



**Works approval number** W6751/2022/1

**Works approval holder** Anax Metals Limited  
**ACN** 106 304 787  
**Registered business address** Ground Floor West  
20 Kings Park Road  
WEST PERTH WA 6005

**DWER file number** DER2022/000520

**Duration** 26/05/2023 to 25/05/2026

**Date of issue** 25/05/2023

**Premises details** Whim Creek Copper Project  
Mining Leases M47/236, M47/237, M47/238,  
M47/443  
North Coastal Highway  
WHIM CREEK WA 6718  
As defined by the coordinates in Schedule 2

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i> )	Assessed production / design capacity
Category 5: Processing or beneficiation of metallic or non-metallic ore	1,200,000 tonnes per Annual Period ROM throughput 400,000 tonnes per Annual Period tailings production

This works approval is granted to the works approval holder, subject to the attached conditions, on 25 May 2023, by:

**Alana Kidd**

**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
25/05/2023	W6751/2022/1	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;
  - (c) at the corresponding infrastructure location; and
  - (d) within the corresponding timeframe,
 as set out in Table 1.

**Table 1: Design and construction / installation requirements**

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
1.	Conventional Flotation Processing Plant	<ul style="list-style-type: none"> <li>• Designed to process up to 400,000 tonnes per annum of pre-concentrate ore to produce separate copper, lead and zinc concentrates;</li> <li>• Diversions for stormwater in place to ensure the entire site is designed to maintain a capacity to contain a 1 in 100 year 72 hour rainfall event;</li> <li>• All tanks fitted with high level alarm systems which report to a centralised monitoring room (Process Control Room); and</li> <li>• Flooring constructed from sealed concrete so that any spillages to the ground can be collected on the sealed floor via sump pumps or manually and returned to the process water circuit.</li> </ul> <p><b>Flotation:</b></p> <ul style="list-style-type: none"> <li>• 3 x Flotation circuit for copper, lead and zinc; and</li> <li>• Fully bunded concrete floor for each flotation circuit sloped to either of two pump sumps to aid clean up.</li> </ul> <p>Copper roughing and scavenging flotation circuit consists of:</p> <ul style="list-style-type: none"> <li>• 6 x 8 m<sup>3</sup> copper roughing and</li> </ul>	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Environmental Compliance Report required by condition 4

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
		<p>scavenging cells;</p> <ul style="list-style-type: none"> <li>• Regrind cyclones;</li> <li>• 2 x regrind vertical stirred mills; and</li> <li>• 4 x 3 m<sup>3</sup> copper cleaning cells.</li> </ul> <p>Lead roughing and scavenging floatation circuit consists of:</p> <ul style="list-style-type: none"> <li>• 4 x 8 m<sup>3</sup> lead roughing and scavenging cells; and</li> <li>• 2 x 2 m<sup>3</sup> lead cleaning cells.</li> </ul> <p>Zinc roughing and scavenging circuit consists of:</p> <ul style="list-style-type: none"> <li>• 4 x 8 m<sup>3</sup> copper roughing and scavenging cells;</li> <li>• Regrind cyclones;</li> <li>• 2 x regrind vertical stirred mills;</li> <li>• 4 x 2 m<sup>3</sup> zinc cleaning and scavenging cells; and</li> <li>• 3 x 2 m<sup>3</sup> zinc recleaning cells.</li> </ul> <p><b>Concentrate Thickening:</b></p> <ul style="list-style-type: none"> <li>• 3 x 4 m diameter high-rate thickener for copper, lead and zinc;</li> <li>• The concentrate thickener and filter storage tanks fully bunded and provided with sump pumps to aid area clean up;</li> <li>• Clean up directed back to the thickener feed or optionally to the appropriate filter feed tank;</li> <li>• Wet processing areas concrete bunded and graded to sumps where liquids are returned to process; and</li> <li>• Separation through bunding, drainage diversion and infrastructure, of plant area drainage and surrounding, uncompromised runoff.</li> </ul> <p><b>Tailings Thickening:</b></p> <ul style="list-style-type: none"> <li>• 1 x 12 m diameter high-rate tailings thickener for copper, lead and zinc;</li> <li>• Designed to allow the tailings to be mixed with flocculant and</li> </ul>		

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
		<p>coagulant to increase settling rate and underflow density;</p> <ul style="list-style-type: none"> <li>Thickener underflow designed to be pumped, at 60 - 65% solids by weight, to the TSF; and</li> <li>Thickener overflow to report to the process water tank.</li> </ul>		
2.	Three Cell In Pit TSF	<ul style="list-style-type: none"> <li>TSF siting in exhausted pits at Mons Cupri Hill;</li> <li>TSF to be located at the existing Mons Cupri mining area and consists of three distinct tailings cells: <ul style="list-style-type: none"> <li>➤ The existing Mons Cupri Pit (MCIPTSF1);</li> <li>➤ The existing Mons Cupri Northwest Pit (MCIPTSF2); and</li> <li>➤ The to be constructed New Mons Cupri Pit (MCIPTSF3); and</li> </ul> </li> <li>Deposition via multiple spigots located on the upstream embankment crest of the northern and southern embankments of Cell 1. Tailings deposition carried out such that the Decant Pond is maintained at the decant pump deployed from the eastern end of the pit.</li> </ul> <p><b>MCIPTSF1:</b></p> <ul style="list-style-type: none"> <li>Located in Mons Cupri Pit with a total footprint of 2.3 ha;</li> <li>Storage capacity of 300,000 tonnes;</li> <li>Maximum embankment height of 16.0 m constructed on the northwest corner of the existing Mons Cupri Pit;</li> <li>Embankment zoned, comprising a 1.5 mm HDPE liner over the upstream zone of low permeability roller compacted clayey borrow (Zone 1) with a downstream zone (Zone 2) of mine waste</li> </ul>	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Environmental Compliance Report required by condition 4

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
		<p>from the waste dump; and</p> <ul style="list-style-type: none"> <li>• Embankment foundation preparation requires removal of loose rock material on the pit walls and floor incorporates a cut-off trench excavated to a competent 'rock' layer, as directed on site in order to reduce seepage.</li> </ul> <p><b>MCIPTSF2:</b></p> <ul style="list-style-type: none"> <li>• Utilise the existing pit walls of the Northwest pit;</li> <li>• Designed for total footprint of 2.3 ha; and</li> <li>• Designed for storage capacity of 300,000 tonnes.</li> </ul> <p><b>Pipelines:</b></p> <ul style="list-style-type: none"> <li>• Bunded tailings pipelines and sumps to contain spillage;</li> <li>• Pipeline alignment to utilise topography for spillage containment; and</li> <li>• Pressures sensors along pipelines and auto pump shut-off in event of significant pressure drop.</li> </ul> <p><b>TSF base and embankments:</b></p> <ul style="list-style-type: none"> <li>• TSF minimum freeboard designed to be 1.0 m under normal operating conditions, which includes an allowance for the temporary storage of the 1:100 years or 1% average exceedance probability (AEP) storm event of 72-hour duration whilst maintaining the required total freeboard;</li> <li>• MCIPTSF1 designed, with progressive construction of the embankments managed, to ensure rainfall from a 1 in 100 year, 72 hour event will be contained within the structure during the operational phase;</li> <li>• Construction of embankment cut-offs and foundation preparation;</li> <li>• Construction of an upstream low permeability clay zone and</li> </ul>		

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
		<p>installation of a 1.5 mm HDPE on the upstream batter;</p> <ul style="list-style-type: none"> <li>• Underdrainage capture. Along valley invert and at the toe of embankments (except middle embankment);</li> <li>• Cut off trenches at base of upstream embankments;</li> <li>• Seepage is to report to the expanded Mon Cupri Pit;</li> <li>• Vibrating Wire Piezometers installed in the embankment; and</li> <li>• 4 x survey prisms installed on the downstream crest of the TSF embankment.</li> </ul> <p><b>Decant Pond:</b></p> <ul style="list-style-type: none"> <li>• Pontoon-mounted decant pump to return water to the Concentrator Process Water Pond; and</li> <li>• Standby/ spare decant pumps will be installed to ensure the adequate freeboard is maintained at the TSF.</li> </ul>		
3.	Concentrator Process Water Pond	<ul style="list-style-type: none"> <li>• Design freeboard of the Concentrator Process Pond to be maintained at 0.5m;</li> <li>• 1.5 mm HDPE lined pond; and</li> <li>• Storage capacity of 5,000 m<sup>3</sup>.</li> </ul>	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Environmental Compliance Report required by condition 4
4.	Concentrate Storage & Loading Enclosed Shed Truck Wheel Wash	<p><b>Concentrate Storage &amp; Loading Enclosed Shed:</b></p> <ul style="list-style-type: none"> <li>• Separate copper, lead and zinc concentrate filters housed in an enclosed shed that is constructed on relatively flat area of ground, on a concrete constructed hardstand pad bunded area;</li> <li>• An earthen bund and diversion drain constructed around the perimeter of the shed to divert stormwater runoff around the facility;</li> <li>• Designated entry and exit points for trucks at the shed;</li> </ul>	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Environmental Compliance Report required by condition 4

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
		<ul style="list-style-type: none"> <li>Rainfall that falls within the shed area directed to a sump. Water collected in the sump added to the process water circuit; and</li> <li>Shed equipped with an air/dust extraction filter system to meet Occupational Health and Safety standards.</li> </ul> <p><b>Truck Wheel Wash:</b></p> <ul style="list-style-type: none"> <li>Sensor activated drive through Truck Wheel Wash constructed outside of the loading exit point. The facility will have a drive-in sump to be serviced by a front end loader;</li> <li>Truck Wheel Wash is designed to be approximately 15m long x 5m wide;</li> <li>The sump includes a sump pump, to discharge to an oily water separator and then to either the copper thickener feed hopper, lead thickener feed hopper, zinc thickener feed hopper or the flotation feed conditioning tank.</li> <li>Truck Wheel Wash raised and bunded to prevent wastewater egress to the environment with high level alarm systems; and</li> <li>Truck Wheel Wash raised and bunded to direct clean stormwater around the facility and prevent ingress into the facility.</li> </ul>		
5.	Hydrocarbon storage areas	<ul style="list-style-type: none"> <li>All liquid chemical reagents stored within tanks in appropriately bunded facilities whereby 110% of the largest vessel is contained and 25% of the total volume is contained according to Australian Standards AS1940 and AS1692. Stocks of reagents in solid form will be stored in a designated reagent shed;</li> <li>All hydrocarbon storage areas designed and constructed in accordance with Australian Standards AS1940 and</li> </ul>	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Environmental Compliance Report required by condition 4

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
		<p>AS1692;</p> <ul style="list-style-type: none"> <li>Plant site drainage directed to HDPE lined stormwater pond with capacity for 1 in 100 year, 72 hour event;</li> <li>Captured stormwater directed to process water circuit/treatment plant;</li> <li>Workshops and washdown bays have concrete floors and sides (as appropriate) and runoff to be directed to oily water separators / clean water recovery systems that are designed to treat wastewater to a Total Petroleum Hydrocarbon level of &lt;10 ppm;</li> <li>Self-bunded bulk fuel storage;</li> <li>Above ground tanks and pipework;</li> <li>Designated refuelling bays / designated hydrocarbon and chemical storage areas / designated vehicle and equipment service areas;</li> <li>The bunded areas incorporate a collection sump to recover spillage;</li> <li>Fuel bowsers and fuel delivery inlets located on concrete or HDPE-lined pads to contain any drips and spills;</li> <li>Spill kits in strategic positions with materials and equipment to contain and collect/recover hydrocarbon spills; and</li> <li>Personnel trained in use of spill kits.</li> </ul>		
6.	Dust controls	<ul style="list-style-type: none"> <li>Dust suppression using dedicated water carts;</li> <li>Ground disturbance planning to minimise areas 'open' (progressive clearing);</li> <li>Sprinkler infrastructure to be installed on ROM pad stockpiles;</li> <li>Application of speed limits;</li> </ul>	<p>Schedule 1: Maps, Premises map, Figure 1</p> <p>Schedule 1: Maps, Premises map, Figure 5</p>	Prior to the submittal of the Environmental Compliance Report required by condition 4

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
		<ul style="list-style-type: none"> <li>• Visual monitoring of airborne dust levels and effectiveness of dust extraction and suppression measures to ensure they are adequately maintained and working efficiently; and</li> <li>• Ambient Air Quality Monitoring consisting of the following: <ul style="list-style-type: none"> <li>➢ 2 x E-sampler PM<sub>10</sub> dust monitors (nephelometers) named Station 1 and Station 2;</li> <li>➢ Meteorological station measuring temperature, rainfall (mm), relative humidity (%), wind speed (m/s) and wind direction (°);</li> <li>➢ Station 1 and Station 2 to be implemented so that six months of data can be collected prior to the commencement of commissioning; and</li> <li>➢ AS/NZS 3580.1.1.:2016 Methods for sampling and analysis of ambient air, Part 1.1: Guide to siting air monitoring equipment.</li> </ul> </li> </ul>		

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

**Table 2: Infrastructure requirements – groundwater monitoring wells**

Infrastructure	Design, construction, and installation requirements	Monitoring well location(s)	Timeframe
Groundwater monitoring wells to be installed to bedrock around the perimeter of the TSF TSFMW01 TSFMW02 TSFMW03	<p><u>Well design and construction:</u> Designed and constructed in accordance with <i>ASTM D5092/D5092M-16: Standard practice for design and installation of groundwater monitoring bores.</i></p> <p>Well screens must target the part, or parts, of the aquifer most likely to be affected by contamination<sup>1</sup>. Where temporary/seasonal perched features are present, wells must be nested, and the perched features individually screened.</p>	Around the perimeter of the TSF	Must be constructed, developed (purged), and determined to be operational with adequate baseline sampling conducted prior to dewatering activities commencing.
	<p><u>Logging of borehole:</u> Soil samples must be collected and logged during the installation of the monitoring wells.</p>		

Infrastructure	Design, construction, and installation requirements	Monitoring well location(s)	Timeframe
	<p>A record of the geology encountered during drilling must be described and classified in accordance with the Australian Standard Geotechnical Site Investigations AS1726.</p> <p>Any observations of staining / odours or other indications of contamination must be included in the bore log.</p> <p><u>Well construction log:</u> Well construction details must be documented within a well construction log to demonstrate compliance with <i>ASTM D5092/D5092M-16</i>. 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.</p> <p><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.</p> <p><u>Installation survey:</u> the vertical (top of casing) and horizontal position of each monitoring well must be surveyed and subsequently mapped by a suitably qualified surveyor.</p> <p><u>Well network map:</u> 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.</p>		

3. The works approval holder must, within 60 calendar days of the monitoring wells being constructed, submit to the CEO a well construction report evidencing compliance with the requirements of condition 2.

### Compliance reporting

4. The works approval holder must within 30 calendar days of an item of infrastructure or equipment required by condition 1 being constructed and/or installed:
  - (a) undertake an audit of their compliance with the requirements of condition 1; and
  - (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.
5. The Environmental Compliance Report required by condition 4, must include as a minimum the following:
  - (a) certification by a suitably qualified professional engineer or builder that the items of infrastructure or component(s) thereof, as specified in condition 1,

have been constructed in accordance with the relevant requirements specified in condition 1;

- (b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1; and
- (c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

## Environmental commissioning phase

### Environmental commissioning requirements and emission limits

- 6. 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 4 of this works approval.
- 7. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 3 may be carried out:
  - (a) In accordance with the corresponding commissioning requirements; and
  - (b) For the corresponding authorised commissioning duration.

**Table 3: Environmental commissioning requirements**

	Infrastructure	Commissioning requirements	Authorised commissioning duration
1.	Conventional Flotation Processing Plant	<p>Plant commissioning generally comprises five sequential steps:</p> <ul style="list-style-type: none"> <li>• Stage 1 – Construction verification – verification that infrastructure/plant/equipment is mechanically and electrically complete and constructed to specification;</li> <li>• Stage 2 – Functional testing (Dry Testing) - introduction of energy (electrical, hydraulic, pneumatic or potential) to test motors and pressure test vessels and piping where possible;</li> <li>• Stage 3 – No Load Commissioning (Wet Commissioning) – involves operating plant with load (ore/material) or where appropriate with water to verify operation of control systems, and integration of plant subsystems where practicable. For example, filling tanks with water, operating conveyors, operating crushers (no feed) and testing shutdown devices and instrumentation function;</li> <li>• Stage 4 – Load Commissioning (Ore Commissioning) – ore, or other process medium, is progressively introduced to the plant and system settings are monitored and adjusted and plant performance data obtained from the control systems. Loadings are progressively increased</li> </ul>	Six months

	Infrastructure	Commissioning requirements	Authorised commissioning duration
		<p>with the plant functioning carefully monitored. Emergency shutdown and plant start-up are tested; and</p> <ul style="list-style-type: none"> <li>• Stage 5 – Performance Verification. – plant is operated under normal conditions for longer periods, at variable rates and steady state conditions to evaluate reliability and performance against design criteria.</li> </ul> <p>Stage 4 of the commissioning process, the introduction of ore to the process circuit, will commence on satisfactory conclusion of Stages 1-3.</p> <p>Commissioning the Conventional Flotation Processing Plant and TSF will be considered complete when:</p> <ul style="list-style-type: none"> <li>• The Concentrator is operating in steady state at design rates;</li> <li>• Tailings have been discharged to the TSF and return water is routinely utilised, after treatment as necessary, as make-up process water;</li> <li>• Product and tailings thickeners are performing to design with underflows of required density and overflow of required clarity;</li> <li>• Plant maintenance is according to schedule, with minimum interruption for process upsets or spillage; and</li> <li>• Commercial quantities of copper, zinc and lead concentrates have been produced.</li> </ul> <p>Monitoring / inspections to be conducted during commissioning:</p> <ul style="list-style-type: none"> <li>• Visual monitoring of airborne dust levels and effectiveness of dust extraction and suppression measures to ensure they are adequately maintained and working efficiently;</li> <li>• Daily inspections of processing areas and pipelines; and</li> <li>• Monthly inspections of storage and refuelling areas.</li> </ul>	
2.	Three Cell In Pit TSF	<ul style="list-style-type: none"> <li>• Thickener underflow will be pumped, targeted at 60 - 65% solids by weight, to the TSF;</li> <li>• Cycling tailings discharge to maintain wet tailings surface;</li> <li>• Location and size of the Decant Pond will be visually monitored and maintained by changing the active spigots;</li> <li>• Maximising water recovery from the TSF via the decant system;</li> </ul>	Six months

	Infrastructure	Commissioning requirements	Authorised commissioning duration
		<ul style="list-style-type: none"> <li>• Minimum freeboard for the TSF under normal operating conditions is 1.0 m, which includes an allowance for the temporary storage of the 1:100 years or 1% average exceedance probability (AEP) storm event of 72-hour duration whilst maintaining the required total freeboard;</li> <li>• Location and size of the Decant Pond will be visually monitored and maintained by changing the active spigots;</li> <li>• Vibrating Wire Piezometers maintained in the embankment to monitor trends in pore pressure which can reflect seepage through the embankment; and</li> <li>• 4 x survey prisms installed on the downstream crest of the TSF embankment are to be monitored daily for movement;</li> <li>• Tailings containment and recovery as soon as practicable following any spillage incident;</li> <li>• Minimum daily (each shift) inspections of: <ul style="list-style-type: none"> <li>➢ Pipelines, valves, pumps;</li> <li>➢ Initial deposition and behaviour of tailings;</li> <li>➢ Decant Pond formation, location and size;</li> <li>➢ Return water operations system;</li> <li>➢ Embankment condition;</li> <li>➢ Seepage detection (Vibrating Wire Piezometers); and</li> <li>➢ Seepage will report to the expanded Mon Cupri Pit; and</li> </ul> </li> <li>• Monthly production parameters – tailings deposited (dry tonnes), slurry density, water return to plant;</li> <li>• Tailings containment and recovery following any spillage incident; and</li> <li>• Maintenance of design freeboard, deposition management.</li> </ul>	
3.	Concentrator Process Water Pond	<ul style="list-style-type: none"> <li>• Minimum daily (each shift) inspections;</li> <li>• Inspected to ensure that the water from the TSF water return pipes is clear and the level of the water in the pond is at or below the design level;</li> <li>• High level alarm systems;</li> <li>• High water levels, above the design water level monitored; and</li> <li>• Visual inspections to check for damage of HDPE liners to the Concentrator Process Water Pond.</li> </ul>	Six months

	Infrastructure	Commissioning requirements	Authorised commissioning duration
4.	Concentrate Storage & Loading Enclosed Shed Truck Wheel Wash	<p>Concentrate Storage &amp; Loading Enclosed Shed:</p> <ul style="list-style-type: none"> <li>• Loading of trucks is to occur on the loading pad;</li> <li>• Concentrate will be loaded by FEL into rotainers for transport;</li> <li>• Designed for concentrate storage &amp; loading to only be undertaken in enclosed shed;</li> <li>• Concentrate loaded out from stockpile in damp, spadable condition;</li> <li>• Visual monitoring of airborne dust levels and effectiveness of dust extraction and suppression measures to ensure they are adequately maintained and working efficiently;</li> <li>• Loading of trucks will occur inside the concentrate storage shed in the designated loading area;</li> <li>• Visual monitoring will be undertaken of the truck undercarriage to ensure all concentrate is effectively removed from the truck prior to leaving the wheel wash. Daily inspections of the wheel wash will be undertaken when in use by site staff to ensure its working correctly;</li> <li>• During concentrate haulage campaigns, daily visual inspections will be undertaken of the site haulage route to identify and confirm that the route is not contaminated by concentrate spillage; and</li> <li>• In the event any spill to ground of concentrate is identified on the haulage route within the site, haulage will be suspended and the spillage removed.</li> </ul> <p>Truck Wheel Wash:</p> <ul style="list-style-type: none"> <li>• The truck wheel wash operates as a drive-through wheel wash. As the trucks drive onto the wheel wash, sensors are activated which engage water sprayers. The sprayers spray down the underside of the truck and wheels removing any spilled concentrate; and</li> <li>• Concentrate reports to a drive-in sump which is serviced by a front-end loader. The loader removes concentrate collected in the sump and dumps the material on the heap leach pad. The wastewater reports to a sump where it is then pumped through an oily water separator. Post removal of hydrocarbons the water is then added to the process water circuit.</li> </ul>	Six months
5.	Hydrocarbon storage areas	<ul style="list-style-type: none"> <li>• Monthly inspections of storage and refuelling areas;</li> <li>• Spill kits in strategic positions with materials and</li> </ul>	Six months

	Infrastructure	Commissioning requirements	Authorised commissioning duration
		<p>equipment to contain and collect/recover hydrocarbon spills; and</p> <ul style="list-style-type: none"> <li>Personnel trained in use of spill kits.</li> </ul>	
6.	Dust controls	<ul style="list-style-type: none"> <li>Dust suppression using dedicated water carts;</li> <li>Application of speed limits;</li> <li>Ground disturbance planning to minimise open areas (progressive clearing);</li> <li>Sprinkler infrastructure operational on ROM pad stockpiles;</li> <li>Application of vehicle speed limits;</li> <li>Visual monitoring of airborne dust levels and effectiveness of dust extraction and suppression measures to ensure they are adequately maintained and working efficiently;</li> <li>Ambient Air Quality Monitoring consisting of the following: <ul style="list-style-type: none"> <li>➤ Sampling of ambient air quality will comply with AS/NZS 3580.1.1.:2016;</li> <li>➤ Nephelometers will be automated, will run 24 hours a day 7 days a week, and will be equipped with their own power source;</li> <li>➤ Nephelometers will be operated according to the manufacturer's specifications and industry best practices;</li> <li>➤ The data will be collected electronically in real time via 4G telemetry and will be available and stored on a secure portal accessed via the internet, including meteorological data;</li> <li>➤ The nephelometers have the ability to collect a sample on a 47mm filter. The filter will be collected monthly and analysed for metals (including Copper, Lead and Zinc) at a NATA accredited laboratory; and</li> <li>➤ Frequency of sample collection may be revised dependent on dust collection levels and limits of detection.</li> </ul> </li> </ul>	Six months

8. The works approval holder must monitor the groundwater during environmental commissioning for concentrations of the identified parameters in accordance with Schedule 3: Monitoring, Table 7.
9. The works approval holder must record the results of all monitoring activity required by condition 8.
10. The works approval holder must submit to the CEO an Environmental Commissioning Report within 60 calendar days of the completion date of environmental

commissioning for each item of infrastructure specified in Table 1.

- 11.** The works approval holder must ensure the Environmental Commissioning Report required by condition 10 of this works approval includes the following:
- (a) a summary of the environmental commissioning activities undertaken, including timeframes, amount of copper, lead and zinc bearing ore processed and copper, lead and zinc concentrate produced;
  - (b) data collected at Station 1 and Station 2 for the Ambient Air Quality monitoring with a summary, including the establishment of trigger levels and management actions if trigger levels are exceeded;
  - (c) ambient concentrations monitoring results recorded in accordance with condition 8 with a comparison to previous monitoring results and summary;
  - (d) a summary of the environmental performance of each item of infrastructure or equipment as constructed or installed (as applicable), which at minimum includes records detailing the:
    - (i) commissioning of the infrastructure; and
    - (ii) testing of the infrastructure;
  - (e) a review of the works approval holder's performance and compliance against the conditions of this works approval; and
  - (f) 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

- 12.** The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 14:
- (a) where the item of infrastructure is not authorised to undertake environmental commissioning, the Environmental Compliance Report as required by condition 4 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 10, and the commissioning period has successfully been completed.
- 13.** The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 14 (as applicable):
- (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 12 (as applicable) 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 13(a).

### Time limited operations requirements and emission limits

- 14.** 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 requirements set out in Table 4.

**Table 4: Infrastructure and equipment requirements during time limited operations**

	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	Conventional Flotation Processing Plant	<ul style="list-style-type: none"> <li>• Visual monitoring of airborne dust levels and effectiveness of dust extraction and suppression measures to ensure they are adequately maintained and working efficiently;</li> <li>• Daily inspections of processing areas and pipelines; and</li> <li>• Monthly inspections of storage and refuelling areas.</li> </ul>	Schedule 1: Maps, Premises map, Figure 1
2.	Three Cell In Pit TSF	<ul style="list-style-type: none"> <li>• Thickener underflow will be pumped, at 60 - 65% solids by weight, to the TSF;</li> <li>• Cycling tailings discharge to maintain wet tailings surface;</li> <li>• Location and size of the Decant Pond will be visually monitored and maintained by changing the active spigots;</li> <li>• Maximising water recovery from the TSF via the decant system;</li> <li>• Minimum freeboard for the TSF under normal operating conditions is 1.0 m, which includes an allowance for the temporary storage of the 1:100 years or 1% average exceedance probability (AEP) storm event of 72-hour duration whilst maintaining the required total freeboard;</li> <li>• Location and size of the Decant Pond will be visually monitored and maintained by changing the active spigots;</li> <li>• Vibrating Wire Piezometers maintained in the embankment to monitor trends in pore pressure which can reflect seepage through the embankment; and</li> <li>• 4 x survey prisms installed on the downstream crest of the TSF embankment are to be monitored daily for movement;</li> <li>• Tailings containment and recovery within 24 hours , if safe to do so, following any spillage incident;</li> <li>• Minimum daily (each shift) inspections of: <ul style="list-style-type: none"> <li>➢ Pipelines, valves, pumps;</li> <li>➢ Initial deposition and behaviour of tailings;</li> </ul> </li> </ul>	Schedule 1: Maps, Premises map, Figure 1

	Site infrastructure and equipment	Operational requirement	Infrastructure location
		<ul style="list-style-type: none"> <li>➤ Decant Pond formation, location and size;</li> <li>➤ Return water operations system;</li> <li>➤ Embankment condition;</li> <li>➤ Seepage detection (Vibrating Wire Piezometers); and</li> <li>➤ Seepage will report to the expanded Mon Cupri Pit; and</li> <li>• Monthly production parameters – tailings deposited (dry tonnes), slurry density, water return to plant;</li> <li>• Tailings containment and recovery following any spillage incident; and</li> <li>• Maintenance of design freeboard, deposition management.</li> </ul>	
3.	Concentrator Process Water Pond	<ul style="list-style-type: none"> <li>• Minimum daily (each shift) inspections;</li> <li>• Inspected to ensure that the water from the TSF water return pipes is clear and the level of the water in the pond is at or below the design level; and</li> <li>• High water levels, above the design water level monitored; and</li> <li>• Visual inspections to check for damage of HDPE liners to the Concentrator Process Water Pond.</li> </ul>	Schedule 1: Maps, Premises map, Figure 1
4.	Concentrate Storage & Loading Enclosed Shed Truck Wheel Wash	<p>Concentrate Storage &amp; Loading Enclosed Shed:</p> <ul style="list-style-type: none"> <li>• Loading of trucks is to occur on the loading pad;</li> <li>• Concentrate will be loaded by FEL into retainers for transport;</li> <li>• Designed for concentrate storage &amp; loading to only be undertaken in enclosed shed;</li> <li>• Concentrate loaded out from stockpile in damp, spadable condition;</li> <li>• Loading of trucks will occur inside the concentrate storage shed in the designated loading area;</li> <li>• Visual monitoring of airborne dust levels and effectiveness of dust extraction and suppression measures to ensure they are adequately maintained and working efficiently;</li> <li>• Visual monitoring will be undertaken of the truck undercarriage to ensure all</li> </ul>	Schedule 1: Maps, Premises map, Figure 1

	Site infrastructure and equipment	Operational requirement	Infrastructure location
		<p>concentrate is effectively removed from the truck prior to leaving the wheel wash. Daily inspections of the wheel wash will be undertaken when in use by site staff to ensure its working correctly;</p> <ul style="list-style-type: none"> <li>• During concentrate haulage campaigns, daily visual inspections will be undertaken of the site haulage route to identify and confirm that the route is not contaminated by concentrate spillage; and</li> <li>• In the event any spill to ground of concentrate is identified on the haulage route within the site, haulage will be suspended and the spillage removed.</li> </ul> <p>Truck Wheel Wash:</p> <ul style="list-style-type: none"> <li>• The truck wheel wash operates as a drive-through wheel wash. As the trucks drive onto the wheel wash, sensors are activated which engage water sprayers. The sprayers spray down the underside of the truck and wheels removing any spilled concentrate; and</li> <li>• Concentrate reports to a drive-in sump which is serviced by a front-end loader. The loader removes concentrate collected in the sump and dumps the material on the heap leach pad. The wastewater reports to a sump where it is then pumped through an oily water separator. Post removal of hydrocarbons the water is then added to the process water circuit.</li> </ul>	
5.	Hydrocarbon storage areas	<ul style="list-style-type: none"> <li>• Monthly inspections of storage and refuelling areas;</li> <li>• Spill kits in strategic positions with materials and equipment to contain and collect/recover hydrocarbon spills; and</li> <li>• Personnel trained in use of spill kits.</li> </ul>	Schedule 1: Maps, Premises map, Figure 1
6.	Dust controls	<ul style="list-style-type: none"> <li>• Dust suppression using dedicated water carts;</li> <li>• Application of speed limits;</li> <li>• Ground disturbance planning to minimise open areas (progressive clearing);</li> <li>• Sprinkler infrastructure on ROM pad stockpiles;</li> <li>• Application of speed limits;</li> <li>• Visual monitoring of airborne dust levels and effectiveness of dust extraction and</li> </ul>	Schedule 1: Maps, Premises map, Figure 1 Schedule 1: Maps, Premises map, Figure 5

	Site infrastructure and equipment	Operational requirement	Infrastructure location
		<p>suppression measures to ensure they are adequately maintained and working efficiently; and</p> <ul style="list-style-type: none"> <li>• Ambient Air Quality Monitoring consisting of the following: <ul style="list-style-type: none"> <li>➤ Sampling of ambient air quality will comply with AS/NZS 3580.1.1.:2016;</li> <li>➤ Nephelometers will be automated, will run 24 hours a day 7 days a week, and will be equipped with their own power source;</li> <li>➤ Nephelometers will be operated according to the manufacturer's specifications and industry best practices;</li> <li>➤ The data will be collected electronically in real time via 4G telemetry and will be available and stored on a secure portal accessed via the internet, including meteorological data;</li> <li>➤ The nephelometers have the ability to collect a sample on a 47mm filter. The filter will be collected monthly and analysed for metals (including Copper, Lead and Zinc) at a NATA accredited laboratory; and</li> <li>➤ Frequency of sample collection may be revised dependent on dust collection levels and limits of detection.</li> </ul> </li> </ul>	

### Monitoring during time limited operations

- 15.** During time limited operations, the works approval holder must record the following data monthly for the site water balance:
- (a) site rainfall;
  - (b) evaporation rate;
  - (c) tailings return water recovery volumes;
  - (d) seepage recovery volumes;
  - (e) estimate of seepage losses; and
  - (f) volumes of tailings deposited.
- 16.** The works approval holder must monitor the groundwater during time limited operations as per Schedule 3: Monitoring, Table 7.

### Compliance reporting

- 17.** 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.

- 18.** The works approval holder must ensure the report required by condition 17 includes the following:
- (a) a summary of the environmental commissioning activities undertaken, including timeframes, amount of copper, lead and zinc bearing ore processed and copper, lead and zinc concentrate produced;
  - (b) data collected at Station 1 and Station 2 for the Ambient Air Quality monitoring with a summary, including any exceedences of trigger levels and management actions taken;
  - (c) ambient concentrations monitoring results recorded in accordance with condition 8 with a comparison to previous monitoring results and summary;
  - (d) a summary of environmental performance of all infrastructure as constructed or installed (as applicable), which includes records detailing the:
    - (i) copper, lead and zinc bearing ore processed;
    - (ii) copper, lead and zinc concentrate produced;
  - (e) a review of operational performance and compliance against the conditions of the works approval and the Environmental Commissioning Report; and
  - (f) 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)

- 19.** 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.
- 20.** The works approval holder must maintain accurate and auditable books including the following records, information, reports, and data required by this works approval:
- (a) the works conducted in accordance with condition 1;
  - (b) any maintenance of infrastructure that is performed in the course of complying with condition 1;
  - (c) monitoring programmes undertaken in accordance with condition 8; and
  - (d) complaints received under condition 19.
- 21.** The books specified under condition 20 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 5 have the meanings defined.

**Table 5: Definitions**

Term	Definition
AS 1692-2006	means the Australian Standard AS 1692-2006 <i>Steel tanks for flammable and combustible liquids</i>
AS 1940:2017	means the Australian Standard AS 1940:2017 <i>The storage and handling of flammable and combustible liquids</i>
AS/NZS 3580.1.1.:2016	means the AS/NZS 3580.1.1.:2016 <i>Methods for sampling and analysis of ambient air - Guide to siting air monitoring equipment</i>
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 <i>Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples</i>
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 <i>Water Quality – Sampling – Guidance on sampling of groundwaters</i>
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 <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> 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 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

<b>Term</b>	<b>Definition</b>
	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	<i>Environmental Protection Act 1986 (WA).</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA).</i>
FEL	Front end loader
HDPE	High density polyethylene
mbgl	Metres below ground level
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.
ROM	Run of Mine
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.
waste	has the same meaning given to that term under the EP Act.
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.

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**END OF CONDITIONS**

# Schedule 1: Maps

## Premises map

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

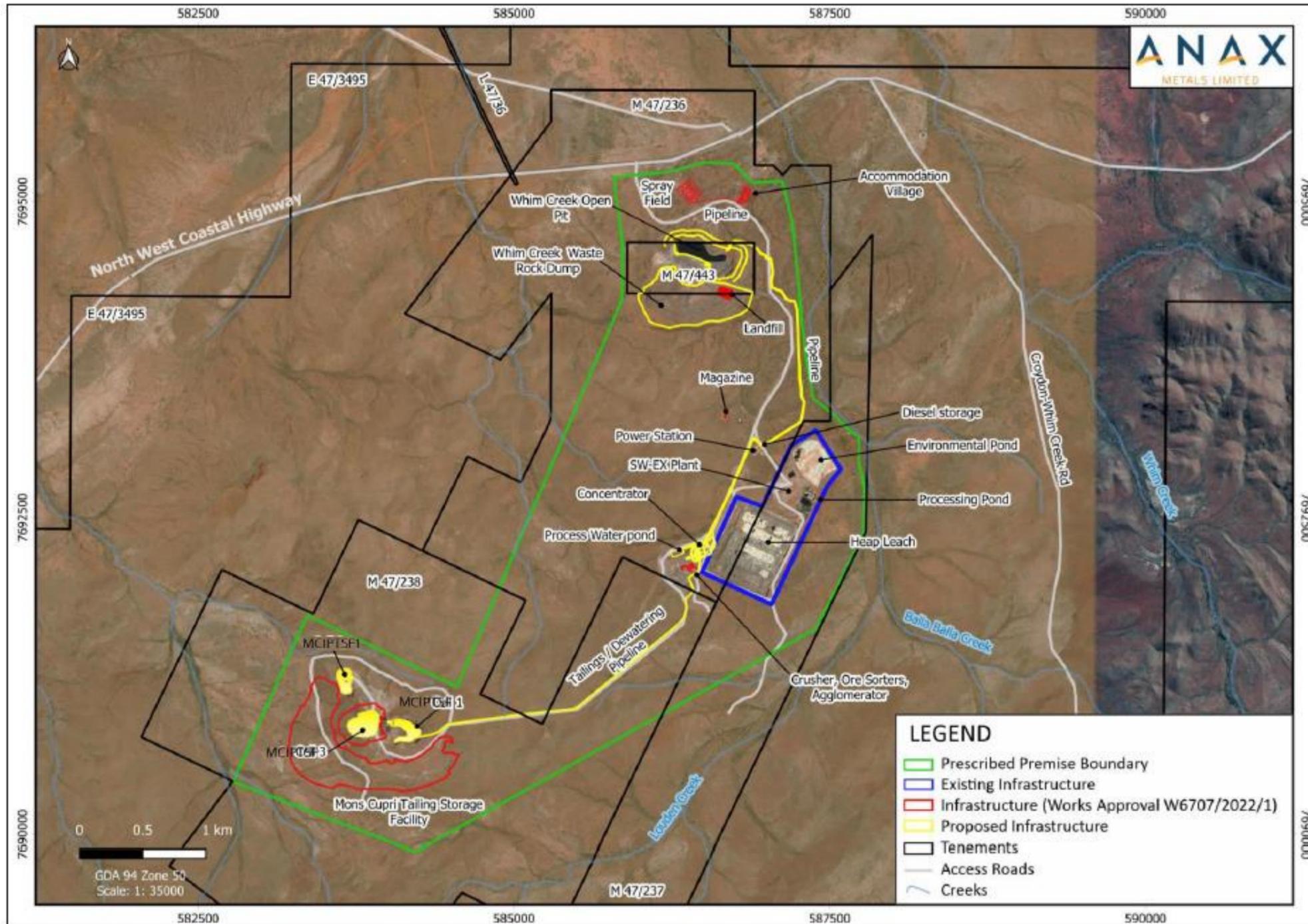


Figure 1: Map of the boundary of the prescribed premises

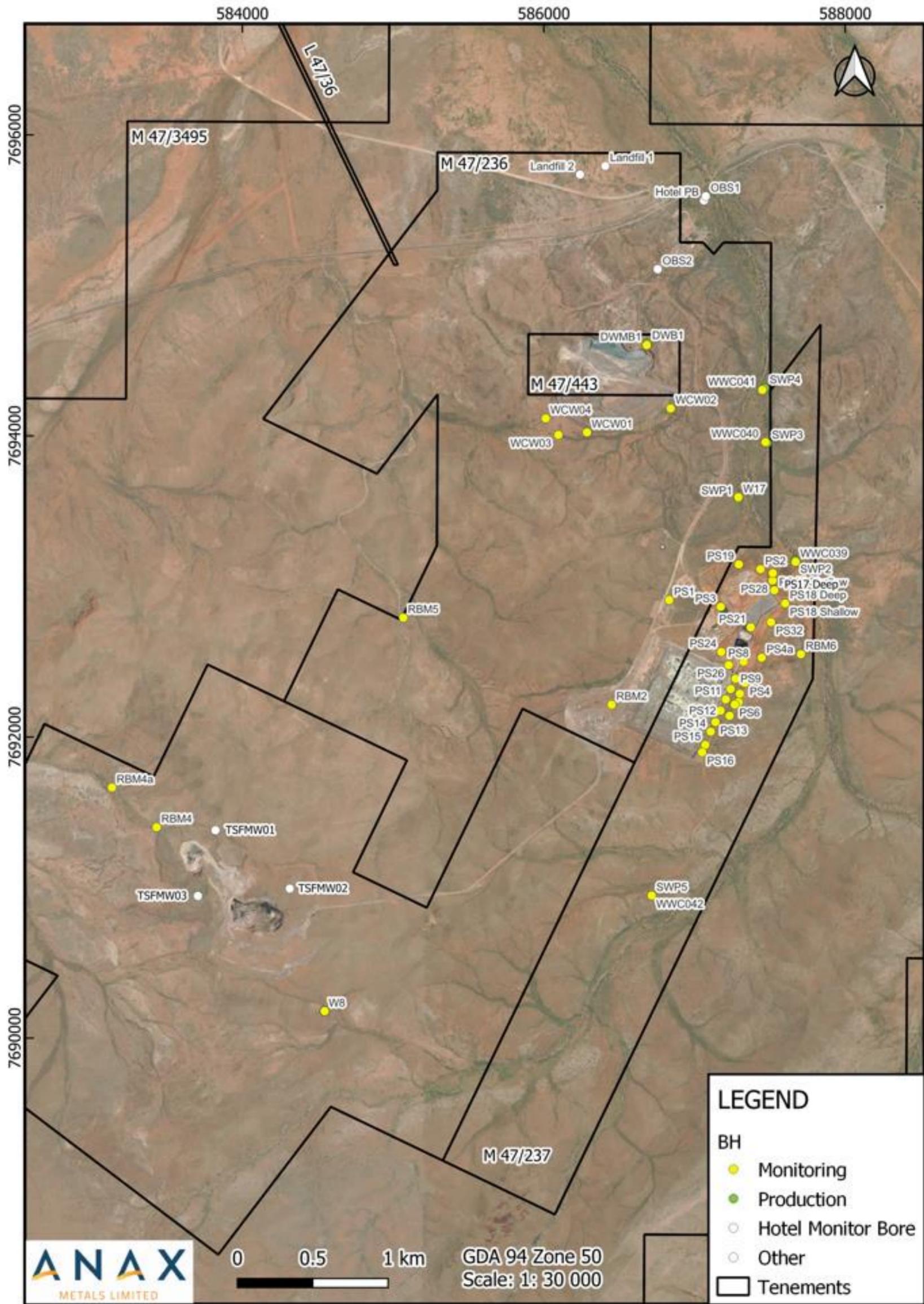


Figure 2: Project Production and Monitoring Bores



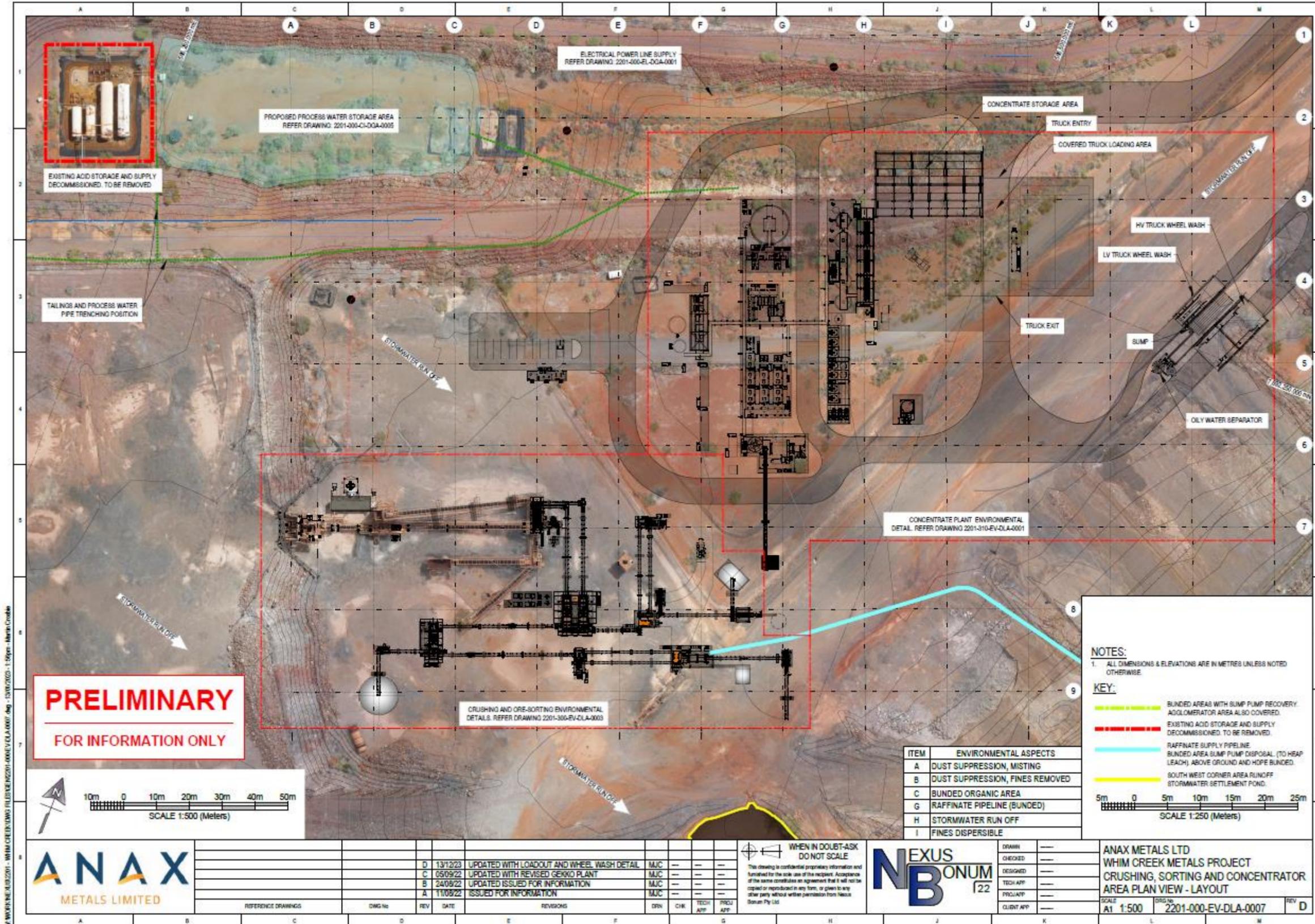


Figure 4: Crushing, Sorting, Concentrator and Shed Layout

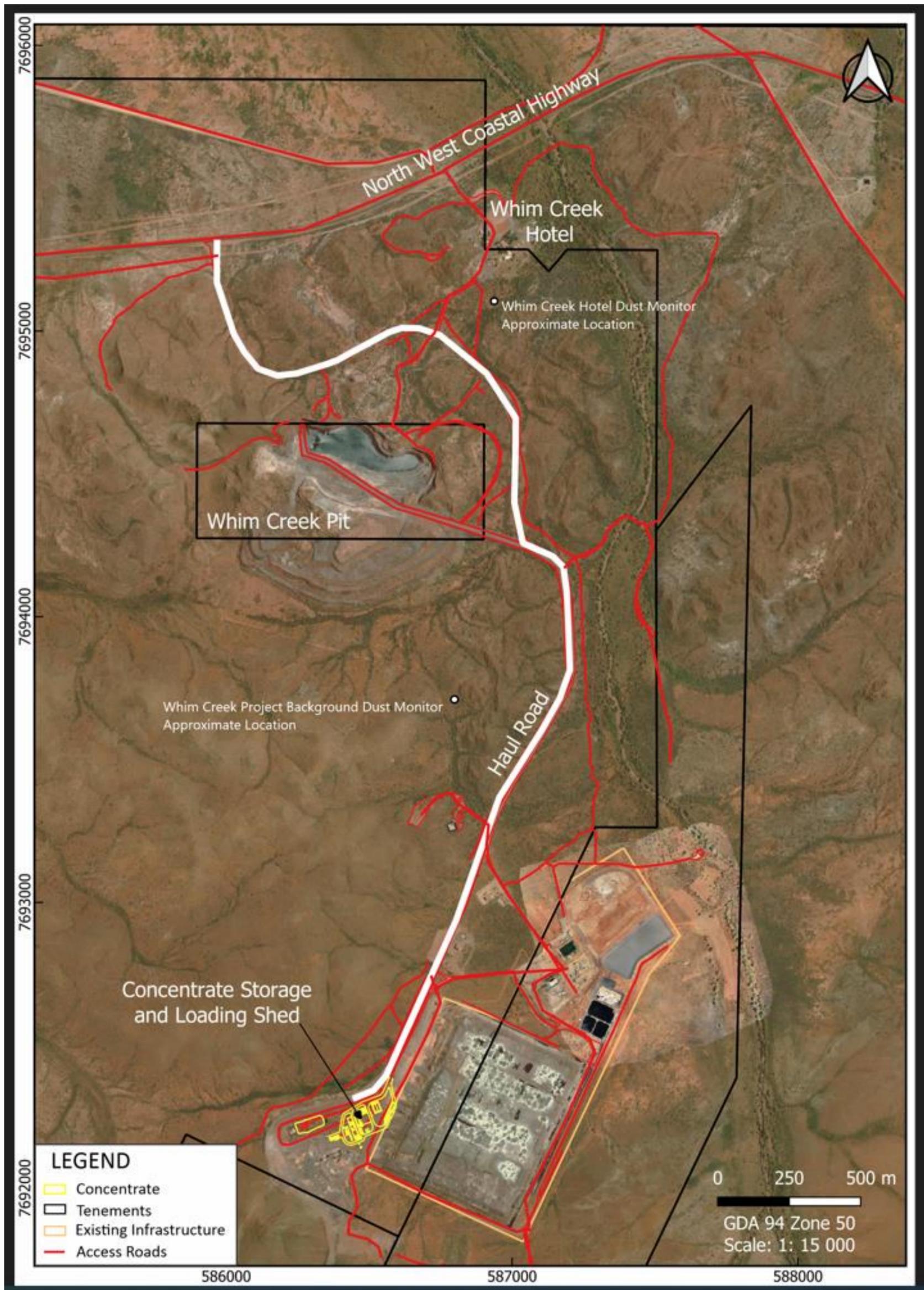


Figure 5: Locations of Ambient Air Quality Monitoring

## Schedule 2: Premises boundary

The premises boundary is defined by the coordinates in Table 6.

**Table 6: Premises boundary coordinates**

<b>Easting</b>	<b>Northing</b>
586,738	7,695,302
586,889	7,695,150
587,126	7,695,160
587,204	7,694,826
587,244	7,694,461
587,280	7,694,043
587,315	7,693,731
587,348	7,693,571
587,366	7,693,447
587,506	7,693,332
587,626	7,693,218
587,729	7,693,132
587,735	7,692,927
587,775	7,692,722
587,772	7,692,537
587,769	7,692,380
587,577	7,691,991
587,390	7,691,621
584,221	7,689,859
582,776	7,690,408
583,363	7,691,727
584,549	7,691,160
585,852	7,694,216

585,862	7,694,458
585,855	7,694,701
585,790	7,695,196
586,228	7,695,234
586,504	7,695,311
586,738	7,695,302

## Schedule 3: Monitoring

**Table 7: Monitoring of ambient concentrations during environmental commissioning and time limited operations**

Parameter	Monitoring location	Unit	Frequency	Averaging period	Method
SWL	TFSMW01	mbgl	Comprehensive pre-disturbance baseline groundwater levels and comprehensive chemical analysis prior to dewatering commencement  Monthly during commissioning  Quarterly during Time Limited Operations	Spot sample	AS/NZS 5667.1 AS/NZS 5667.11
pH	TFSMW02	pH units			
EC	TFSMW03	mS/cm			
TDS		mg/L			
DO		mg/L			
ORP		mg/L			
Sodium (Na)		mg/L			
Potassium (K)		mg/L			
Calcium (Ca)		mg/L			
Magnesium (Mg)		mg/L			
Chloride (Cl)		mg/L			
Nitrate (NO <sub>3</sub> )		mg/L			
Sulfate (SO <sub>4</sub> )		mg/L			
Hydroxide Alkalinity (as CaCO <sub>3</sub> )		mg/L			
Bicarbonate Alkalinity (as CaCO <sub>3</sub> )		mg/L			
Carbonate Alkalinity (as CaCO <sub>3</sub> )		mg/L			
Total Acidity		mg/L			
Total Alkalinity (as CaCO <sub>3</sub> )		mg/L			
Aluminium (Al)		mg/L			
Antimony (Sb)		mg/L			

Parameter	Monitoring location	Unit	Frequency	Averaging period	Method
Arsenic (As)		mg/L			
Barium (Ba)		mg/L			
Beryllium (Be)		mg/L			
Boron (B)		mg/L			
Cadmium (Cd)		mg/L			
Cobalt (Co)		mg/L			
Copper (Cu)		mg/L			
Iron (Fe)		mg/L			
Lead (Pb)		mg/L			
Manganese (Mn)		mg/L			
Mercury (Hg)		mg/L			
Molybdenum (Mo)		mg/L			
Nickel (Ni)		mg/L			
Selenium (Se)		mg/L			
Silica (Si)					
Silver (Ag)		mg/L			
Tin (Sn)		mg/L			
Zinc (Zn)		mg/L			
Vanadium (V)		mg/L			