor emissions during environmental commissioning in accordance with Schedule 3: Monitoring, Table 12.

Ambient monitoring during commissioning

16. The works approval holder must monitor the ambient air quality and ambient groundwater during environmental commissioning for concentrations of the identified parameters in accordance with Schedule 3: Monitoring, Table 13.

Compliance reporting

17. The works approval holder must submit to the CEO an Environmental Commissioning Report within 60 days of the completion date of environmental commissioning for each item of infrastructure specified in Condition 13.

18. The works approval holder must ensure the Environmental Commissioning Report

required by Condition 17 of this works approval includes the following:

(a) a summary of the environmental commissioning activities undertaken, including timeframes and amount of material processed, tailings deposited and mine dewatering discharged to the environment;

(b) the point source emissions monitoring and/or ambient concentrations monitoring results recorded in accordance with Condition 15 and Condition 16;

(c) a summary of the environmental performance of each item of infrastructure or equipment as constructed or installed (as applicable), which at a minimum includes records detailing the:

(i) Commissioning of the infrastructure; and

(ii) Testing of the infrastructure;

(d) a review of the works approval holder's performance and compliance against the conditions of this works approval; and

(e) where they have not been met, measures proposed to meet the manufacturer's design specifications and the conditions of this works approval, together with timeframes for implementing the proposed measures.

Time limited operations phase

Commencement and duration

19. The works approval holder may only commence time limited operations for an item of infrastructure identified in Condition 1:

(a) Where the item of infrastructure is not authorised to undertake environmental commissioning, the Environmental Compliance Report as required by Condition 5 and 6 has been submitted by the works approval holder for that item of infrastructure; and

(b) Where the item of infrastructure is authorised to undertake environmental commissioning under Condition 13, the Environmental Commissioning Report for that item of infrastructure as required by Condition 17 has been submitted by the works approval holder.

20. The works approval holder may only commence time limited operations for an item of critical containment infrastructure identified in Condition 8 where:

(a) where the infrastructure does require commissioning, the Environmental Commissioning Report for that item of infrastructure as required by Condition 17 has been submitted to the CEO; and

(b) where the CEO has notified the works approval holder that the Critical Containment Infrastructure Report for that item on infrastructure as required by Condition 7 and 8 meets the requirements of that condition; or

(c) where at least 45 days business days have passed after the Critical Containment Infrastructure Report for that item of infrastructure as required by Condition 7 and 8 has been submitted to the CEO.

21. The works approval holder may conduct time limited operations for an item of infrastructure specified in Condition 22 (as applicable):

(a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of Condition 20 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 21(a).

Time limited operations requirements and emission limits

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

Table 8: Infrastructure and equipment requirements during time limited operations

	Facility	Infrastructure	Operational requirement	Infrastructure location
			Category 5	
1.	Ore Processing Facility	Dust Control Systems	• Maintain and test ROM bin fogging sprays regularly; • Perform scheduled maintenance on dust collectors (daily, weekly, monthly, quarterly, annual); • Replace filter bags as needed; • Maintain conveyor scrapers to prevent carryback; • Inspect foggers at transfer points; • Ensure ceramic filter press operational for product drying; • Confirm concentrate shed ventilation and dust management systems functional; and • Maintain Rotabox or equivalent enclosed transport system.	Schedule 1: Maps, Figure 1 and Figure 4
2.		Stormwater Management	• Monitor stormwater retention sump capacity and pump performance; • Pump water back to process circuit within 24 hours post-rainfall; • Inspect diversion drains and lined channels after rainfall; • Maintain bund integrity around plant and circuits; • Test sump pumps and automatic shut-down systems; • Verify alarms to control room; and • Conduct surface water quality monitoring post-rainfall from sumps within the OPF footprint (pH, TDS, turbidity, hydrocarbons, BTEX, metals) prior to discharge to Evaporation Basin, Disused Pit or TSF Evaporation Pond (refer to Condition 14)	N/A
3.		Hydrocarbon and	• Weekly inspections of bunded storage areas;	N/A

	Facility	Infrastructure	Operational requirement	Infrastructure location
		Chemical Storage	• Maintain self-bunded fuel tanks and secondary containment; • Check spill kits availability and condition; and • Clean up spills immediately and document incidents.	
4.		TLO Inspections	• Twice daily visual inspections for dust, stormwater, and hydrocarbon controls.	N/A
	Dust collectors	• Primary Crusher Dust Collector (Ducted system to reverse pulse dust collector); • Crushed Ore Bin Dust Collector 1 (Horizontal Insertable Dust Collector); • Crushed Ore Bin Dust Collector 2 (Ducted system to reverse pulse dust collector); and • Concentrate Shed Dust Collector (Ducted system to reverse pulse dust collector).	Following maintenance schedule to be implemented - Daily: • Visual inspection: check for abnormal operation, dust leaks, or unusual noises, differential pressure (dp); • Dust discharge system: ensure proper operation of hoppers and discharge valves; • Cleaning system: confirm pulse-jet or shaker systems are functioning correctly; and • Compressed air: check air pressure, filters, and dryers. Weekly: • Filter bags: inspect for tears, holes, or improper seating; • Valves: verify all cleaning valves are cycling and seating properly; • Fans and drives: check for wear, alignment, and unusual vibrations; • Air lines and hoses: inspect for leaks or damage; and • Discharge equipment: ensure screw conveyors and rotary valves are operating smoothly. Monthly: • Fans: inspect for corrosion, buildup, and belt tension; • Housing: check for corrosion or structural damage; • Instrumentation: verify accuracy of gauges and sensors; and • Spot check for leaks: use leak detection methods (e.g., fluorescent powder or smoke	Schedule 1: Maps, Figure 4 and Figure 5

	Facility	Infrastructure	Operational requirement	Infrastructure location
			testing). Quarterly to Biannual: • Filter bag condition: perform a more thorough inspection or partial bag replacement if needed; • Cleaning system calibration: adjust pulse duration and frequency if required; and • Structural integrity: inspect support structures, access doors, and gaskets. Annual: • Full filter bag replacement: typically every 1–3 years depending on application, dust type, and operating conditions; • Leak testing: conduct a full leak test to identify any compromised bags or seals; and • System audit: review performance data, maintenance logs, and emissions compliance.	
5.	TSF	General	• Maintain freeboard of 0.5 m; • Tailings discharge up to 625,000 tonnes per lift (1,250,000 tpa); • Tailings thickened to >65% solids; and • Decant pond maintained at minimum size.	Schedule 1: Maps, Figure 1.
6.		Daily Inspections	• Pipelines (delivery/discharge lines and water return); • Leak detection systems; tailings pumps, spigots, valves; • Tailings deposition and beaching characteristics; • Supernatant/decant pond size and location; • TSF decant area and return water pump; • Embankment integrity (erosion, cracking, seepage); and	

	Facility	Infrastructure	Operational requirement	Infrastructure location
			• Freeboard and seepage.	
7.		Dust Management	• Implement dust monitoring program (Condition 10); • Dust suppression using water carts as required; and • Beach management via spigot placement to avoid ponding outside decant pond.	
8.		Fauna Management	• Twice daily fauna observations; and • Implement deterrents such as bird cannons and barricades as required; record any evidence of fauna impacts.	
9.	TSF Evaporation Pond	General	• Maintain 2.0 m operational freeboard; • Daily inspections for embankment cracking, erosion, seepage, vegetation, burrowing animals, and pond level; • Twice daily fauna inspections; implement deterrents (bird cannons, decoys); • Maintain fencing and fauna egress points; • Collect bird feathers quarterly for metals analysis; • Monitor fauna occurrences (quarterly and opportunistic counts); and • Use insect deterrent lighting (Bug Yellow or similar).	Schedule 1: Maps, Figure 1.
10.	Concentrate Storage and Loading Enclosed Shed	Concentrate Storage and Loading	• No concentrate stockpiles will be required on-site. The concentrate will be packaged directly into fully sealed and lockable containers within a concentrate handling shed; • Concentrate will either be placed directly within containers as loose material, or bagged prior and then placed within a container; • Direct-feed into containers: ➢ A container will be placed within the shed onto a trailer system mounted on rails outside of the shed; ➢ An automatic door system will open the shed for the trailer to enter. Once the trailer is	Schedule 1: Maps, Figure 4.

	Facility	Infrastructure	Operational requirement	Infrastructure location
			inside, the door will close; ➢ The lid of the container will be removed, and the concentrate will be fed into the container by a bottom-dumping hopper; ➢ Once the required volume of concentrate has been placed within the container, the lid will be replaced and locked and the outside of the container washed to remove any fugitive material; ➢ Washdown water will be collected in a sump within the shed, and pumped to the concentrate thickener feed box; and ➢ The trailer and locked container will then be transported to the outside of the shed and either stockpiled, or placed directly onto the truck for transport off-site; and • Concentrate Bagging: ➢ Similar to the direct-feed option, material will be fed into a hopper; however this hopper will feed into a screw feeder and a standard bagging plant; ➢ Bags will be double-lined to remove the risk of breakage; ➢ Once a suitable amount of bags have been filled, a forklift automatic door will be open such that the forklift can place the bags directly into the containers; ➢ The containers will then be sealed and locked; and ➢ The shed will be fitted with a dust collector to manage any fugitive emissions. Dust collected will feed into a hopper and transfer pump and report to the concentrate thickener feed box.	
11.	Depositional dust monitoring	Dust Deposition Gauges and Real-time Ambient Dust Monitors	• Operate and maintain dust monitors in accordance with the Ambient Air Quality Monitoring Plan approved under Condition 10.	Schedule 1: Maps, Figure 6
Category 6				
12.	Mine Dewatering	Dewatering Pipelines	• Visual inspections once per shift (every 12 hours) for pipelines and discharge locations; • Monthly reporting of flow meter readings; and	Schedule 1: Maps, Figure 7.

	Facility	Infrastructure	Operational requirement	Infrastructure location
			• Automatic fault and alarm notifications sent to control room for immediate investigation.	
13.		Mine Water Settling Pond	• Freeboard inspections daily and after significant rainfall events; • Maintain 1.2 m freeboard at all times; • Record water levels and corrective actions in inspection logs; and • Visual inspection of embankment integrity (erosion, cracking, seepage) during routine checks.	Schedule 1: Maps, Figure 1, Figure 16, Figure 17
14.		Evaporation Basin	• Operational freeboard is maintained at 0.5m; • Freeboard inspections daily and after significant rainfall events; • Maintain magflow meter calibration and monthly reporting; • Visual checks for erosion, seepage, and embankment integrity; • Regular soil and groundwater monitoring to confirm negligible infiltration impacts; • Quarterly soil sampling at 6 random locations within basin (as per monitoring plan); and • Weed management to prevent proliferation due to increased soil moisture.	Schedule 1: Maps, Figure 1 and Figure 11
15.		Pit Voids	• Water to be filled to the historical water table level (being 12m below pit crest); • Freeboard inspections daily and after significant rainfall events; • Monitor water levels and stability during discharge; and • Inspect for seepage or erosion post-discharge.	N/A
16.		Mechanical Evaporators	• Operate only during low wind conditions to prevent overspray; and • Maintain buffer zones to prevent drift outside project footprint.	N/A
17.		Dust Suppression	• Use water from evaporation basin for haul road dust suppression under controlled volumes; and	N/A

	Facility	Infrastructure	Operational requirement	Infrastructure location
			• Avoid oversaturation and runoff.	
Category 63				
18.	Integrated Waste Landform	Class I Inert Landfill (Tyre Landfill)	• Deposited in accordance with *Environmental Protection Regulations 1987*: ➢ Final soil cover of minimum 500 mm; ➢ Batches separated by ≥100 mm soil; and ➢ Each batch: max 1,000 whole tyres or 40 m³ shredded tyres; • Dust suppression using water carts as required; • Implementation of dust monitoring program; • Maintain firebreak and remove vegetation regularly; • Waste segregation: hazardous waste taken offsite for disposal; • Maintain waste tracking records; • Post-rainfall inspections of landfill facility; • Surface water quality monitoring after rainfall (pH, TDS, turbidity, surfactants, hydrocarbons, BTEX, dissolved metals, major ions); and • Ensure landfill design contains surface water within footprint and directs it to designated sumps.	Schedule 1: Maps, Figure 1
Category 85				
19.	WWTP and Irrigation Area	WWTP and Irrigation Area	• TN and TP concentrations in treated effluent calculated loading rates for the Irrigation Area meet the requirements of WQPN 22; • Ensure all monitoring equipment is calibrated and functioning correctly at all times; • Maintain contingency storage capacity within WWTP; • Dispose of excess treated effluent to Kununurra WWTP in consultation with Water	Schedule 1: Maps, Figure 1

	Facility	Infrastructure	Operational requirement	Infrastructure location
			Corporation if required; • No irrigation or effluent disposal during or immediately after storm events; • Inspect WWTP and Irrigation Area monthly for infrastructure integrity, weed coverage, and evidence of ponding; • Keep detailed operational logs including flow rates, chemical dosing, and maintenance activities; and • Implement corrective actions immediately if monitoring indicates non-compliance with effluent quality requirements.	
Category 89				
20.	Integrated Waste Landform	Putrescible Landfill	• Waste types: Clean Fill, Putrescible Wastes, Inert Waste Type 1, Uncontaminated Fill - Trenches: max 30 m length, 2 m width, 2 m depth; • Dust suppression using water carts as required; • Dust monitoring program implemented; • Waste covered with dense, inert, incombustible material fortnightly; • Monthly pick-up of windblown or washed waste and return to trench; • No stockpiling of waste outside trenches; all bins fitted with lids and kept closed; • Maintain firebreak and remove vegetation regularly; • Waste tracking records maintained; • Segregation of hazardous waste (taken offsite for disposal); • Post-rainfall inspections of landfill facility; • Records of type and volume of waste to ensure compliance with prescribed premises category limit; and • Surface water contained within landfill footprint and directed to designated sumps.	Schedule 1: Maps, Figure 1

	Facility	Infrastructure	Operational requirement	Infrastructure location
Other infrastructure				
21.	Multimedia Treatment Units	Multimedia Treatment Units	• Backwash water to be returned to the Process Plant tailings hopper for discharge with the tailings; and • At least weekly inspections of facility.	None specified
22.	Reverse Osmosis Plant	Reverse Osmosis Plant	• Brine to be directed to the dust suppression water tank for operational reuse. TDS concentrations within the dust suppression tank will be routinely monitored. An operational TDS trigger level of 5,000 mg/L to be applied. Where TDS concentrations exceed this level, water within the tank will be further diluted (shandied) prior to use for dust suppression to ensure suitability for application; and • At least weekly inspections of facility.	None specified
23.	Integrated Waste Landform	Bioremediation facility	• Maintain liner and surrounding bund to prevent discharges to land from bioremediation activities; and • Maintain signage; site to be appropriately marked with signage to prevent unauthorised access and include contacts in the event of an incident or emergency.	None specified

23. During time limited operations, the works approval holder must ensure that the emissions from the discharge point listed in Condition 14 do not exceed the corresponding limit(s) when monitored in accordance with Condition 14.

Monitoring during time limited operations

24. The works approval holder must monitor emissions during time limited operations in accordance with Schedule 3: Monitoring, Table 12.

25. The works approval holder must monitor the sediment/soil quality during time limited operations in accordance with Table 9.

Table 9: Evaporation Basin Soil Quality Sampling

Location	Parameters	Monitoring Frequency
Sediment monitoring – 6 × random locations near water discharge	pH, TDS, Total Soluble Salts, Moisture Content, filtered metals	Quarterly

Ambient monitoring during time limited operations

26. The works approval holder must monitor the ambient air quality and ambient groundwater during time limited operations for concentrations of the identified parameters in accordance with Schedule 3: Monitoring, Table 13.

Compliance reporting

27. 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 60 calendar days before the expiration date of the works approval, whichever is the sooner.

28. The works approval holder must ensure the report required by Condition 27 includes the following:

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

(b) a summary of monitoring parameter results obtained during time limited operations under Condition 24, Condition 25 and Condition 26;

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

(i) ore processed;

(ii) product produced;

(iii) tailings deposited;

(iv) tailings density; and

(i) water balance;

(d) A review of operational performance and compliance against the conditions of the works approval and the Environmental Commissioning Report; and

(e) 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)

29. 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.

30. 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 3;

(b) any maintenance of infrastructure that is performed in the course of complying with Condition 1, 3 and 22;

(c) monitoring programmes undertaken in accordance with Condition 9, 10, 15, 16, 24, 25, and 26; and

(d) complaints received under Condition 29.

31. The books specified under Condition 30 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 10 have the meanings defined.

Table 10: Definitions

Term	Definition
AS/NZS 3580.1.1	means the recent version and the relevant parts of the Australian Standard AS/NZS 3580.1.1 Methods for sampling and analysis of ambient air. Part 1.1: Guide to siting air monitoring equipment.
AS/NZS 3580.10.1	means the recent version and the relevant parts of the Australian Standard AS 3580.10.1 Methods for sampling and analysis of ambient air – Determination of particulate matter – deposited matter – gravimetric method.
AS/NZS 3580.9.6	means the recent version and the relevant parts of the Australian Standard AS/NZS 3580.9.6 Methods for sampling and analysis of ambient air. Method 9.6: Determination of suspended particulate matter – PM10 high volume sampler with size selective inlet – Gravimetric method.
AS/NZS 3580.9.15	means the recent version and the relevant parts of the Australian Standard AS/NZS 3580.9.15 Methods for sampling and analysis of ambient air – Part 9.15: Determination of suspended particulate matter – Particulate metals high or low volume sampler gravimetric collection – Inductively coupled plasma (ICP) spectrometric method.
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 Australia 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.
AS/NZS 3580	Means the Australian Standard AS/NZS 3580 series for ambient particulate monitoring and dust deposition.
books	has the same meaning given to that term under the EP Act.
CCI	means Critical Containment Infrastructure

Term	Definition
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
critical containment infrastructure	means the items of infrastructure listed in Condition 3.
Critical Containment Infrastructure Report	means a report to satisfy the CEO that works of critical containment infrastructure have been constructed in accordance with the works approval.
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.
DWER	means the Department of Water and Environmental Regulation
DWER Guideline: Dust Emissions	means *Guideline: Dust emissions*, Perth Western Australia (DWER, 2021, DRAFT), as amended from time to time. Guideline provides methods and requirements for assessing fugitive dust emissions from prescribed premises under Part V of the *Environmental Protection Act 1986.*
emission	has the same meaning given to that term under the EP Act.
environmental commissioning	means the sequence of activities to be undertaken to test equipment integrity and operation, or to determine the environmental performance, of equipment and infrastructure to establish or test a steady state operation and confirm design specifications.
Environmental Commissioning Report	means a report on any commissioning activities that have taken place and a demonstration that they have concluded, with focus on emissions and discharges, waste containment, and other environmental factors.
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).

Term	Definition
NEPM Ambient Air Quality Standards	means the National Environment Protection (Ambient Air Quality) Measure (Air NEPM), established under the *National Environment Protection Council Act 1994.*
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 qualitied engineer or accredited testing authority	means a person who: (a) holds a Bachelor of Engineering degree recognised by the Institute of Engineers; and (b) has a minimum of five years of experience working in the field of engineering relating to geotechnical and/or tailings dam infrastructure.
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	means Tailings Storage Facility
waste	has the same meaning given to that term under the EP Act.
WHO/FAO guidelines for heavy metals in crops and soils (for interpretation of deposition impacts).	means the joint guidance produced by the World Health Organization and Food and Agriculture Organization, which sets recommended maximum concentrations for heavy metals (e.g., Fe, Cu, Zn, Pb, Cd) in food crops, soils, and irrigation water to assess and interpret deposition impacts on agricultural products and environmental health.
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).

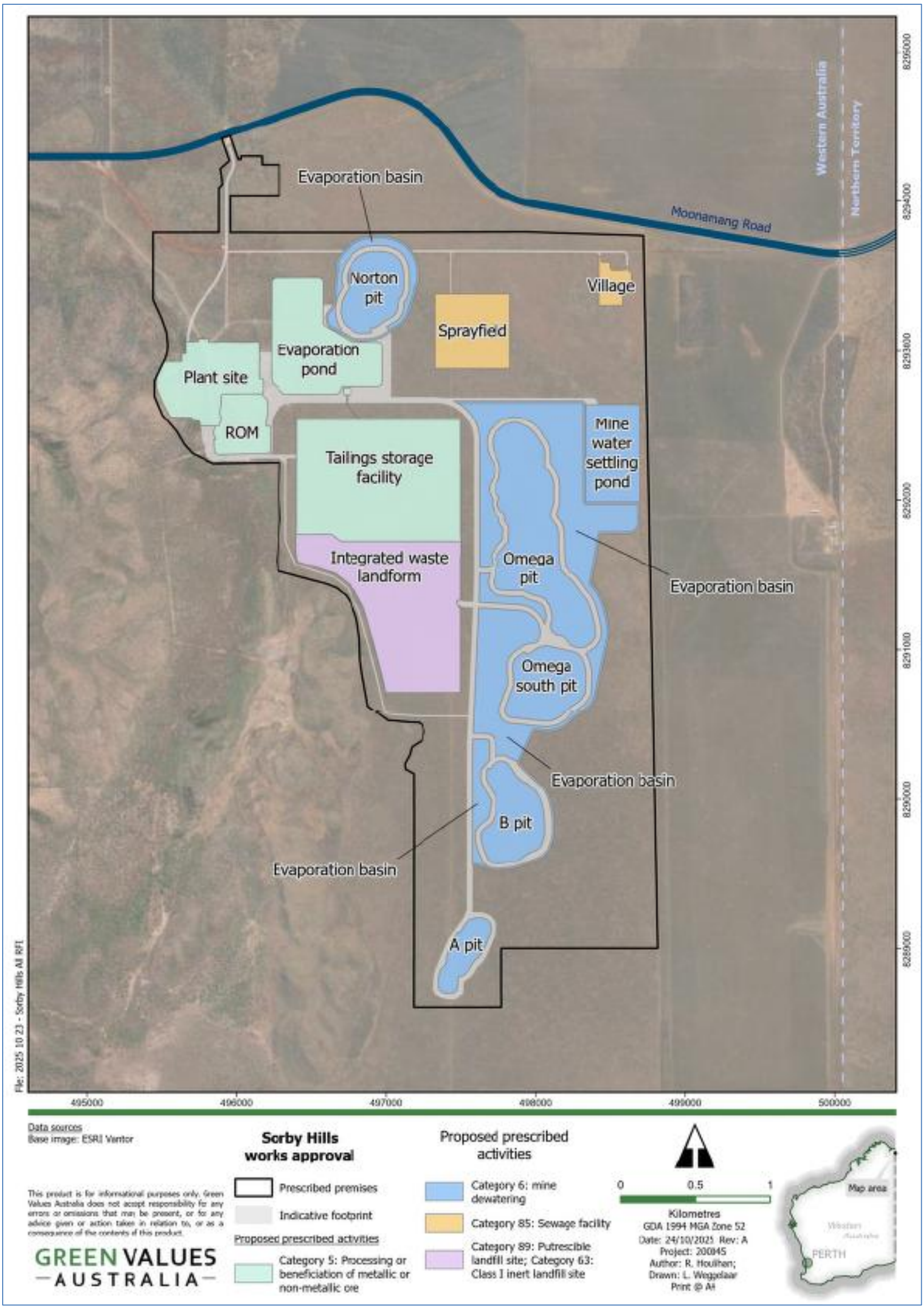

Figure 1: Map of the boundary of the prescribed premises and general site layout

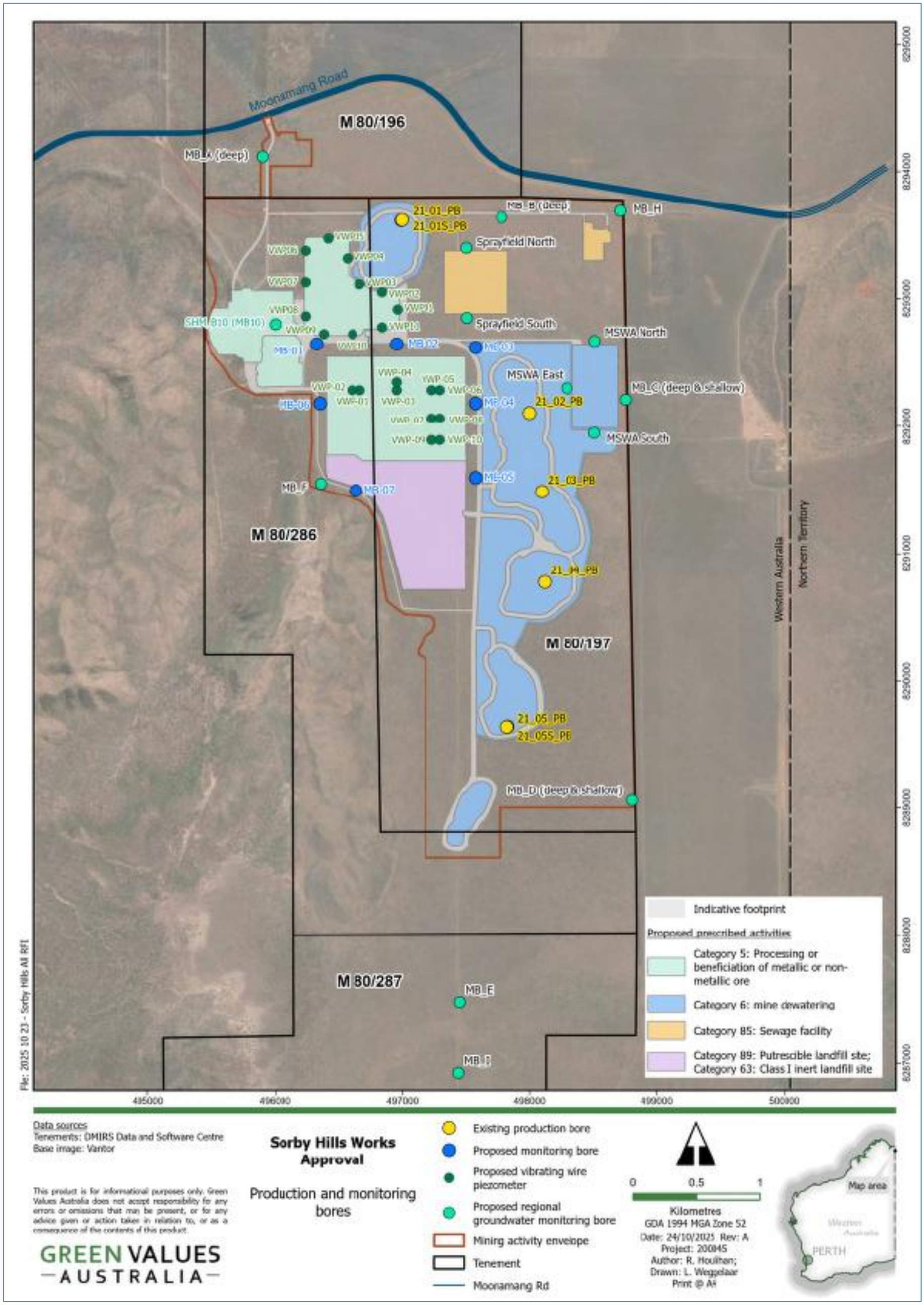

Figure 2: Production and monitoring bore locations

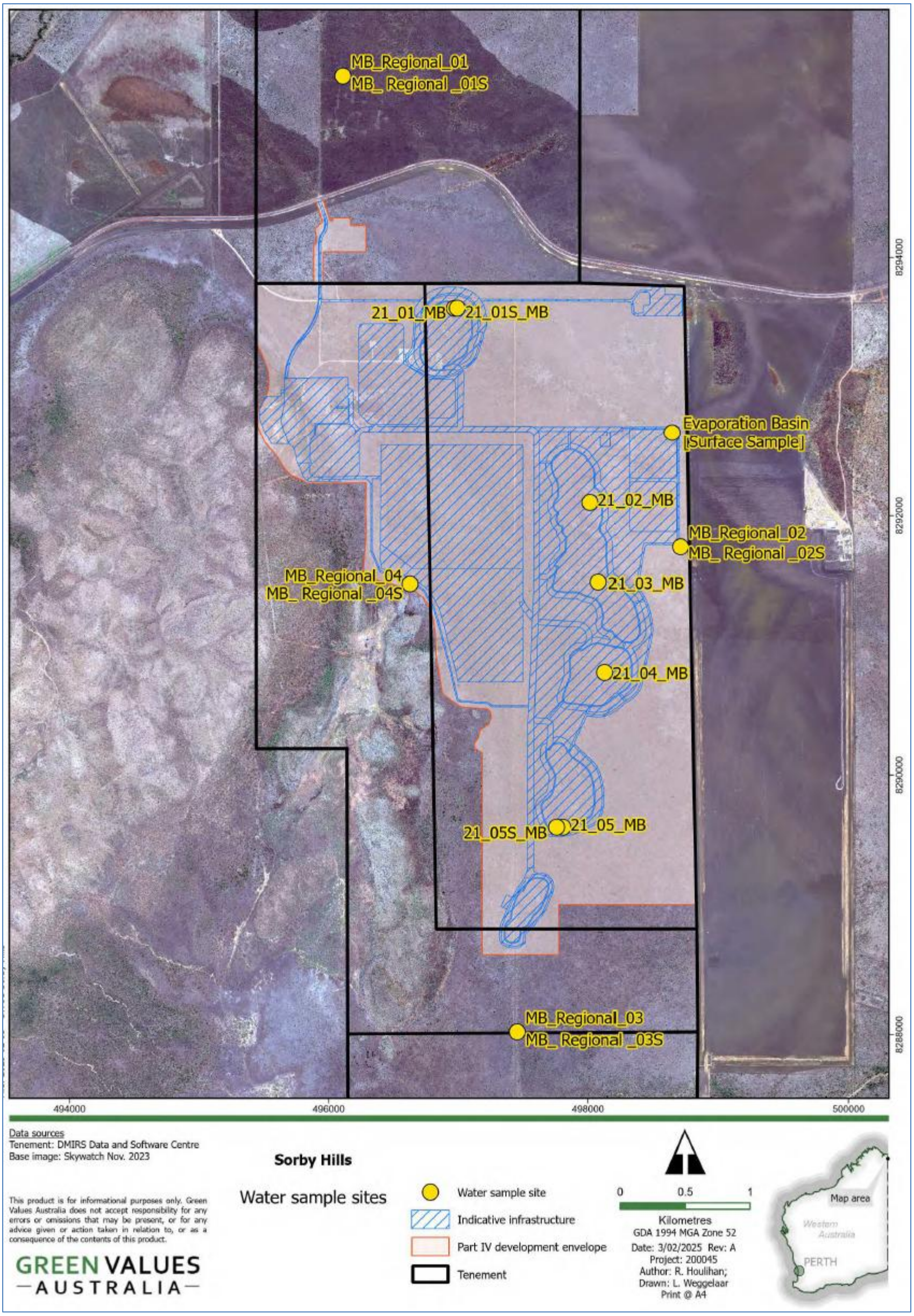

Figure 3: Other regional monitoring bore locations and evaporation basing surface sample site

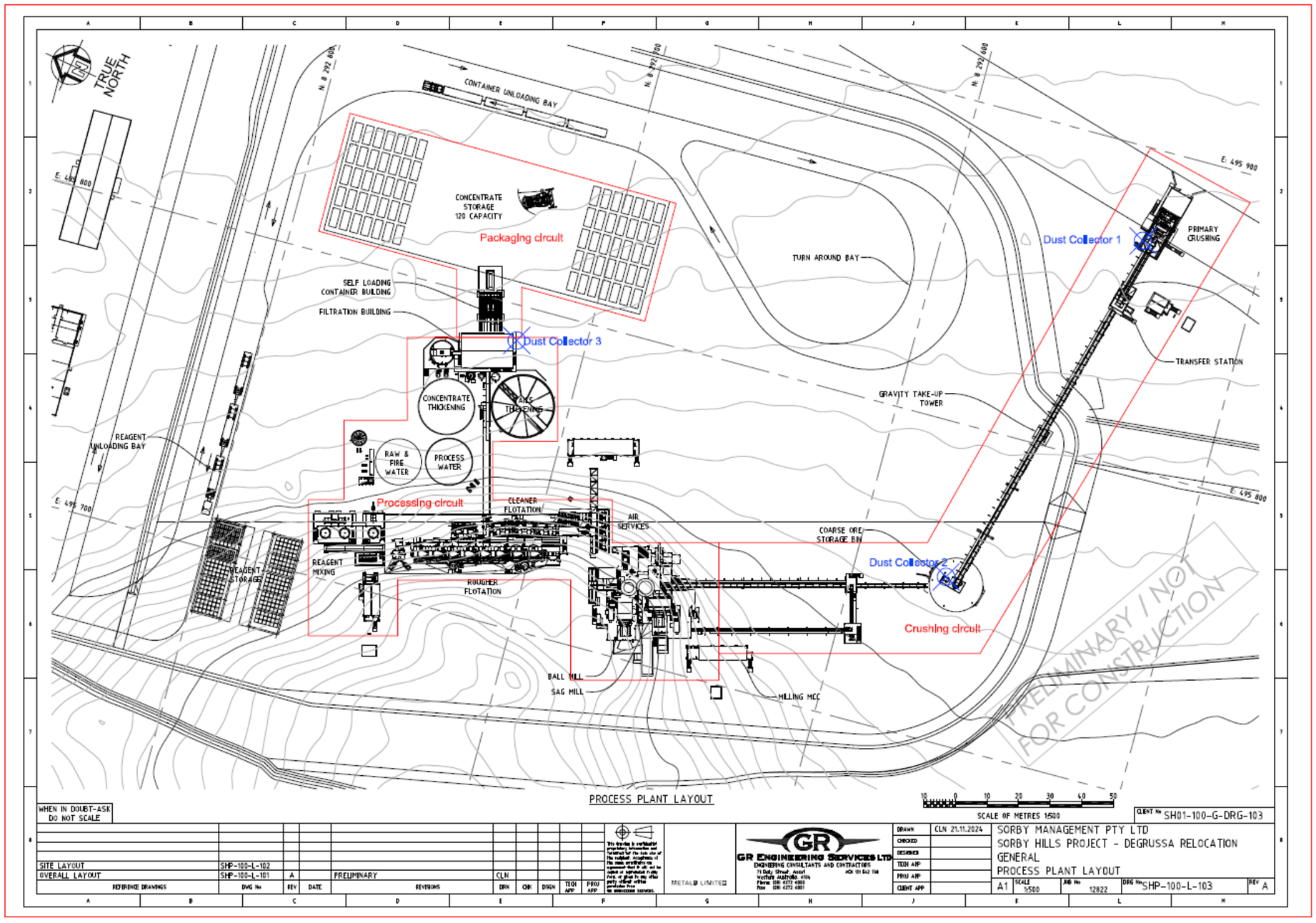

Figure 4: Process Plant Layout

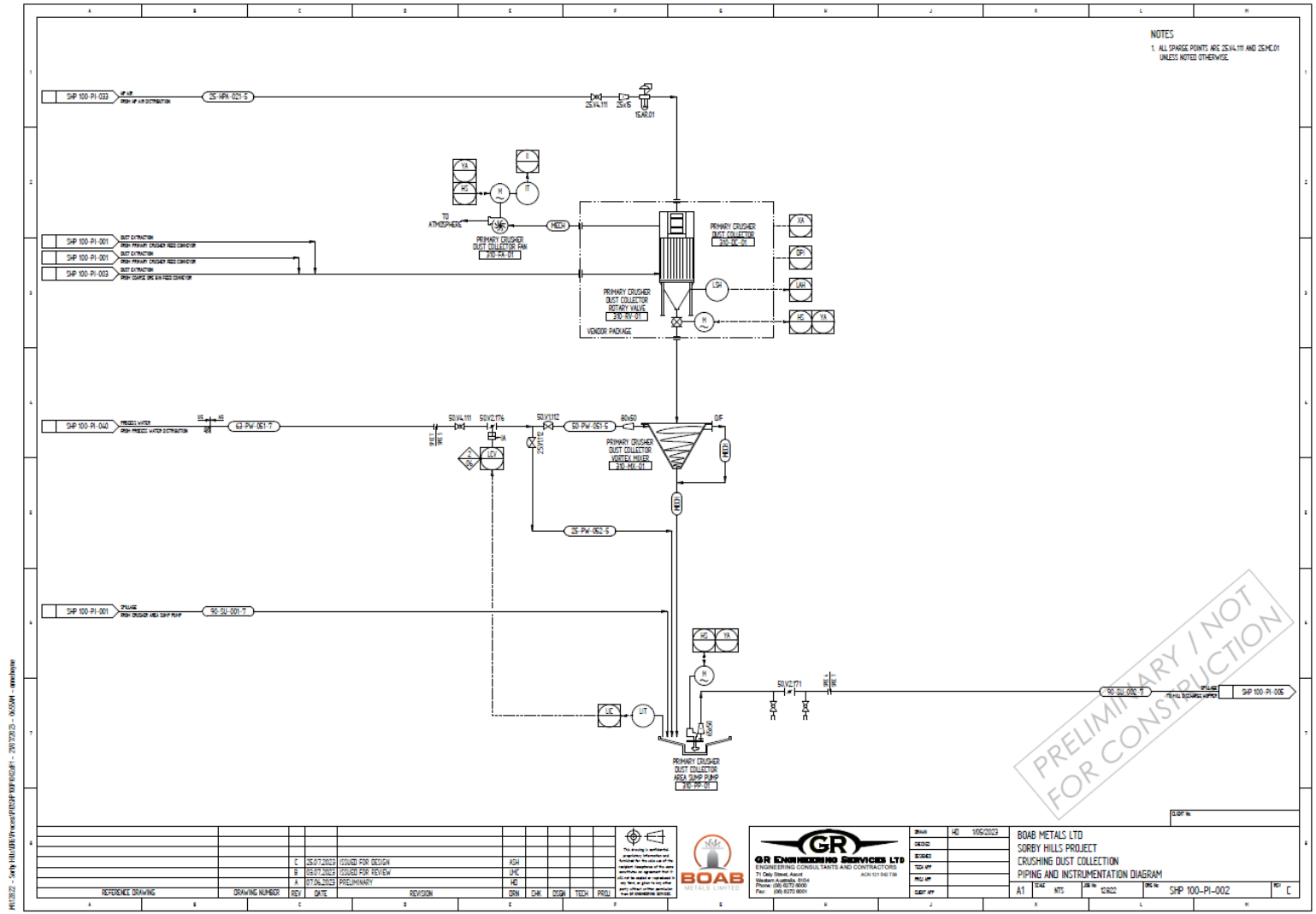

Figure 5: Crushing Dust Collection Piping and Instrumentation Diagram

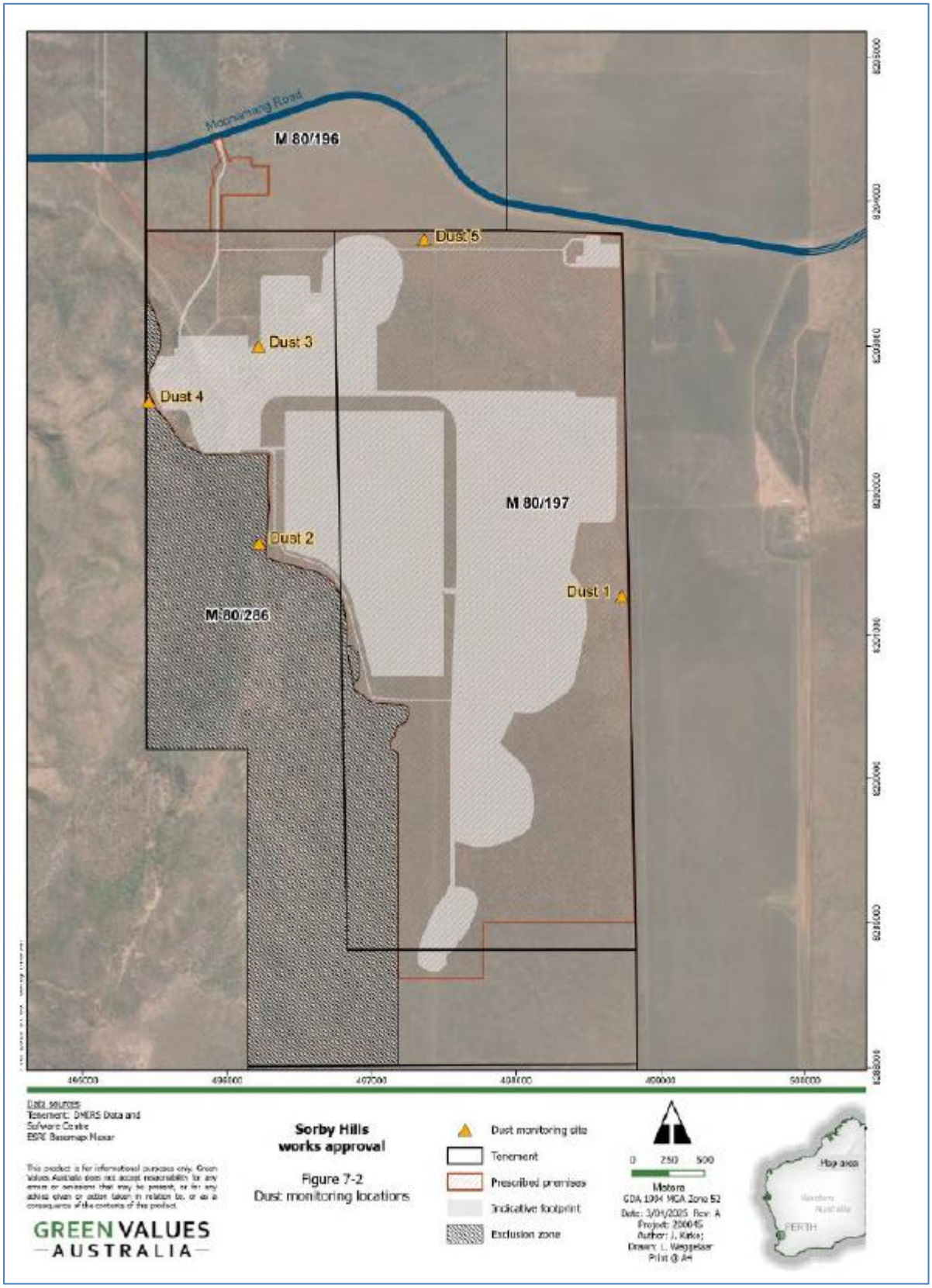

Figure 6: Dust and ambient air monitoring network

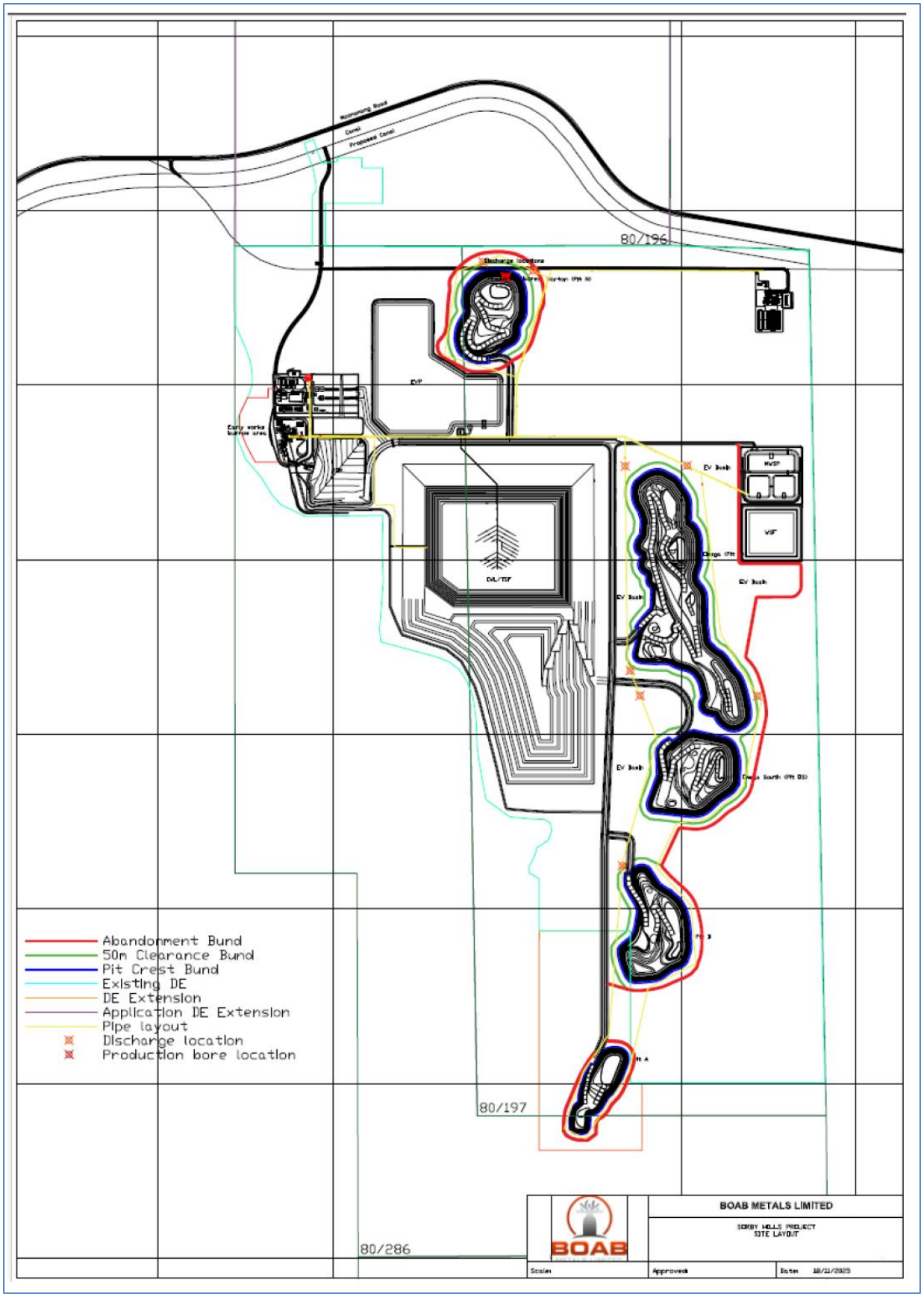

Figure 7: Dewatering pipelines arrangement

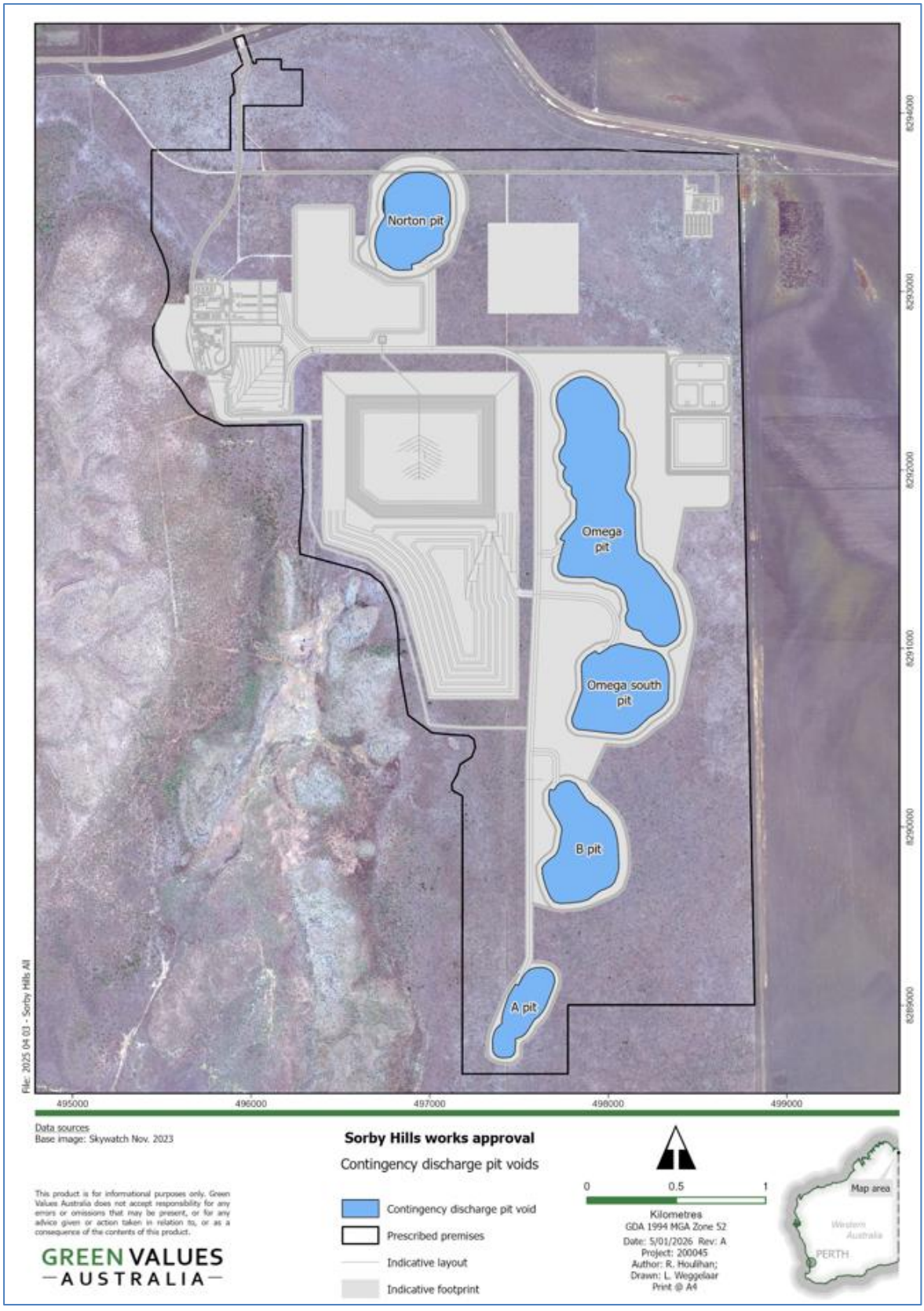

Figure 8: Contingency discharge pit voids

Figure 9: Mechanical evaporators - layout

Figure 10: TSF pipelines arrangement

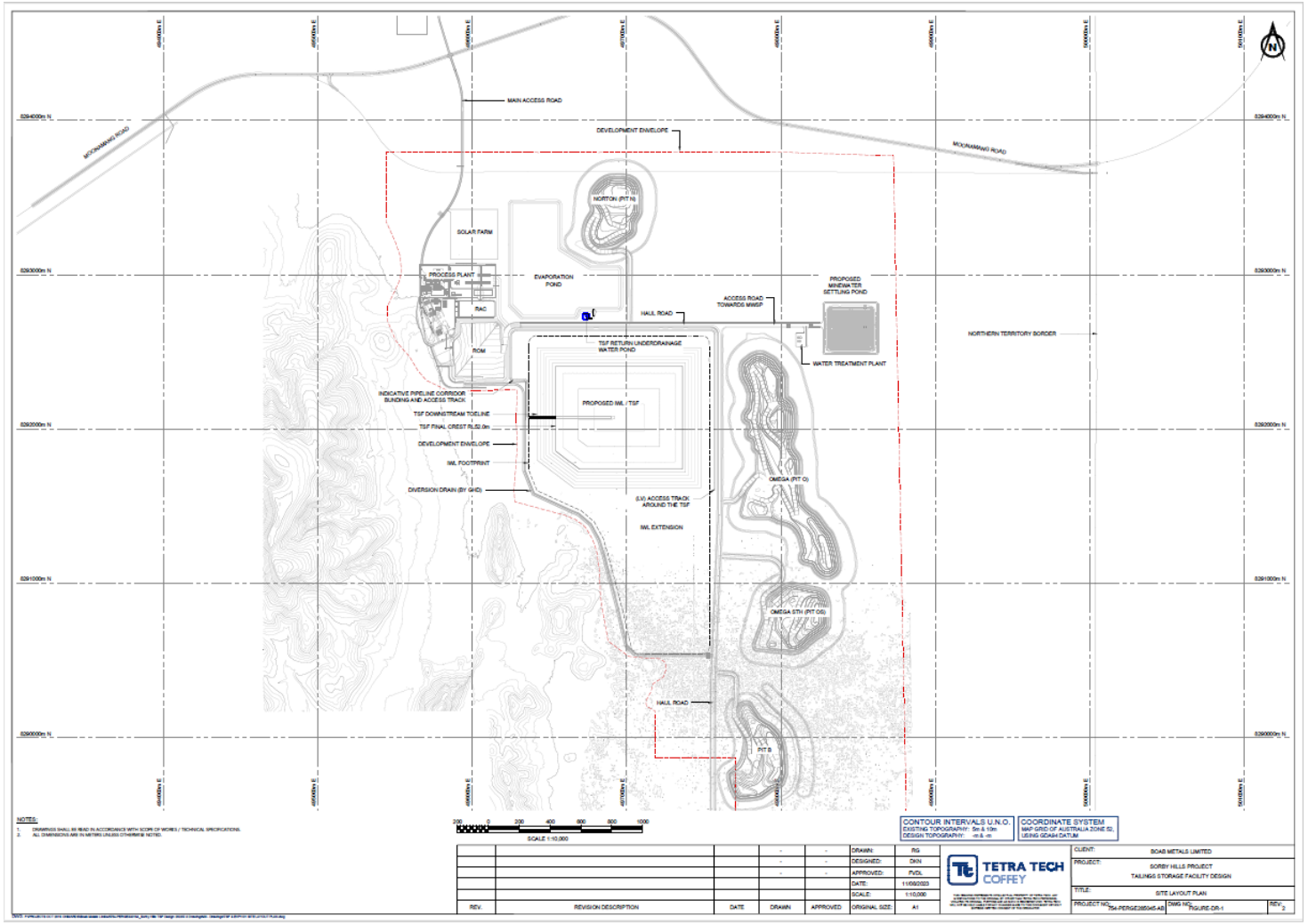

Figure 11: TSF Design

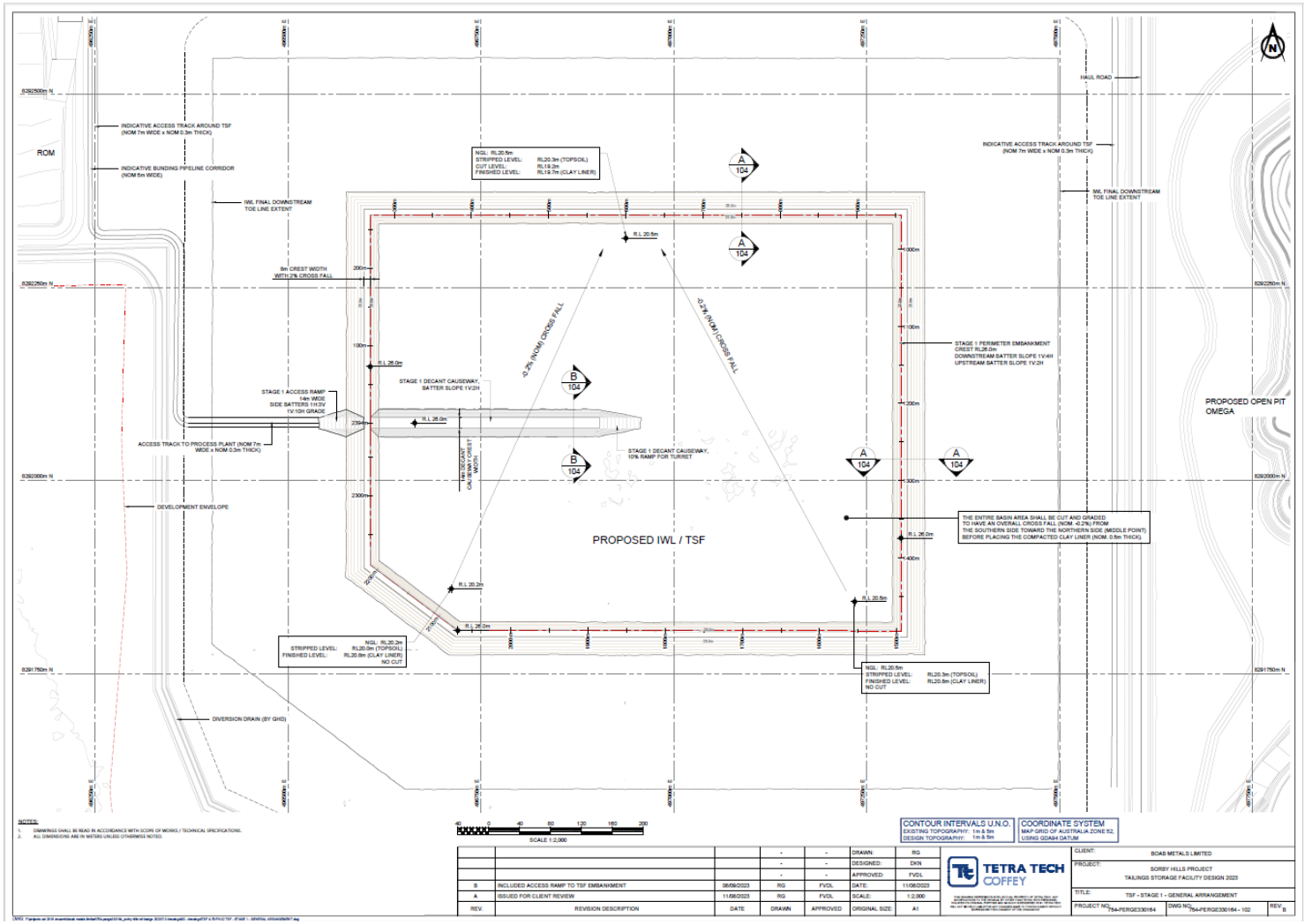

Figure 12: TSF Stage 1 General Arrangement

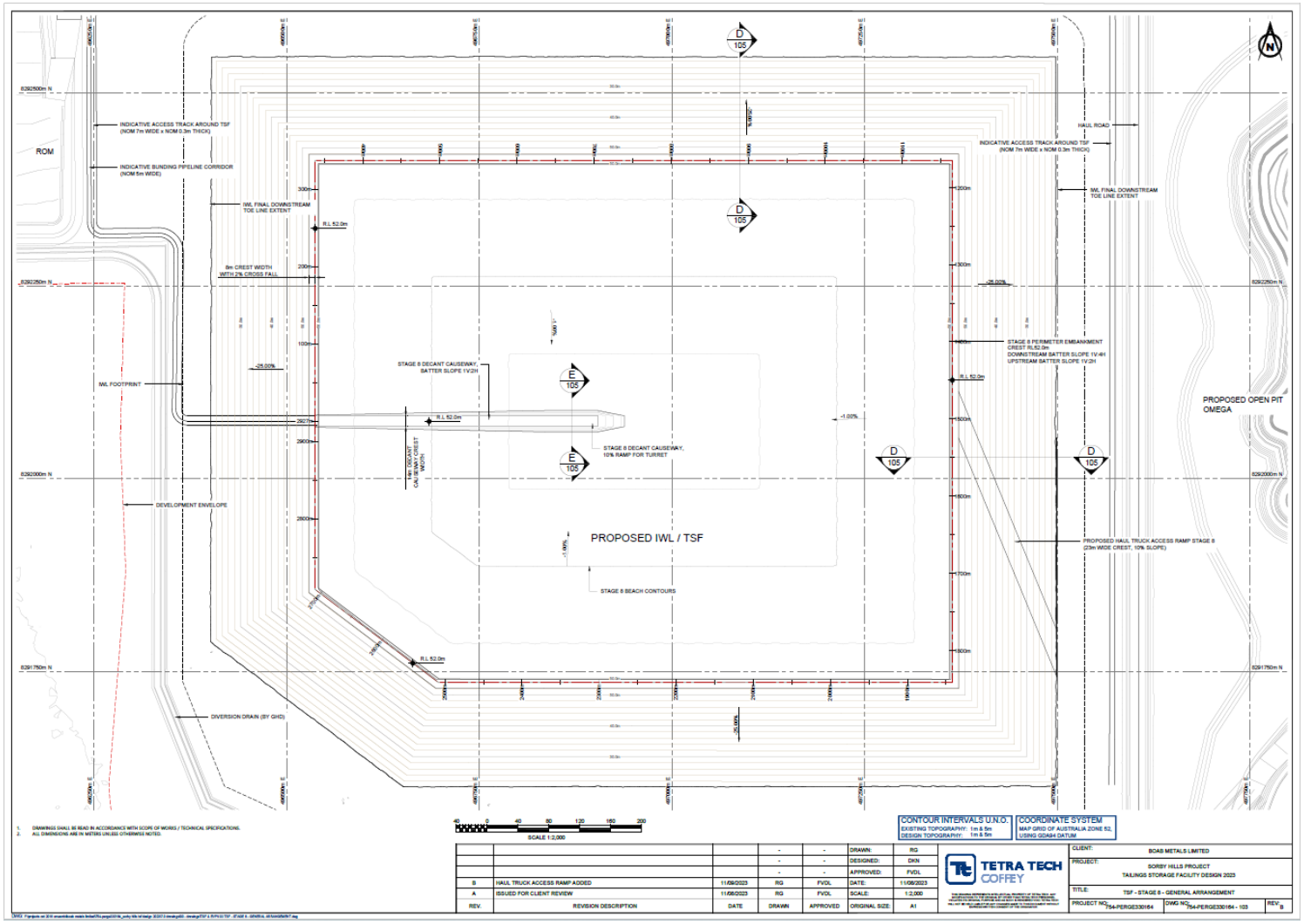

Figure 13: TSF Stage 8 General Arrangement

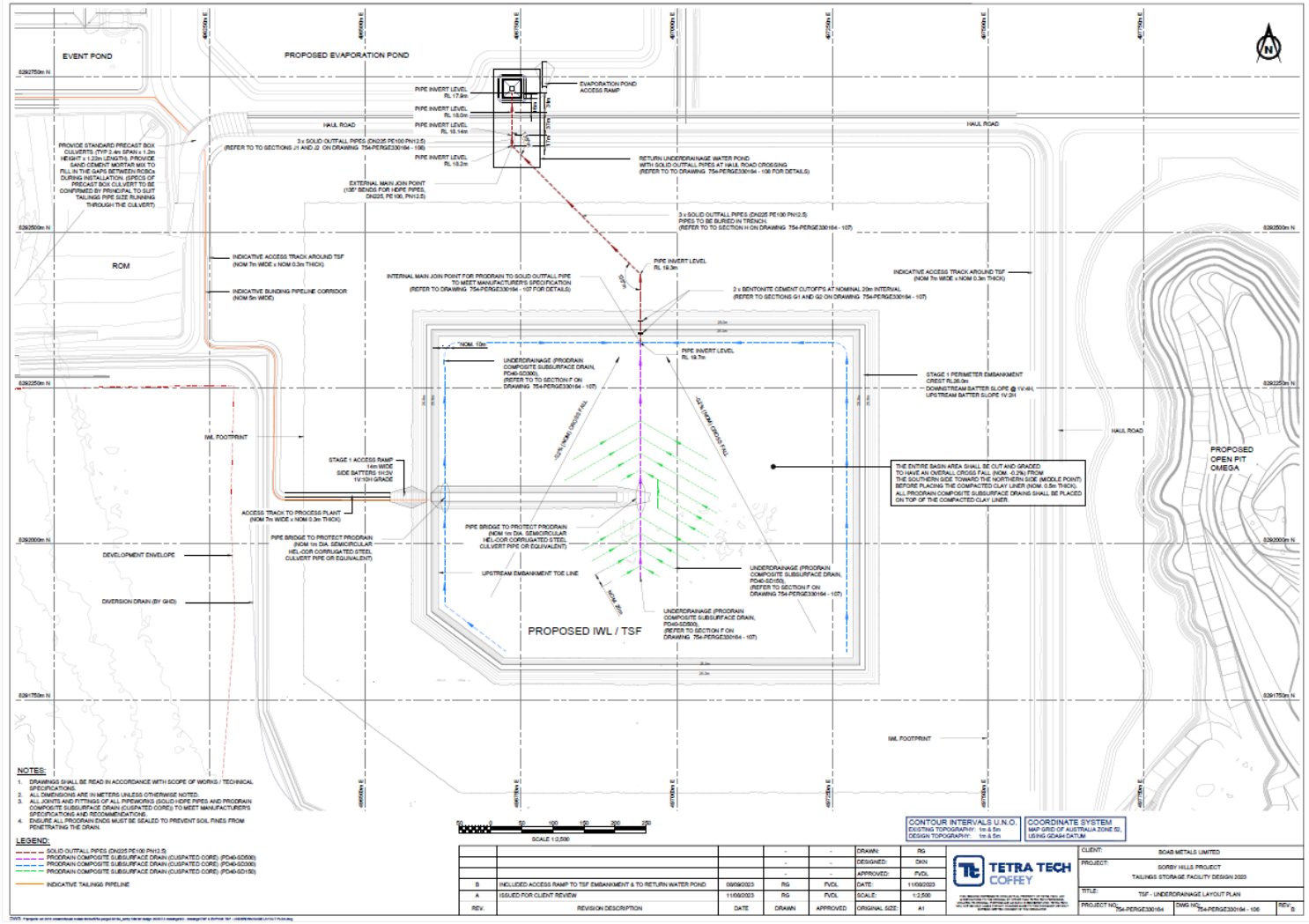

Figure 14: TSF Underdrainage Layout Plan

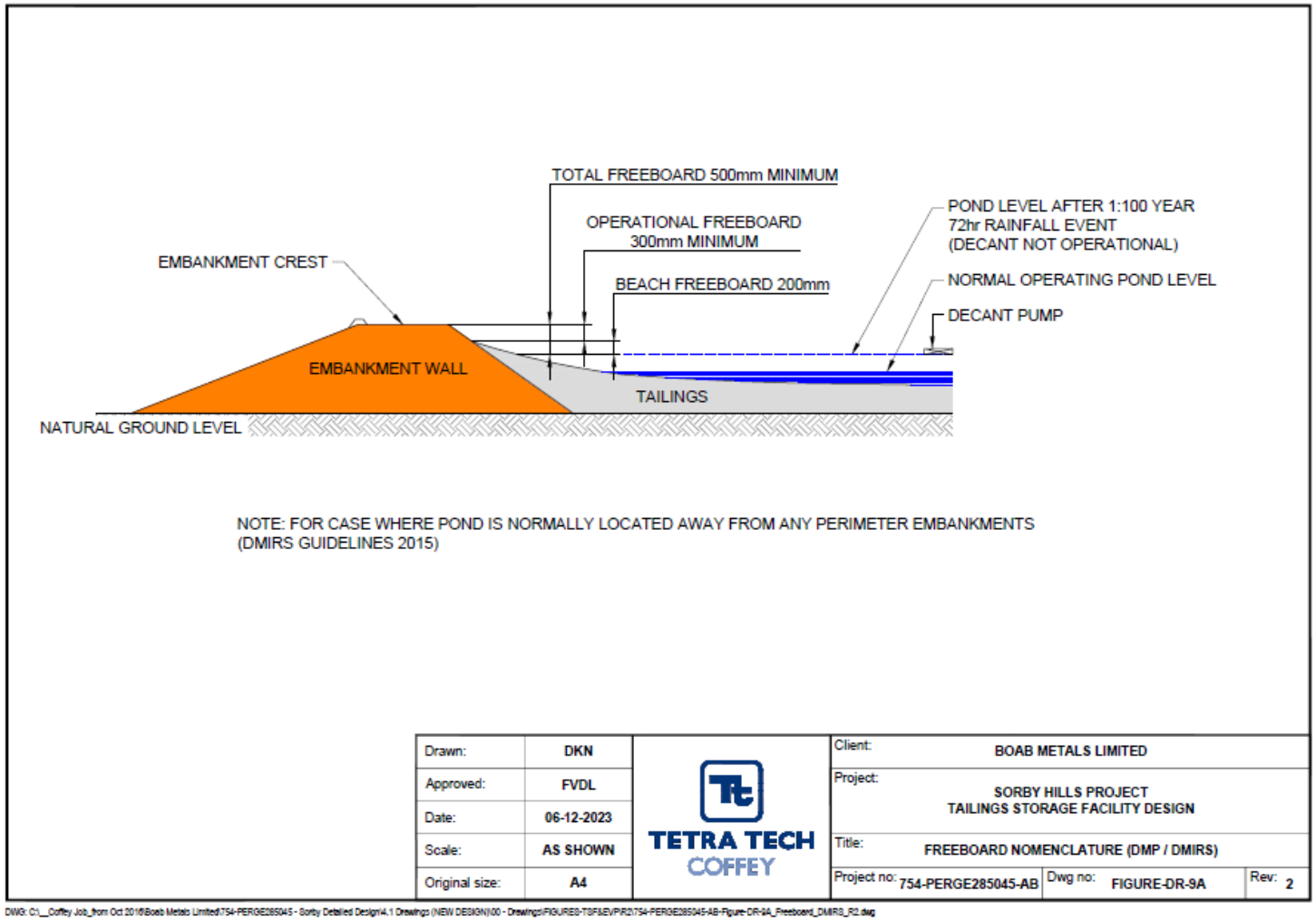

Figure 15: TSF Design cross section – freeboard details

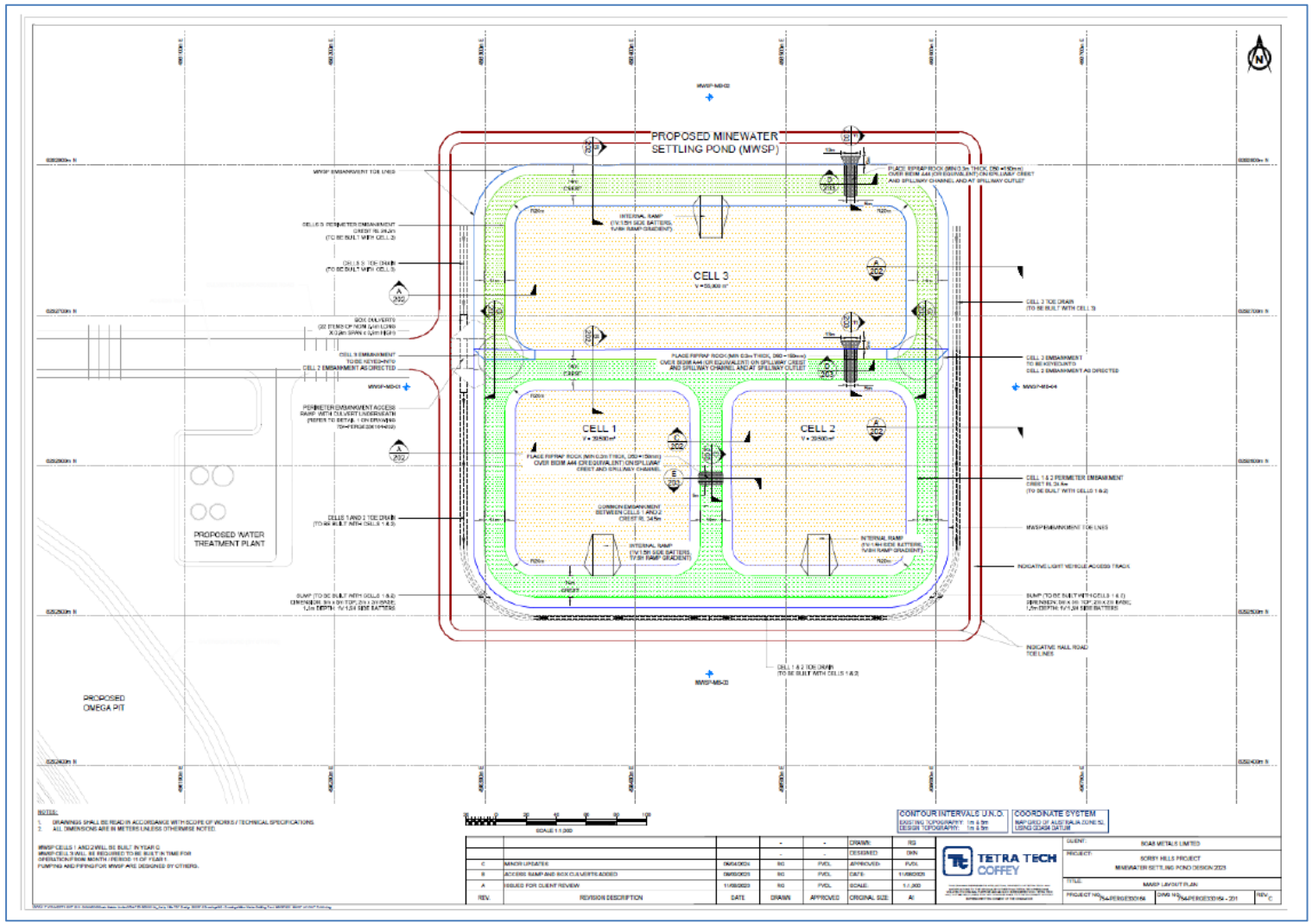

Figure 16: Minewater Settling Pond (MWSP) Design

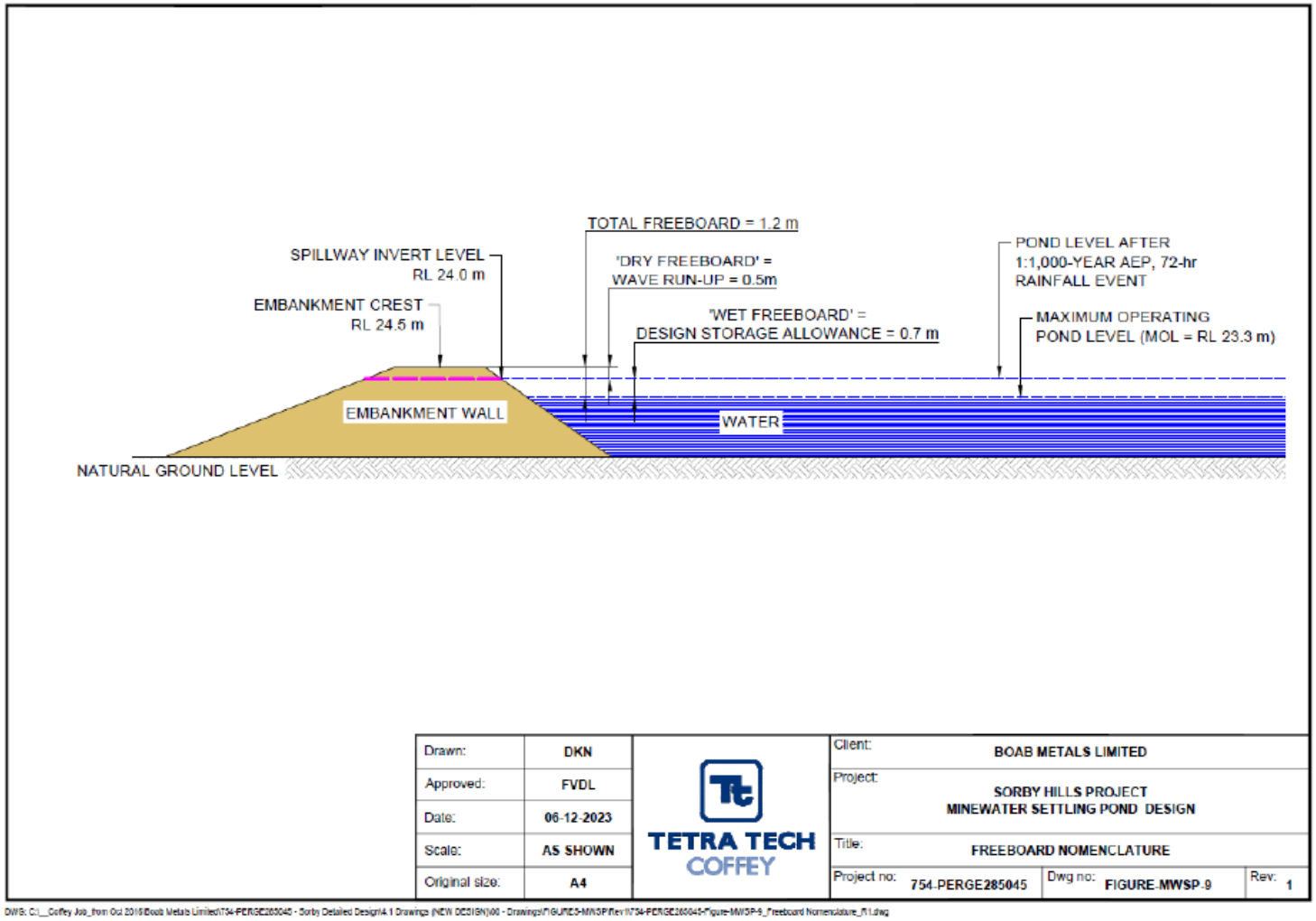

Figure 17: Minewater Settling Pond (MWSP) - Freeboard details

Schedule 2: Premises boundary

The corners of the premises boundary are the coordinates listed in Table 11.

Table 11: Premises boundary coordinates (GDA2020)

	Easting	Northing	Zone
1.	496004.5	8294300.6	MGA94 52
2.	496012.5	8294279.9	MGA94 52
3.	496028.8	8294281.0	MGA94 52
4.	496028.8	8294302.7	MGA94 52
5.	496168.0	8294302.7	MGA94 52
6.	496168.0	8294245.0	MGA94 52
7.	496287.3	8294245.0	MGA94 52
8.	496287.3	8294042.6	MGA94 52
9.	496004.5	8294300.6	MGA94 52
10.	496012.5	8294279.9	MGA94 52
11.	495958.7	8294042.6	MGA94 52
12.	495958.7	8293793.5	MGA94 52
13.	496740.3	8293792.8	MGA94 52
14.	497935.1	8293796.9	MGA94 52
15.	498726.8	8293771.7	MGA94 52
16.	498728.9	8293665.5	MGA94 52
17.	498729.0	8293657.5	MGA94 52
18.	498803.2	8289873.0	MGA94 52
19.	498820.3	8289002.4	MGA94 52
20.	497773.9	8289002.4	MGA94 52
21.	497774.1	8288615.8	MGA94 52
22.	497182.6	8288615.8	MGA94 52
23.	497183.7	8289873.0	MGA94 52

24.	497182.9	8289873.0	MGA94 52
25.	497182.9	8290173.5	MGA94 52
26.	497126.1	8290206.1	MGA94 52
27.	497124.2	8290240.2	MGA94 52
28.	497156.0	8290297.0	MGA94 52
29.	497169.8	8290349.8	MGA94 52
30.	497235.9	8290392.6	MGA94 52
31.	497255.6	8290445.2	MGA94 52
32.	497248.1	8290490.2	MGA94 52
33.	497216.5	8290512.2	MGA94 52
34.	497146.8	8290515.2	MGA94 52
35.	497013.9	8290526.8	MGA94 52
36.	496878.9	8290626.8	MGA94 52
37.	496839.4	8290846.0	MGA94 52
38.	496828.0	8290927.8	MGA94 52
39.	496823.3	8291081.6	MGA94 52
40.	496806.7	8291198.0	MGA94 52
41.	496806.6	8291198.4	MGA94 52
42.	496805.2	8291204.2	MGA94 52
43.	496803.8	8291209.9	MGA94 52
44.	496802.2	8291215.6	MGA94 52
45.	496800.7	8291221.2	MGA94 52
46.	496799.0	8291226.9	MGA94 52
47.	496797.3	8291232.5	MGA94 52
48.	496795.5	8291238.1	MGA94 52
49.	496793.6	8291243.7	MGA94 52
50.	496791.7	8291249.2	MGA94 52

51.	496789.6	8291254.8	MGA94 52
52.	496787.6	8291260.3	MGA94 52
53.	496785.4	8291265.8	MGA94 52
54.	496783.2	8291271.2	MGA94 52
55.	496780.9	8291276.6	MGA94 52
56.	496778.5	8291282.0	MGA94 52
57.	496776.1	8291287.4	MGA94 52
58.	496773.6	8291292.7	MGA94 52
59.	496771.1	8291298.0	MGA94 52
60.	496768.4	8291303.3	MGA94 52
61.	496765.7	8291308.5	MGA94 52
62.	496763.0	8291313.7	MGA94 52
63.	496760.2	8291318.9	MGA94 52
64.	496757.3	8291324.0	MGA94 52
65.	496754.3	8291329.1	MGA94 52
66.	496751.3	8291334.1	MGA94 52
67.	496748.2	8291339.2	MGA94 52
68.	496745.1	8291344.1	MGA94 52
69.	496741.9	8291349.1	MGA94 52
70.	496738.6	8291353.9	MGA94 52
71.	496735.3	8291358.8	MGA94 52
72.	496731.9	8291363.6	MGA94 52
73.	496728.4	8291368.4	MGA94 52
74.	496727.8	8291369.3	MGA94 52
75.	496667.1	8291415.2	MGA94 52
76.	496601.5	8291441.8	MGA94 52
77.	496275.5	8291529.4	MGA94 52

78.	496268.8	8291600.7	MGA94 52
79.	496290.8	8291880.4	MGA94 52
80.	496283.8	8292053.5	MGA94 52
81.	496289.2	8292254.4	MGA94 52
82.	495845.2	8292248.2	MGA94 52
83.	495703.8	8292315.1	MGA94 52
84.	495650.7	8292373.7	MGA94 52
85.	495597.1	8292463.6	MGA94 52
86.	495503.6	8292573.8	MGA94 52
87.	495454.2	8292692.0	MGA94 52
88.	495451.3	8292698.3	MGA94 52
89.	495451.3	8292799.6	MGA94 52
90.	495520.8	8292945.6	MGA94 52
91.	495522.2	8292948.9	MGA94 52
92.	495523.8	8292952.9	MGA94 52
93.	495525.3	8292957.0	MGA94 52
94.	495526.7	8292961.1	MGA94 52
95.	495528.1	8292965.2	MGA94 52
96.	495529.4	8292969.3	MGA94 52
97.	495530.5	8292973.5	MGA94 52
98.	495531.7	8292977.7	MGA94 52
99.	495532.7	8292981.9	MGA94 52
100.	495533.7	8292986.1	MGA94 52
101.	495534.6	8292990.3	MGA94 52
102.	495535.4	8292994.6	MGA94 52
103.	495536.1	8292998.8	MGA94 52
104.	495536.8	8293003.1	MGA94 52

105.	495537.3	8293007.4	MGA94 52
106.	495537.8	8293011.7	MGA94 52
107.	495538.2	8293016.0	MGA94 52
108.	495538.6	8293020.3	MGA94 52
109.	495538.8	8293024.6	MGA94 52
110.	495539.0	8293028.9	MGA94 52
111.	495539.1	8293033.3	MGA94 52
112.	495539.1	8293037.6	MGA94 52
113.	495539.0	8293041.9	MGA94 52
114.	495538.9	8293046.2	MGA94 52
115.	495538.7	8293050.6	MGA94 52
116.	495538.4	8293054.9	MGA94 52
117.	495538.0	8293059.2	MGA94 52
118.	495537.5	8293063.5	MGA94 52
119.	495537.0	8293067.8	MGA94 52
120.	495532.6	8293121.9	MGA94 52
121.	495501.6	8293212.2	MGA94 52
122.	495443.4	8293341.1	MGA94 52
123.	495443.0	8293794.0	MGA94 52
124.	495477.2	8293794.0	MGA94 52
125.	495488.8	8293794.0	MGA94 52
126.	495884.2	8293793.6	MGA94 52
127.	495884.2	8293793.6	MGA94 52
128.	495884.2	8294091.8	MGA94 52
129.	495905.7	8294113.3	MGA94 52
130.	495905.1	8294131.9	MGA94 52
131.	495903.7	8294150.6	MGA94 52

132.	495901.6	8294169.2	MGA94 52
133.	495898.8	8294187.7	MGA94 52
134.	495892.4	8294218.2	MGA94 52
135.	495953.2	8294272.4	MGA94 52
136.	495950.3	8294279.6	MGA94 52
137.	495933.0	8294331.0	MGA94 52
138.	495902.6	8294419.9	MGA94 52
139.	495957.5	8294438.5	MGA94 52
140.	495977.7	8294379.3	MGA94 52
141.	495995.1	8294328.1	MGA94 52
142.	496004.5	8294300.6	MGA94 52

Schedule 3: Monitoring

Table 12: Emissions and discharges monitoring during environmental commissioning and time limited operations

	Discharge point	Parameters	Frequency	Averaging Period	Unit	Method
1.	Stormwater sumps within OPF to Evaporation Basin, Disused Pit or TSF Evaporation Pond	pH	Quarterly	Spot sample	pH units	AS/NZS 5667.1 AS/NZS 5.667.10
		TDS	Quarterly	Spot sample	mg/L	
		Turbidity	Quarterly	Spot sample	NTU	
		Surfactants (detergents)	Quarterly	Spot sample	mg/L	
		Petroleum hydrocarbons	Quarterly	Spot sample	µg/L	
		Benzene, toluene, ethyl benzene, xylene (BTEX)	Quarterly	Spot sample	µg/L	
		Lead (dissolved)	Quarterly	Spot sample	µg/L	
		Nickel (dissolved)	Quarterly	Spot sample	µg/L	
		Zinc (dissolved)	Quarterly	Spot sample	µg/L	
		Silver (dissolved)	Quarterly	Spot sample	µg/L	
		Major cations and anions	Quarterly	Spot sample	Mg/L	
2.	Tailings hopper	pH	Daily	Spot sample	pH units	AS/NZS 5667.1 AS/NZS 5.667.10
		Sulphide	Daily	Spot sample	mg/L	
3.	TSF decant return pump	pH	Daily	Spot sample	pH units	AS/NZS 5667.1 AS/NZS 5.667.10
		Sulphide			mg/L	
		Acrylamide			mg/L	

	Discharge point	Parameters	Frequency	Averaging Period	Unit	Method
4.	TSF Evaporation Pond Process Pond Water Mine Water Settling Pond Evaporation Basin	pH	Quarterly	Spot sample	pH units	AS/NZS 5667.1 AS/NZS 5.667.10
		Electrical Conductivity			mg/L	
		Total Dissolved Solids			NTU	
		Chloride			mg/L	
		Sulfate			mg/L	
		Hardness as $CaCO_3$			µg/mL	
		Ionic Balance			µg/mL	
		Cations Total			µg/mL	
		Anions Total			µg/mL	
		Silicon as SiO_2			µg/mL	
		Silicon			mg/L	
		Calcium			mg/L	
		Magnesium			mg/L	
		Potassium			mg/L	
		Sodium			mg/L	
		Ammonia as N			mg/L	
		Nitrate as N			mg/L	
		Total Nitrogen			mg/L	
		Phosphate			mg/L	
		Lead			mg/L	
		Zinc			mg/L	
		Silver			mg/L	
		Cadmium			mg/L	
		Arsenic			mg/L	
		Chromium (III+VI)			mg/L	

	Discharge point	Parameters	Frequency	Averaging Period	Unit	Method
		Mercury			mg/L	
		Selenium			mg/L	
		Copper			mg/L	
		Nickel			mg/L	
		Antimony			mg/L	
		Aluminium			mg/L	
		Manganese			mg/L	
		Ferrous Iron			mg/L	
5.	WWTP Irrigation Tank	pH	Weekly during commissioning Quarterly during time limited operations	Spot sample	pH units	AS/NZS 5667.1 AS/NZS 5.667.10
		Biochemical Oxygen Demand			mg/L	
		Electrical Conductivity			µS/cm	
		Total Dissolved Solids			mg/L	
		Total Suspended Solids				
		Total Nitrogen				
		Total Phosphorus				
		Residual chlorine				
		E.coli			cfu / 100 mL	

Table 13: Monitoring of ambient concentrations during environmental commissioning and time limited operations

	Parameter	Monitoring location	Unit	Frequency	Averaging period	Method
Air Quality Monitoring Network – deposited dust						
1.	Deposited dust	Dust deposition gauges: Dust 1, Dust 2, Dust 3, Dust 4 and Dust 5 As depicted in Schedule 1, Figure 6	g/m^2/month	Monthly	Monthly	AS/NZS 3580.10.1
2.	**Air Quality Monitoring Network – ambient air monitoring**					
	PM_{10}	Real-time ambient dust monitors at locations Dust 1 and Dust 5 - as depicted in Schedule 1, Figure 6	$\mu g/m^3$	Continuous	24 hours Instantaneous	AS/NZS 3580.9.6
	$PM_{2.5}$		$\mu g/m^3$			
	TSP		$\mu g/m^3$			AS/NZS 3580.9.15
	Lead		$\mu g/m^3$			
	Copper dusts		$\mu g/m^3$			
	Zinc		$\mu g/m^3$			
Groundwater Quality Monitoring Network						
3.	SWL[1]	Groundwater monitoring bores and shallow monitoring bores which have been installed in accordance with Condition 4 - As depicted in Figure 2 Regional water monitoring bores: • MB_A (deep) • MB_B (deep) • MB-C (deep and shallow) • MB_D (deep and shallow) • MB_E	mBGL	Monthly	Spot Sample	AS5667.1-1998 AS/NZS 5667.11
	Ammonia as N		mg/L	Quarterly		
	Chloride		mg/L			
	Electrical Conductivity[2]		µg/mL			
	Mercury		mg/L			
	Aluminium		mg/L			
	Arsenic		mg/L			
	Cadmium		mg/L			
	Chromium (III+VI)		mg/L			

	Parameter	Monitoring location	Unit	Frequency	Averaging period	Method
	Lead	• MB_F • MB_G (existing shallow bore) • MB_H • MB_I • SHM_B07 (MB8) (existing shallow bore) • SHM_B08 (MB8) (existing shallow bore) • SHM_B10 (MB10) As depicted in Figure 2	mg/L			
	Manganese		mg/L			
	Selenium		mg/L			
	Zinc		mg/L			
	Silver		mg/L			
	Ferrous Iron		mg/L			
	Cations Total		mg/L			
	Anions Total		mg/L			
	Ionic Balance		mg/L			
	Silicon as SiO2	• MB_Regional-01 and 01S • MB_Regional-02 and 02S • MB_Regional-03 and 03S • MB_Regional-42 and 04S As depicted in Figure 3	mg/L			
	Silicon		mg/L			
	Calcium		mg/L			
	Magnesium		mg/L			
	Potassium		mg/L			
	Sodium		mg/L			
	Hardness as $CaCO_3$		mg/L			
	Nitrate as N		mg/L			
	Nitrogen		mg/L			
	Nitrate as N		mg/L			
	pH[2]		mg/L			
	Sulfate		mg/L			
	Total Dissolved Solids		mg/L			
	Phosphate		mg/L			

Note 1: Standing water level shall be determined prior to the collection of other water samples.
Note 2: In-field non-NATA accredited analysis permitted.