Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6671/2022/1
Works approval holder	Nifty Copper Pty Ltd
ACN	074 145 636
Registered business address	Unit 1, 437 Roberts Road SUBIACO WA 6008
DWER file number	DER2022/000098
Duration	05/08/2022 to 04/08/2025
Date of issue	04/08/2022
Premises details	Nifty Copper Project M271SA TELFER WA 6762

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	9,600,000 tonnes of ore per year
Category 7: Vat or in situ leaching of metal	30,000 tonnes of copper metal per year

This works approval is granted to the works approval holder, subject to the attached conditions, on 04 August 2022, by:

Sonya Poor
Digitally signed by Sonya Poor
Date: 2022.08.04 09:54:02 +08'00'

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

Works approval history

Date	Reference number	Summary of changes
04/08/2022	W6671/2022/1	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; and

(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.	Pumps and pipelines	• Pumps are constructed of corrosive resistant material; • To be installed in v-drains or bunded to ensure that any uncontrolled discharges from pipe or fitting failure can be contained and drain to the ILS, PLS or Environmental Ponds; • Flow sensors to be fitted to allow leaks to be detected and trigger the shut-down of pumps; and • Majority of the pumps are automated and controlled via PLC.	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Environmental Compliance Report required by condition 4
2.	New Mobile Crushing System consisting of: • Existing refurbished Jaw Crusher on mobile platform; • Cone crushers; • Double deck screen plant; • Conveyors; • Agglomerator; and	• Jaw Crusher to be refurbished; and • Water sprays will be installed / utilised at the crushing and screening stations, tipping areas, conveyor transfer points and stockpiles.	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
	• Stacker. Second Crushing System consisting of: • Cone crusher; • Double deck screening plant; • Conveyors; • Agglomerator; and • Stacker.			

2. The works approval holder must:

(a) construct critical containment infrastructure;

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

(c) at the corresponding infrastructure location; and

(d) within the corresponding timeframe,

as set out in Table 2.

Table 2: Critical containment infrastructure design and construction requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
1.	Heap leach pads	• Two heap leach facilities, HLF south and HLF north; • HLF south will be a newly constructed heap leach; • HLF north is the existing heap leach; • Any historical contamination requiring remediation at HLF north must be removed or remediated in-situ; • Once remediated HLF north must be reconstructed to the same engineering standards applied to the new HLF south and become HLF north; • Compacted soil layer beneath GCL topped with 1.5 mm HDPE liner to maintain a minimum permeability of 3.5×10^{-15} m/s; • GCL will be installed on the new constructed heap leach pads prior to the installation of the HDPE liner.	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Critical Containment Infrastructure Report required by condition 6

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
		The GCL liner must be installed by a suitably qualified and experienced contractor. QA/QC must be conducted in accordance with the Engineering Standards developed by a suitable third party underpinned by ATSM; • A 500-600 mm cushion/protection layer must be placed on the liner to preserve the liners integrity prior to any stacking activity. The cushion layer shall consist of a fine material to prevent puncturing of the liner. The cushion layer must be installed on the heap leach HDPE liner once the QA/QC has confirmed the liner has been installed in accordance the technical specification requirements. The purpose of the sand cushion layer is to provide permanent ballast to protection the heap leach liner from wind uplift, and protect the integrity of the liner from UV degradation and during placement of waste rock. The sand cushion layer shall be constructed from suitably graded sand material, selected so as to not cause damage to the HDPE liner; • Heap leach pumping system must be connected to alarms to alert the operators if the system falls out of the predetermined parameters • Separate clean and potentially contaminated stormwater; • Use of bunding to divert stormwater into Environmental Ponds; • All potentially contaminated stormwater must be directed to Environmental Ponds; • "W" Drain design installed to allow for additional wall height to allow the solution to back flow into the drains in the unlikely event of the Environmental ponds reaching capacity. Additional catchment to be 10,000 m^3; • Dripper to be installed rather than wobbler or other spray applicator to be used on the heap leach pads; and • Dripper line to be specialised to		

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
		operate with low pH solution and method eliminates risk of overspray and fumes.		
2.	ILS Transfer Ponds ILS1 ILS2 ILS3 ILS – storage pond	• Storage capacity: ➢ ILS1 27,300 m^3 (existing); ➢ ILS2 7,000 m^3 (existing); ➢ ILS3 2,500 m^3 (existing); and ➢ ILS – storage pond 16,111 m^3 (new). • Minimum design freeboard of 0.5 m; and • Each pond must be double lined with 1.5 mm HDPE liner over a compacted soil layer to maintain a minimum permeability of 3.5 x 10^{-15} m/s.	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Critical Containment Infrastructure Report required by condition 6
3.	PLS Transfer Ponds PLS1 PLS2 PLS – primary settlement PLS – storage pond	• Storage capacity: ➢ PLS1 12,000 m^3 (existing); ➢ PLS2 31,500 m^3 (existing); ➢ PLS – primary settlement 4,762 m^3 (new); and ➢ PLS – storage pond 12,753 m^3 (new); and • Minimum design freeboard of 0.5 m; and • Each pond must be double lined with 1.5 mm HDPE liner over a compacted soil layer to maintain a minimum permeability of 3.5 x 10^{-15} m/s.	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Critical Containment Infrastructure Report required by condition 6
4.	Environmental Ponds Enviro1 Enviro2	• Enviro1 capacity 45,000 m^3; • Enviro2 capacity 50,000 m^3; • Minimum design freeboard of 0.5 m; • Each pond must be double lined with 1.5 mm HDPE liner over a compacted soil layer to maintain a minimum permeability of 3.5 x 10^{-15} m/s; • Solution reporting to these ponds must be reclaimed to the heap leach pads; and • Ponds must be maintained to remain empty.	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Critical Containment Infrastructure Report required by condition 6

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
5.	Raffinate Pond	• Pond capacity 14,400 m^3; • Minimum design freeboard of 0.5 m; and • Pond must be double lined with 2.0 mm HDPE liner over a compacted soil layer to maintain a minimum permeability of 3.5 x 10^{-15} m/s and allow for leak detection.	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Critical Containment Infrastructure Report required by condition 6
6.	Stormwater Ponds	• Stormwater Pond 1 capacity of 90,000 m^3; • Stormwater Pond 2 capacity of 90,000 m^3; • Compacted clay lined; and • Ponds must be maintained to remain empty.	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Critical Containment Infrastructure Report required by condition 6
7.	Sulphuric Acid Tanks	• 3 x 60m^3 modular tanks; • Tanks must be designed to meet the requirements of the AS 3780-2008; • Layout must be designed to ensure all product is delivered and there is no waste or residue product outside of the containment bund; • Sulphuric acid tanks and unloading facilities must be localized to the addition point, reducing the need for extend piping; • In the event of acid required to be piped extended distances, the piping design must entail the transport pipe to be fully enclosed within HDPE pipe to contain any spills; • HDPE outer piping must have drain points to allow for periodical checks to be carried out for leaks; • Acid tank priming tank is gravity fed via delivery hose from acid delivery truck.; and • Priming tank must be designed to hold the entire product remaining in the pipework on the discharge side of the pump. On completion of the transfer, the pump shall be stopped and all liquid must drain freely back to the priming tank, including any residue from the road tanker hose.	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Critical Containment Infrastructure Report required by condition 6

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
8.	SX Plant	• Infrastructure must be designed with containment bunds or sumps to retain all leaks and spills; • Bunds must be designed to retain process solutions; • Sumps and bunds must be lined with HDPE or epoxy to prevent degradation to the concrete structures from the low pH solutions; • Sumps must be fitted with level sensors and linked to process control system to automatically pump the solution; • All containment bunds checked against Australian design standards to retain all tank volumes and required contingencies; • All existing containment bunds and sumps will be inspected by a suitable engineer to identify any structural damage from geotechnical instability and/or previous chemical erosion. All areas identified will refurbished to meet AS 3600:2018 and AS 3735-2001; • Sumps collect any solution within the bunds and will return the solution into the process stream with sump pumps controlled through the plant control system and set to automatically activate when trigger levels are met; • All sumps and bunds will be Hydrotested to 100% capacity with clean potable water prior to the application of surface protectant. Post application of the surface protectant all areas will undergo further hydrotesting at 100% capacity to ensure surface protectant has provided adequate sealing; and • The surface protectant, or coating, will be chemically and mechanically non-reactive to hydrocarbons in a low pH solution.	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Critical Containment Infrastructure Report required by condition 6
9.	EW Plant	• Infrastructure must be designed with containment bunds or sumps to retain all leaks and spills;	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Critical Containment

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
		• Bunds must be designed to retain process solutions; • Sumps and bunds must be lined with HDPE or epoxy to prevent degradation to the concrete structures from the low pH solutions; • Sumps must be fitted with level sensors and linked to process control system to automatically pump the solution; • EW in new location with new purpose-built sumps and containment engineered to allow for electrolyte catchment; • All containment bunds checked against Australian design standards to retain all tank volumes and required contingencies; • All containment bunds and sumps will be inspected by a suitable engineer to meet AS 3600:2018 and AS 3735-2001; • Sumps collect any solution within the bunds and will return the solution into the process stream with sump pumps controlled through the plant control system and set to automatically activate when trigger levels are met; • All sumps and bunds will be Hydrotested to 100% capacity with clean potable water prior to the application of surface protectant. Post application of the surface protectant all areas will undergo further hydrotesting at 100% capacity to ensure surface protectant has provided adequate sealing; and • The surface protectant, or coating, will be chemically and mechanically non-reactive to hydrocarbons in a low pH solution.		Infrastructure Report required by condition 6

3. 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 location(s)	Timeframe
Groundwater monitoring well(s) MB18 MB19 MB20 MB21 MB22 MB23 MB24 MB25	<u>Well design and construction:</u> Designed and constructed in accordance with *ASTM D5092/D5092M-16: Standard practice for design and installation groundwater monitoring bores.* Wells must be constructed with a screened interval from the water table to a depth of 2 metres below the water table and 1 metre above the water table.	As depicted in Schedule 1: Maps, Figure 2	Must be constructed, developed (purged), and determined to be operational by no later than 180 calendar days prior to commencement of environmental commissioning activities under condition 9
	<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 AS 1726:2017. Any observations of staining / odours or other indications of contamination must be included in the bore log.		
	<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 casing position to be used as the reference point for water-level measurements, and the elevations of the ground surface protective installations.		
	<u>Well development:</u> All installed monitoring wells must be developed after drilling to remove fine sand, silt, clay and any drilling mud residues from around the well screen to ensure the hydraulic functioning of the well. A detailed record should be kept of well development activities and included in the well construction log.		
	<u>Installation survey:</u> The vertical (top of casing) and horizontal position of each monitoring well must be surveyed and subsequently mapped by a suitable qualified surveyor.		
	<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.		

Compliance reporting

4. The works approval holder must within 7 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.

6. The works approval holder must within 7 calendar days of the critical containment infrastructure identified by condition 2 being constructed:

(a) undertake an audit of their compliance with the requirements of condition 2; and

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

7. The Critical Containment Infrastructure Report required by 6 must include as a minimum the following:

(a) certification by a suitably qualified professional engineer or builder that each item of critical containment infrastructure or component thereof, as specified in condition 2, has been built and installed in accordance with the requirements specified in condition 2;

(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 2;

(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; and

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

8. The monitoring of the baseline ambient environmental conditions required under condition 7(e) must be undertaken in accordance with Schedule 3: Ambient groundwater monitoring, Table 8.

Environmental commissioning phase

Environmental commissioning requirements

9. The works approval holder may only commence environmental commissioning of an item of infrastructure identified in condition 10:

(a) once the Environmental Compliance Report has been submitted for that item of infrastructure in accordance with condition 4 of this works approval;

(b) where the CEO has notified the works approval holder that the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 6 meets the requirements of that condition; or

(c) where at least 45 business days have passed after the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 6 has been submitted to the CEO.

10. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 4 may be carried out:

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

(b) for the corresponding authorised commissioning duration.

Table 4: Environmental commissioning requirements

	Infrastructure	**Commissioning requirements**	**Authorised commissioning duration**
1.	Pumps and pipelines	• Running water through all pipelines to their designed flow and/or maximum pumping capacity; • Pipeline integrity will be tested for leaks and defects; and • Residual water will be stored in environmental ponds and then integrated into heap leach process.	Nine months
2.	Crushing Facilities	• Dry and wet commissioning to ensure equipment meets manufacturers' specifications; • Water sprays to be utilised at the crushing and screening stations, tipping areas, conveyor transfer points and stockpiles; • If excessive visible dust emissions are noted then an assessment of the source must be made and additional water will be applied to key source areas, or alternative treatments applied; and • The potential for high-risk weather conditions for dust emissions (i.e. windy conditions) to be monitored and extra water applied in preparation.	
3.	HLF South	• All ponds, collection drains ("W" Drain design) and solution transfer infrastructure must be in place and commissioned prior to stacking of copper bearing ore onto heap leach pads; • Commissioned by sequential stacking of copper bearing ore; • The heap leach delivery pipes and containment corridor must be visually inspected daily for any visible leakage or damage; • The heap leach liners and containment pads must be visually inspected daily for any visible seepage	
4.	HLF North		

	Infrastructure	Commissioning requirements	Authorised commissioning duration
		or damage; • Sedimentation basins and sediment traps must be cleaned and maintained as required to maintain capacity; and • Must be inspected for erosion following significant rainfall events.	
5.	ILS, PLS, Environmental Ponds, Stormwater Ponds and Raffinate Pond	• All transfer ponds must be filled to test for design flow and maximum capacity; • Liners must be tested for leaks and defects, using water from the borefield; • Residual water must be stored in environmental ponds and then integrated into heap leach process; • Sufficient freeboard for ponds must be maintained to prevent overtopping, using a pump with automatic level correction; • Environmental Ponds must be cleaned and maintained as required to maintain capacity; • Stormwater Ponds must be maintained to remain empty; and • Ponds, pumps and valves must be inspected regularly for leaks through the embankments.	
6.	SX Plant	• Dry commissioning – comprising test operation of 'empty' but energised equipment and facilities (electrical motor bump testing, compressed air energized and leak tested, mechanical movement of refurbished or new equipment i.e. Cathode stripping machine); • Stage 1 wet commissioning – water testing will involve the stepwise testing and integration of process areas by pumping water through various process loops, checking plant control and operation; • Stage 2 wet commissioning – addition of first fill materials to all process streams; and • Stage 3 ore introduction – addition of copper bearing ore.	
7.	EW Plant		
8.	Process Control System	• Instrument displays and drive feedback must be checked to ensure that they displayed correctly on SCADA for the control room operator to operate the plant; and • Plant logic program must be tested to ensure it meets the correct specifications.	

Monitoring during environmental commissioning

11. The works approval holder must monitor the groundwater during environmental commissioning for concentrations of the identified parameters in accordance with Schedule 3: Ambient groundwater monitoring, Table 8.

12. The works approval holder must record the results of all monitoring activity required by condition 11.

13. 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 and Table 2.

14. The works approval holder must ensure the Environmental Commissioning Report required by condition 13 of this works approval includes the following:

(a) a summary of the environmental commissioning activities undertaken, including timeframes, amount of copper bearing ore processed and copper plate produced;

(b) ambient concentrations monitoring results recorded in accordance with condition 11;

(c) 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;

(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

15. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 17:

(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 9, the Environmental Commissioning Report for that item of infrastructure as required by condition 13 has been submitted by the works approval holder.

16. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 17 (as applicable):

(a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 15 (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 16 (a).

Time limited operations requirements

17. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 5 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirements set out in Table 5.

Table 5: Infrastructure and equipment requirements during time limited operations

	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	Pumps and pipelines	• Heap leach pipelines must be inspected at the start of each shift; • Heap leach pipelines must be installed in v-drains or bunded as appropriate to ensure that any uncontrolled discharges from pipe or fitting failure can be contained and drain to the ILS, PLS or environmental ponds; • Flow sensors must be fitted to the heap leach pipelines to allow leaks to be detected and trigger the shut-down of pumps; and • The heap leach delivery pipes and containment corridor must be visually inspected daily for any visible leakage or damage.	Schedule 1: Maps, Premises map, Figure 1
2.	Crushing Facilities	• Water sprays must be utilised at the crushing and screening stations, tipping areas, conveyor transfer points and stockpiles. • If excessive visible dust emissions are noted then an assessment of the source must be made and additional water must be applied to key source areas, or alternative treatments applied; and • The potential for high-risk weather conditions for dust emissions (i.e. windy conditions) must be monitored and extra water applied in preparation.	Schedule 1: Maps, Premises map, Figure 1
3.	HLF South	• The heap leach delivery pipes and containment corridor must be visually inspected daily for any visible leakage or damage; • The heap leach liners and containment pads must be visually inspected daily for any visible seepage or damage; • Sedimentation basins and sediment traps	Schedule 1: Maps, Premises map, Figure 1
4.	HLF North		

	Site infrastructure and equipment	Operational requirement	Infrastructure location
		must be cleaned and maintained as required to maintain capacity; and • Must be inspected for erosion following significant rainfall events.	
5.	ILS, PLS, Environmental Ponds, Stormwater Ponds and Raffinate Pond	• Sufficient freeboard for ponds must be maintained to prevent overtopping, using pumps with automatic level correction; • Environmental Ponds must be cleaned and maintained as required to maintain capacity; • Stormwater Ponds must be maintained to remain empty; and • Ponds, pumps and valves must be inspected regularly for leaks through the embankments.	Schedule 1: Maps, Premises map, Figure 1
6.	SX Plant	• The SX-EW Plant delivery pipes and containment corridor must be visually inspected daily for any visible leakage or damage; and • The SX-EW Plant bunding and containment must be visually inspected daily for any visible seepage or damage.	Schedule 1: Maps, Premises map, Figure 1
7.	EW Plant		Schedule 1: Maps, Premises map, Figure 1

Monitoring during time limited operations

18. The works approval holder must monitor the groundwater during time limited operations as per Schedule 3: Ambient groundwater monitoring, Table 8.

Compliance reporting

19. 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.

20. The works approval holder must ensure the report required by condition 19 includes the following:

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

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

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

(i) copper bearing ore processed; and

(ii) copper plate produced;

(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)

21. 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.

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

(a) the works conducted in accordance with conditions 1 and 2;

(b) any maintenance of infrastructure that is performed in the course of complying with conditions 1 and 2;

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

(d) complaints received under condition 21.

23. The books specified under condition 22 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 6 have the meanings defined.

Table 6: Definitions

Term	Definition
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples.*
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters.*
ATSM	means American Society for Testing and Materials
ASTM D5092/D5092M-16	means *Standard Practice for Design and Installation of Groundwater Monitoring Wells*
AS 1726:2017	means *Australian Standard 1726:2017 Geotechnical Site Investigations*
AS 3600:2018	means *Australian Standard AS 3600:2018 Concrete Structures*
AS 3735-2001	means *Australian Standard AS 3735-2001 Concrete structures for retaining liquids*
AS 3780-2008	*Australian Standard 3780-2008 The storage and handling of corrosive substances*
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
critical containment infrastructure	means the items of infrastructure listed in condition 2, Table 2.
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.

Term	Definition
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 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.
EW Plant	Electrowinning Plant
EP Act	*Environmental Protection Act 1986* (WA).
EP Regulations	*Environmental Protection Regulations 1987* (WA).
GCL	Geosynthetic Clay Liner
HDPE	High density polyethylene
HLF	Heap leach facility
ILS	Intermediate Leach Solution
mbgl	Metres below ground level
PLC	Programmable Logic Controller
PLS	Pregnant Leach Solution
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.
QA/QC	Quality assurance / Quality Controls
SX Plant	Solvent Extraction Plant
SWL	Standing water level
TDS	Total dissolved solids

Term	Definition
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.

END OF CONDITIONS

Schedule 1: Maps

Premises map

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

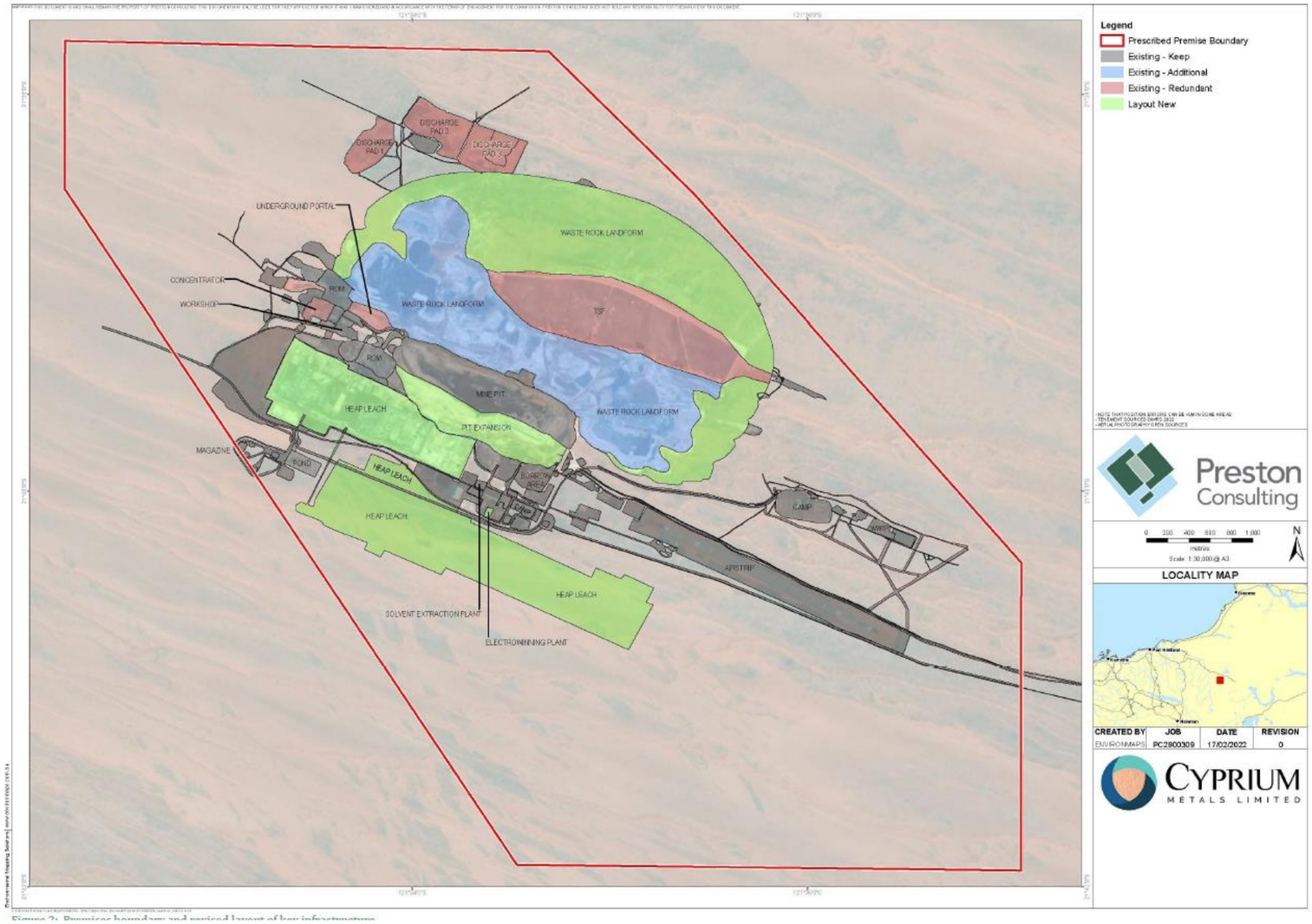

Figure 1: Map of the boundary of the prescribed premises

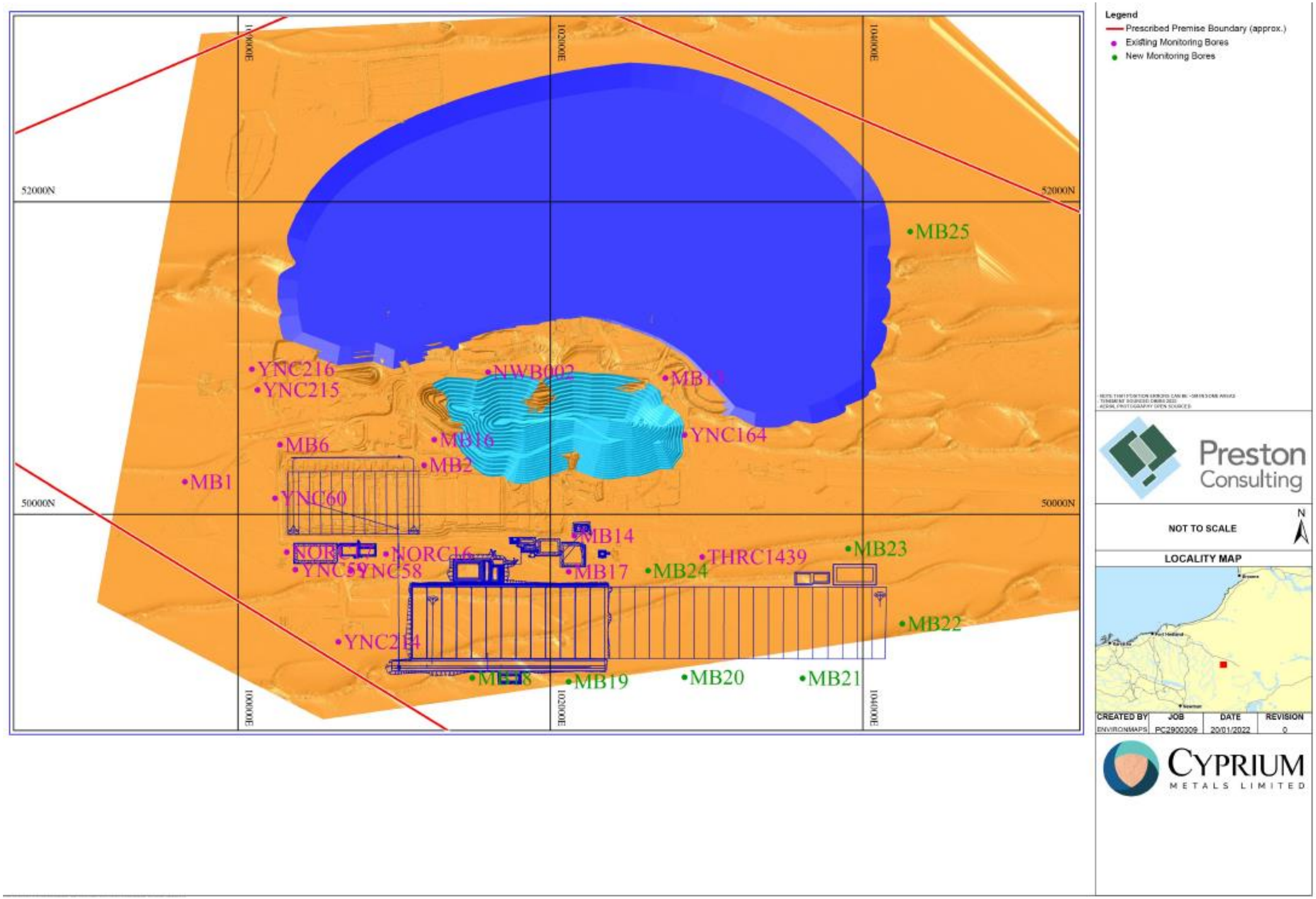

Figure 2: Groundwater monitoring points of prescribed premises

Schedule 2: Premises boundary

The premises boundary is defined by the coordinates in Table 7.

Table 7: Premises boundary coordinates

Easting	Northing
348625.24489200000	7607541.02396000000
352848.69619700000	7607482.76946000000
354138.48725200000	7606156.56934000000
357014.80322700000	7602762.33445000000
357039.37934500000	7599892.39006000000
352640.93698100000	7599906.49857000000
348636.39516700000	7606161.12048000000
348625.24489200000	7607541.02396000000

Schedule 3: Ambient groundwater monitoring

Table 8: Monitoring of ambient concentrations during environmental commissioning and time limited operations

Parameter	Monitoring location	Unit	Frequency	Averaging period	Method
SWL	Background bores: THRC1439 MB1 Near Mine: MB2 MB13 MB14 MB16 MB17 NWB002 YNC164 Heap leach facility: YNC8d YNC58s YNC58d YNC59s YNC59d YNC60d NORC16 NORC17 YNC214s YNC214d MB6 MB7 Heap leach facility – Alluvium Aquifer: YNC58s YNC59s YNC59d YNC214s	mbgl	Monthly baseline data collected from 180 days up to commissioning commencement Monthly during commissioning Quarterly during time limited operations	Spot sample	AS/NZS 5667.1 AS/NZS 5667.11
pH		pH units			
TDS		mg/L			
Aluminium		mg/L			
Sulphate		mg/L			
Lead		mg/L			
Copper		mg/L			
Iron		mg/L			
Manganese		mg/L			
Molybdenum		mg/L			
Zinc		mg/L			
Arsenic		mg/L			
Cadmium		mg/L			
Nickel		mg/L			
Selenium		mg/L			

Parameter	Monitoring location	Unit	Frequency	Averaging period	Method
	MB6 <u>Heap leach facility – Weathered Shale: Aquifer</u> YNC58d YNC60d NORC16 NORC17 <u>New heap leach facility bores:</u> MB18 MB19 MB20 MB21 MB22 MB23 MB24 MB25				