



Works Approval

Works approval number	W5180/2012/1
Works approval holder	Poseidon Nickel Limited
ACN	060 525 206
Registered business address	Level 1, 3 Ord Street WEST PERTH WA 6005
DWER file number	2012/006885-1
Duration	2 July 2012 to 1 July 2027
Date of issue	29 June 2012
Date of Amendment	6 June 2024
Premises details	Windarra Gold Tailings Project M261SA, M38/1244 and M38/1245 LAVERTON WA 6440 as depicted in Schedule 1.

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	1,500,000 tonnes per year.
Category 6: Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore	400,000 tonnes per year.

This amended works is granted to the works approval holder, subject to the attached conditions, on 6 June 2024 by:

MANAGER, RESOURCE INDUSTRIES
REGULATORY SERVICES

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Works approval history

Date	Reference number	Summary of changes
L8173/2007/1	19/10/2007	Licence – Category 6
L8173/2007/1	24/11/2011	Licence – amendment to extend expiry period by 12 months
W5118/2012/1	23/03/2012	Works approval – Category 5 and 85
W5180/2012/1	29/06/2012	Original works approval - Category 5 and 6
L8173/2007/2	17/10/2013	Licence – Category 6 – new licence replacing expired licence L8173/2007/1
W5180/2012/1	16/12/2015	Amendment to facilitate installation of tailings booster pumps and amendment of risk assessment
W5180/2012/1	04/05/2020	Amendment initiated by occupier to extend expiry date by 3 years.
W5180/2012/1	14/07/2022	Amendment initiated by occupier to allow the construction of the Lancefield tailing storage trench, addition of Lancefield (third-party) tailings to the processing stream, to add a new option for dredging of the old tailings / Lancefield tailings within the Mount Windarra TSFs and to add time limited operation phase. Expiry also extended by another 12 months.
W5180/2012/1	6/06/2024	Amendment initiated by occupier to extend expiry date by 3 years.

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

1. The works approval holder must:
 - (a) construct the infrastructure;
 - (b) in accordance with the corresponding design and construction requirements; and
 - (c) at the corresponding infrastructure location as set out in Table 1.

Table 1: Design and construction requirements

Item	Infrastructure	Design and construction requirements	Infrastructure location
Category 5 – beneficiation of metallic or non-metallic ore infrastructure			
1.	Mount Windarra Gold Tailings Processing Plant	<ul style="list-style-type: none"> ▪ Design and construction requirements as stipulated within the document 'MBS Environmental (2012) <i>Windarra Nickel Project – Works Approval Application for a Gold Processing Plant, In-Pit Tailings Storage Facility and Development of Cerberus Underground Mine</i>, Western Australia. Including all figures and appendices. ▪ The design of the Mount Windarra gold tailings processing plant to be in accordance with Figures 3 and 4 in Schedule 1. 	Figure 2, Schedule 1
2.	Mount Windarra TSFs hydro-mining infrastructure.	<ul style="list-style-type: none"> ▪ Design and construction requirements as stipulated within the document 'MBS Environmental (2012) <i>Windarra Nickel Project – Works Approval Application for a Gold Processing Plant, In-Pit Tailings Storage Facility and Development of Cerberus Underground Mine</i>, Western Australia'. Including all figures and appendices. ▪ Location and layout of hydro-mining infrastructure to be in accordance with Figure 3 in Schedule 1. 	Figure 2, Schedule 1
3.	Mount Windarra tailings and return	<ul style="list-style-type: none"> ▪ Design and construction requirements to be as stipulated within the document 	Figure 5, Schedule 1

Item	Infrastructure	Design and construction requirements	Infrastructure location
	water pipeline and South Windarra in-pit TSF discharge infrastructure.	<p>'MBS Environmental (2012) <i>Windarra Nickel Project – Works Approval Application for a Gold Processing Plant, In-Pit Tailings Storage Facility and Development of Cerberus Underground Mine, Western Australia</i>'. Including all figures and appendices.</p> <ul style="list-style-type: none"> ▪ Design and location of the tailings/return water pipelines and associated infrastructure to be in accordance with Figures 5 and 6, Schedule 1. 	
4.	Lancefield tailings trench and associated hydro-mining infrastructure	<ul style="list-style-type: none"> ▪ The trench to be constructed within a raised 2-meter-high pad made of compacted clayey mine waste material. ▪ The trench to be lined with a HDPE liner. ▪ The design of the trench to be in accordance with Figure 7 in Schedule 1. ▪ Trench to be sized to contain a 1% AEP 24-hour rain fall event. ▪ Flow meters to be installed at both ends of the tailings and return water pipelines from the trench to the processing plant for leak detection. ▪ Isolation valves to be installed at appropriate intervals along the tailings and return water pipelines. ▪ Tailings and return water pipelines from the trench to the processing plant to be constructed within secondary containment adequate to contain the volume of spill for 30 minutes of pumping at the average pumping rate. ▪ Hydraulic mining screening and pump station to be constructed on a bunded concrete hardstand. 	Figure 3, Schedule 1
5.	Lancefield tailings unloading area at the Mount Windarra TSF (north) and associated dredging infrastructure	<ul style="list-style-type: none"> ▪ Discharge platform to be graded towards the TSF to ensure spills and runoff are directed into the TSF ▪ Unloading area to be designed and located in accordance with Figure 2 in Schedule 1. ▪ Installation of amphibious dredge as per manufacturers specifications ▪ Tailings and return water pipelines from dredge to the processing plant to be constructed within secondary containment adequate to contain the volume of spill for 30 minutes of pumping 	Figure 2, Schedule 1

Item	Infrastructure	Design and construction requirements	Infrastructure location
		<p>at the average pumping rate.</p> <ul style="list-style-type: none"> ▪ Flow meters to be installed at both ends of the tailings and return water pipelines from the dredge to the processing plant for leak detection. ▪ Isolation valves to be installed at appropriate intervals along the tailings and return water pipelines. 	
Category 6 – Mine dewatering infrastructure			
6.	Cerberus Underground Mine dewatering pipelines, pumps and underground dewatering pond	<ul style="list-style-type: none"> ▪ Design and construction requirements to be as stipulated within the documents <ul style="list-style-type: none"> – ‘MBS Environmental (2012) <i>Windarra Nickel Project – Works Approval Application for a Gold Processing Plant, In-Pit Tailings Storage Facility and Development of Cerberus Underground Mine</i>, Western Australia’. Including all figures and appendices; and – The written correspondence from Karen Ganza to the former Department of Environment and Conservation entitled, “Re: Windarra W5180 – Further Details” 	Figure 1, Schedule 1

Compliance reporting

2. The works approval holder must within 30 calendar days of an item of infrastructure required by condition 1 being constructed:
 - (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.
3. The Environmental Compliance Report required by condition 2, must include as a minimum the following:
 - (a) certification by a suitably qualified and experienced Engineer that the items of infrastructure or component(s) thereof, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1;
 - (b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1; and
 - (c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

Time limited operations phase

Commencement and duration

4. The works approval holder may only commence time limited operations for an item of category 5 infrastructure identified in condition 1 where the Environmental Compliance Report as required by condition 2 has been submitted by the works approval holder for that item of infrastructure; and
5. The works approval holder may conduct time limited operations for an item of category 5 infrastructure specified in condition 1 (as applicable):
 - (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 4 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 EP Act.

Operational requirements

6. Only tailings sourced from the premises and the Lancefield tailings dams are permitted to be processed by the premise's gold processing plant.
7. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 3 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirements set out in Table 3.

Table 3: Infrastructure operating requirements during time limited operations

	Site infrastructure	Operational requirements	Infrastructure location
1.	Mount Windarra Gold Tailings Processing Plant	<ul style="list-style-type: none"> ▪ Clean stormwater run-off shall be diverted around the processing plant. ▪ Stormwater run-off from within the processing plant area is to be managed so contaminated or potentially contaminated stormwater is captured to prevent release into the environment. ▪ Spills of environmentally hazardous materials including hydrocarbons, whether inside or outside an engineered containment system, shall be immediately recovered, or removed and disposed of. ▪ Visual inspection of sediments traps after heavy rains to check capacity. 	Figure 2, Schedule 1
2	Hydro-mining operations at the Mount Windarra TSF	<ul style="list-style-type: none"> ▪ Only tailings within the north and south cell of the Mount Windarra TSF shall be reclaimed via hydromining. ▪ Clean stormwater run-off shall be diverted around the Mount Windarra TSF and hydro-mining infrastructure. ▪ Visual inspection daily of hydraulic mining screening and pumping station bunding to check integrity. ▪ Visual inspection daily of hydro-mining tailings 	Figure 2, Schedule 1

		<p>slurry transfer and water reclaim pipelines to check integrity of the pipelines and bunding.</p> <ul style="list-style-type: none"> ▪ Spills of environmentally hazardous materials including tailings and hydrocarbons, whether inside or outside an engineered containment system, shall be immediately recovered, or removed and disposed of. ▪ Water sprays from water carts shall be used to suppress visible dust emissions during hydro-mining activities at the Mount Windarra TSF. 	
3	Tailings and return water pipelines from processing plant to the South Windarra in-pit TSF	<ul style="list-style-type: none"> ▪ Visual inspections daily when in operation to check the integrity of the pipelines, bunding and catch pits (sumps). ▪ Weekly inspections to check the integrity of flow meters, leak detection telemetry, pressure sensors system and automatic shut-off system when pipelines in operation. 	Figure 5, Schedule 1
4.	South Windarra in-pit TSF	<ul style="list-style-type: none"> ▪ A minimum operating freeboard of 5 meters to be maintained. ▪ Visual inspection daily to check freeboard capacity. 	Figure 5, Schedule 1
5.	Lancefield tailings trench	<ul style="list-style-type: none"> ▪ Water sprays from water carts must be used to suppress visible dust emissions during tipping / unloading of tailings. ▪ Spills of environmentally hazardous materials including tailings and hydrocarbons, whether inside or outside an engineered containment system, shall be immediately recovered, or removed and disposed of. ▪ A minimum operating freeboard of 0.25 meters to be maintained within the trench. ▪ Visual inspection of trench daily to check freeboard capacity and liner integrity. 	Figure 3, Schedule 1
6.	Lancefield tipping area at Mount Windarra TSF (north)	<ul style="list-style-type: none"> ▪ Water sprays from water carts must be used to suppress visible dust emissions during tipping / unloading of tailings. ▪ Spills of environmentally hazardous materials including tailings and hydrocarbons, whether inside or outside an engineered containment system, shall be immediately recovered, or removed and disposed of. 	Figure 2, Schedule 1
7.	Dredging operations at the Mount Windarra TSF	<ul style="list-style-type: none"> ▪ Only tailings within the north and south cell of the Mount Windarra TSF shall be reclaimed via dredging. ▪ Visual inspection daily of the dredging tailings slurry transfer and water reclaim pipelines to check integrity of the pipelines. ▪ Spills of environmentally hazardous materials including tailings and hydrocarbons, whether inside or outside an engineered containment system, shall be immediately recovered, or 	Figure 2, Schedule 1

		<p>removed and disposed of.</p> <ul style="list-style-type: none"> Water sprays from water carts shall be used to suppress visible dust emissions during dredging activities at the Mount Windarra TSF. 	
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Monitoring

Groundwater monitoring

8. The works approval holder must conduct a groundwater monitoring program, in accordance with the requirements specified in Table 4 and record results of all monitoring activity conducted under that program.

Table 4: Monitoring of groundwater surrounding South Windarra in-pit TSF.

Monitoring bore location	Parameter	Unit	Frequency	Method
<p>South Windarra in-pit TSF bores</p> <p>SWMB1</p> <p>SWMB2</p> <p>SWMB3</p> <p>SWMB101</p> <p>SWMB102</p> <p>SWMB103</p> <p>SWMB104</p> <p>SWMB106</p> <p>As depicted in Figure 8 in Schedule 1</p>	Standing water level ¹	mbgl	<ul style="list-style-type: none"> A single sampling event prior to the deposition of tailings into the South Windarra in-pit TSF Quarterly² during time limited operations. 	Spot sample, in accordance with AS/NZS 5667.11.
	pH ¹	pH units		
	Electrical conductivity ¹	µcm/S		
	Total dissolved solids	mg/L		
	Weak acid dissociable cyanide (CN _{WAD})			
	Aluminum (Al), Antimony (Sb), Arsenic (As III), Arsenic (As V), Beryllium (Be), Bicarbonate alkalinity (HCO ₃), Bismuth (Bi), Boron (B), Cadmium (Cd), Calcium (Ca), Chromium (Cr III), Chromium (Cr VI), Chloride (Cl), Cobalt (Co), Copper (Cu), Iron (Fe), Lead (Pb), Magnesium (Mg), Manganese (Mn), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Nitrate (NO ₃), Nitrite (NO ₂), Potassium (K), Selenium (Se), Silver (Ag), Sodium (Na), Sulphate (SO ₄ ²⁻), Thallium (Tl), Tin (Sn), Total Sulphur, Uranium (U), Vanadium (V), Zinc (Zn).			
<p>Mount Windarra TSF bores</p> <p>WMB1b</p> <p>WMB2</p> <p>WMB3</p> <p>WMB4</p> <p>WMB4a</p> <p>WMB5</p> <p>WMB5a</p> <p>As depicted in Figure 9 in Schedule 1</p>			Quarterly ² during time limited operations.	

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

Note 2: Quarterly monitoring is undertaken at least 45 calendar days apart.

9. The works approval holder must adhere to the field quality assurance and quality control procedures specified in Schedule 2 for the monitoring required by condition 8.
10. All sample analysis must be undertaken by laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters, unless otherwise specified in Schedule 2.

Pit Water level monitoring

11. The works approval holder must monitor the pit water level within the South Windarra in-pit TSF in accordance with Table 5.

Table 5: Pit lake water level monitoring requirements

Monitoring point location	Parameter	unit	Frequency	Method
South Windarra in-pit TSF	Water level	Meters below the crest of the pit	Monthly ¹	None specified

Note 1: Monthly means monitoring events that are at least 15 days apart.

Time limited operations – compliance reporting

12. The works approval holder must submit to the CEO a report on the time limited operations within 30 days of the completion date of time limited operations or 30 days before the expiration date of the works approval, whichever is the sooner.
13. The works approval holder must ensure the report required by condition 12 includes the following;
 - (a) A summary of the time limited operations, including timeframes and amount of tailings processed through the gold processing plant;
 - (b) a summary of the environmental performance of all infrastructure as constructed, which includes records detailing the:
 - (i) volume of tailings deposited into South Windarra in-pit TSF;
 - (ii) volume of water reclaimed from the South Windarra in-pit TSF
 - (iii) inspection results obtained in accordance with condition 7
 - (iv) the baseline and quarterly groundwater monitoring results obtained during time limited operations under condition 8.
 - (v) Water level monitoring results obtained during time limited operations under condition 11. These results should be compared to the modelled pit lake water levels predicted by the water balance model for the South Windarra in-pit TSF.
 - (c) a review of performance and compliance against the conditions of the works approval; and
 - (d) where the 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)

- 14.** 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.
- 15.** 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 7;
 - (c) monitoring programmes undertaken in accordance with conditions 8 and 11 and
 - (d) complaints received under condition 14.
- 16.** The books specified under condition 15 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	AS/NZS 5667.1 means the Australian Standard AS/NZS 5667.1 <i>Water Quality – Sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples.</i>
Assessment of Site Contamination NEPM	means the <i>National Environment Protection (Assessment of Site Contamination) Measure 1999.</i>
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 info@dwer.wa.gov.au
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 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>
mbgl	means meters below ground level
mg/L	means milligrams per litre
µS/cm	µS/cm microsiemens per centimeters
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.

Term	Definition
Schedule 1	means Schedule 1 of this works approval unless otherwise stated
Schedule 2	means Schedule 2 of this works approval unless otherwise stated
Suitably qualified and experienced Engineer	means a person who: a) holds a Bachelor's degree recognised by Engineers Australia; and b) has a minimum of five years of experience working in a supervisory role in civil or structural engineering; and c) is employed by an independent third party external to the Works Approval Holder's business; or is otherwise approved in writing by the CEO to act in this capacity.
TSF	means tailings storage facility
Time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.

END OF CONDITIONS

Schedule 1: Maps and drawings

Premises map

The boundary of the prescribed premises is shown in green in the map below

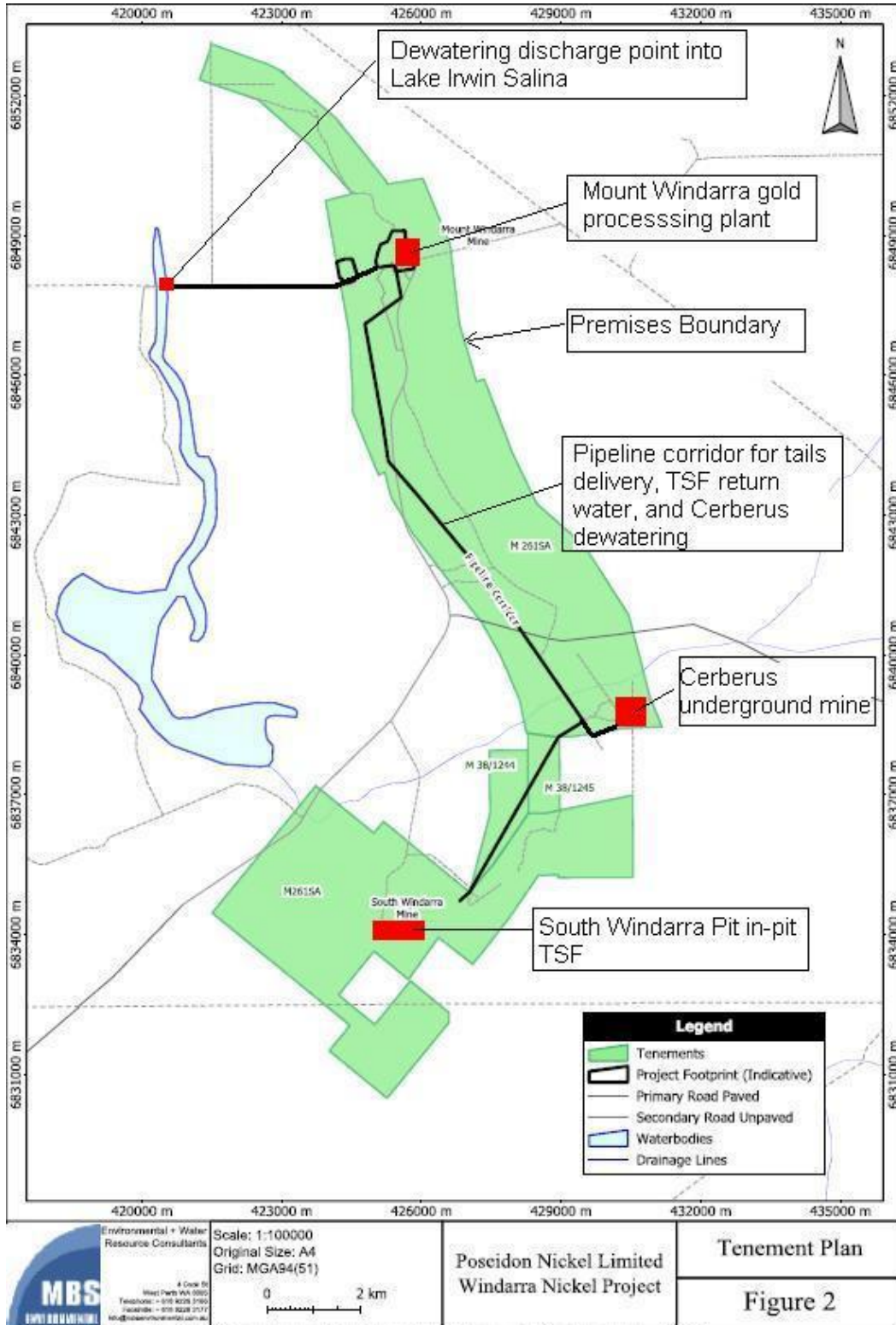


Figure 1: Map of the boundary of the prescribed premises

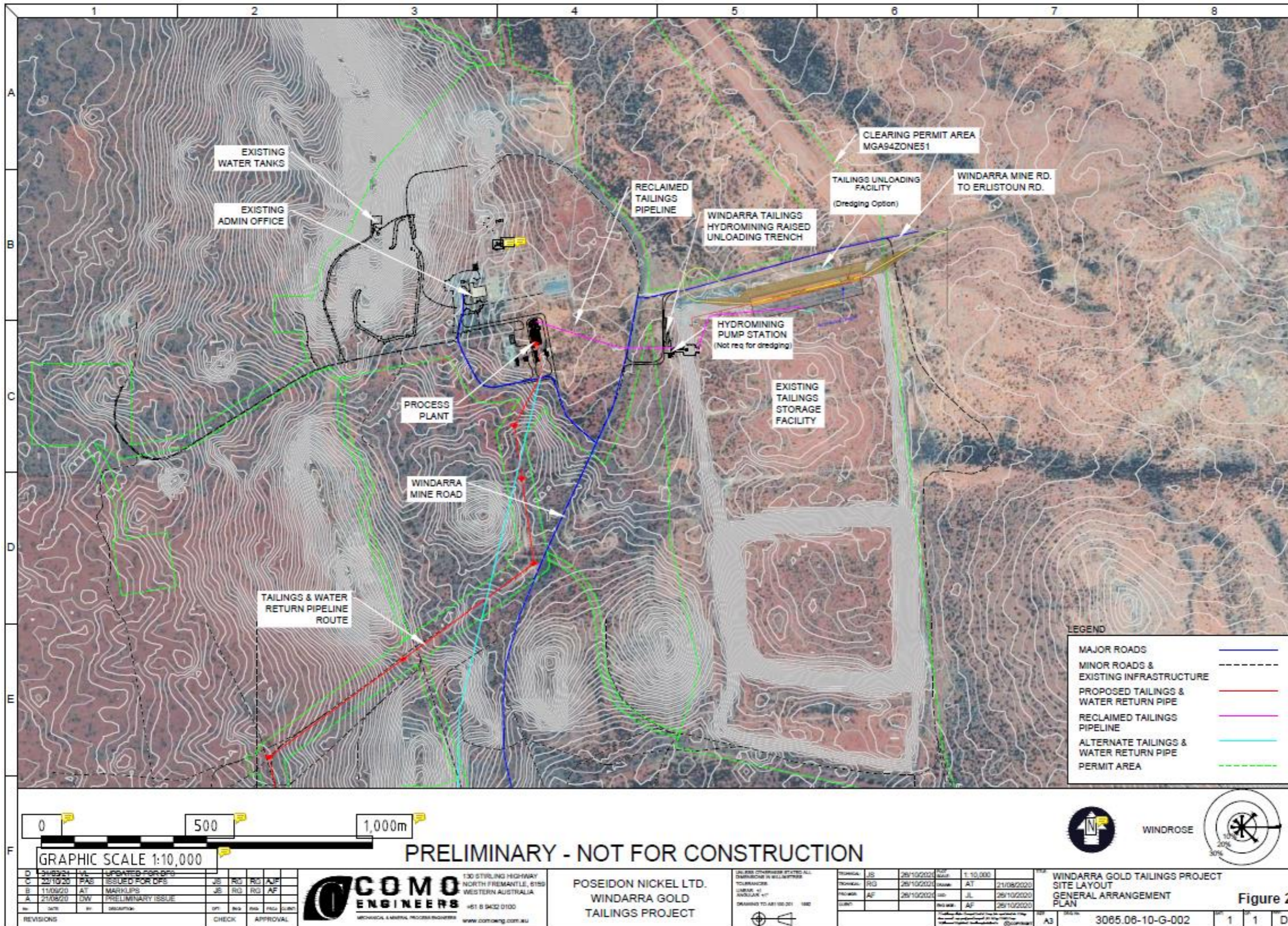


Figure 2: General Layout and location of gold tailings processing plant and hydro mining / dredging infrastructure

Gold processing plant design drawings

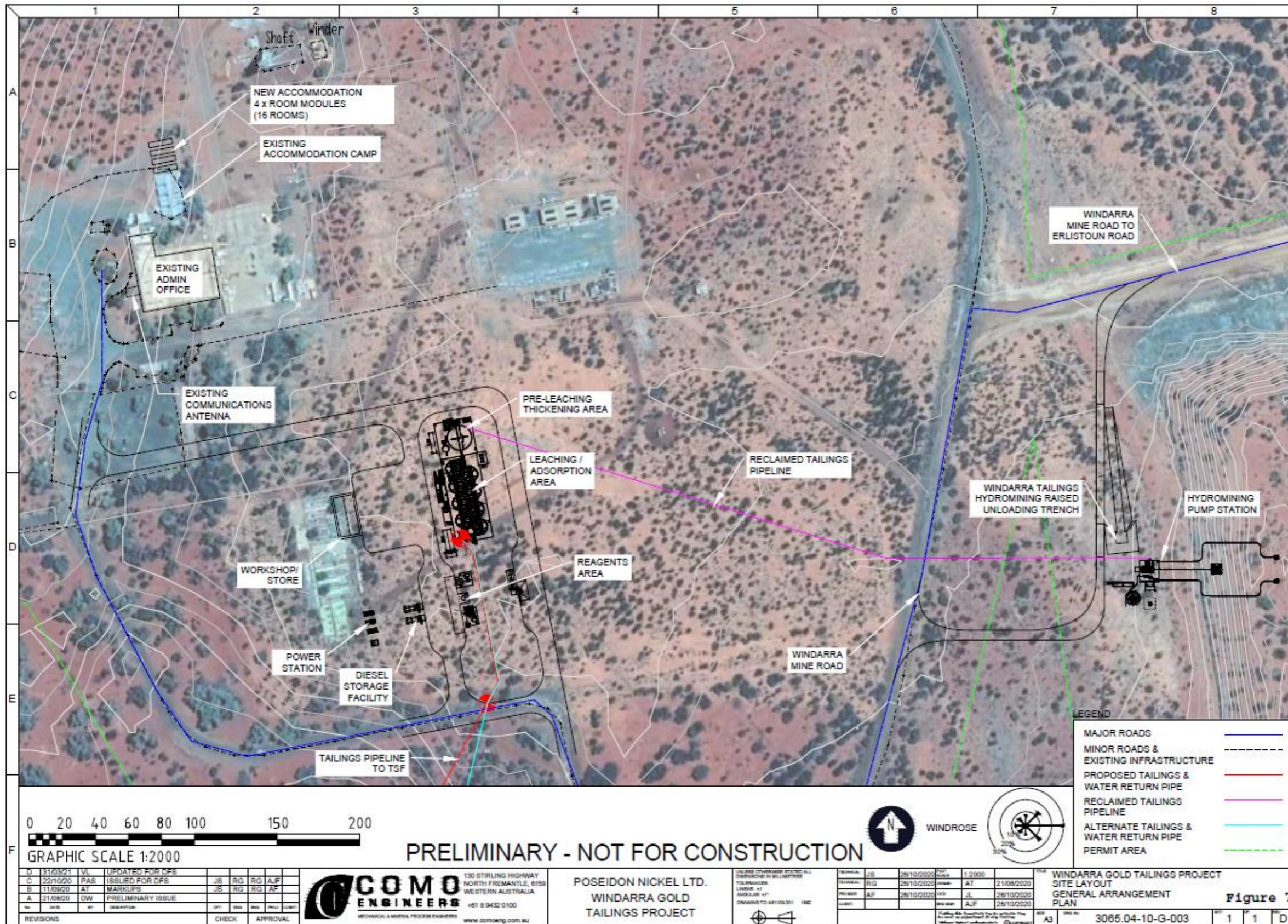


Figure 3: Gold tailings retreatment plant and hydro mining infrastructure layout

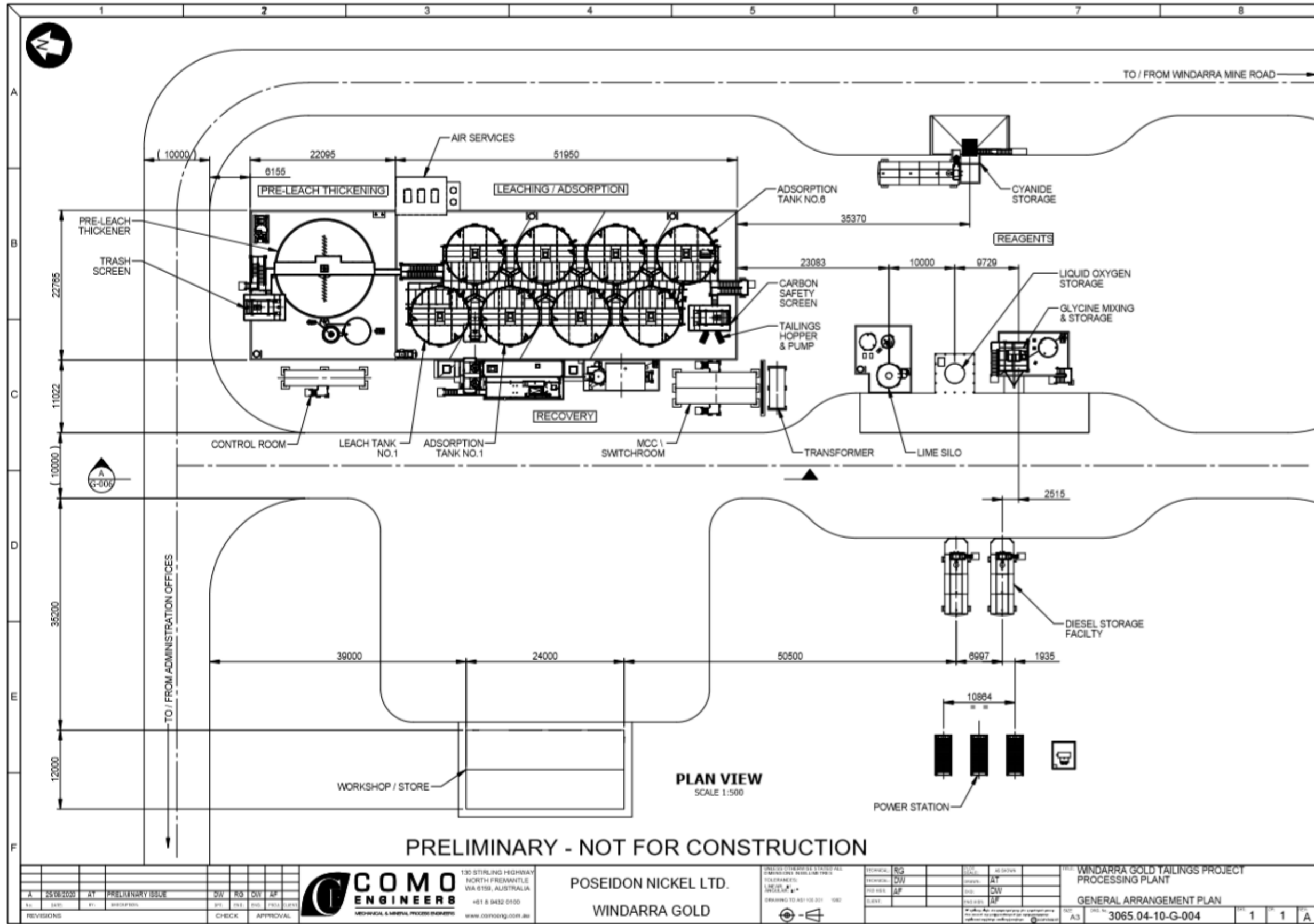


Figure 4: Gold tailings retreatment plant general arrangement

Environmental Protection Act 1986
 Works approval: W5180/2012/1 (as amended 6/06/2024)

Layout map and design drawings of pipeline infrastructure

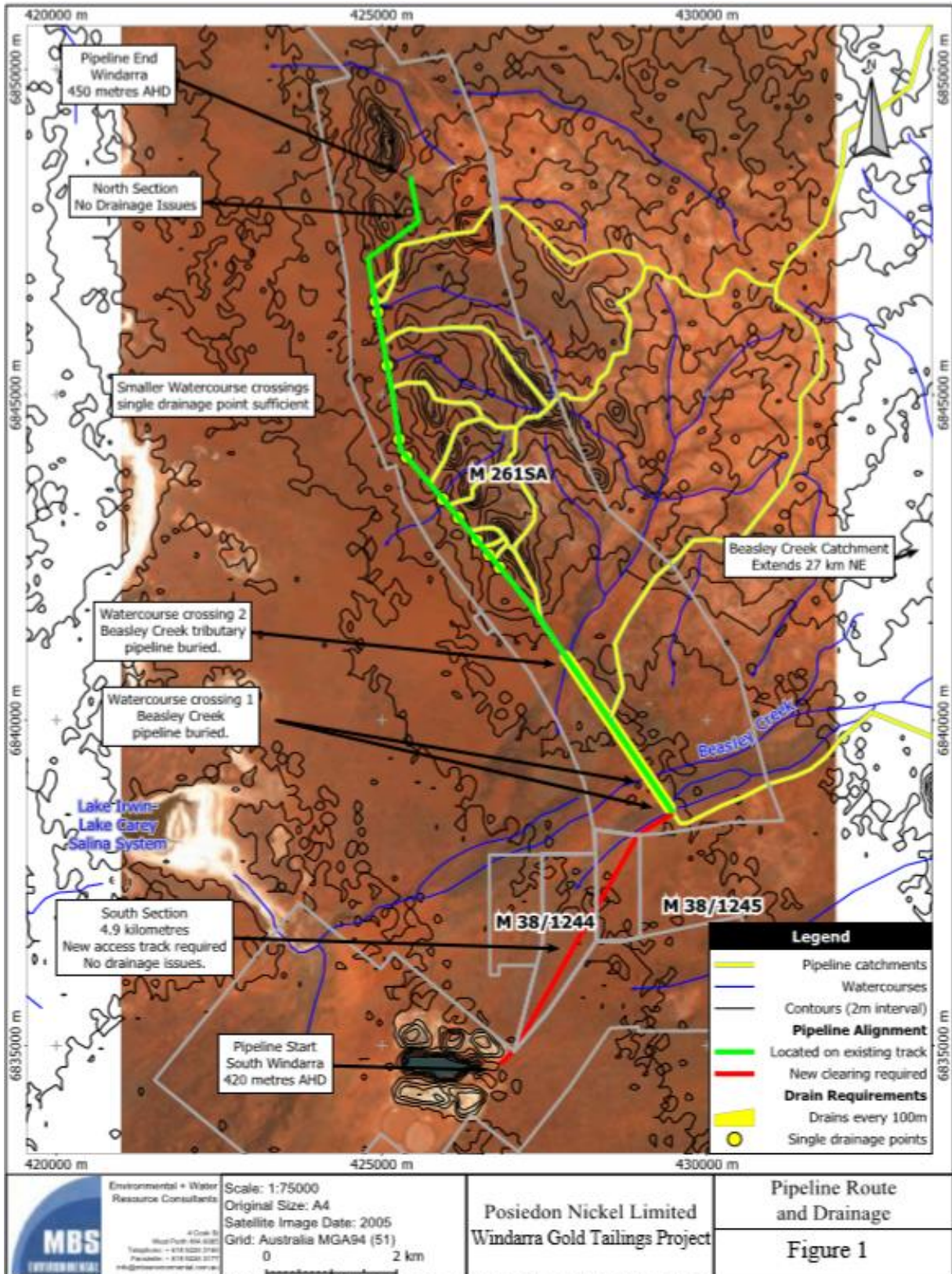


Figure 5: Location of tailings /return water pipeline (source: Poseidon Nickel (2021))

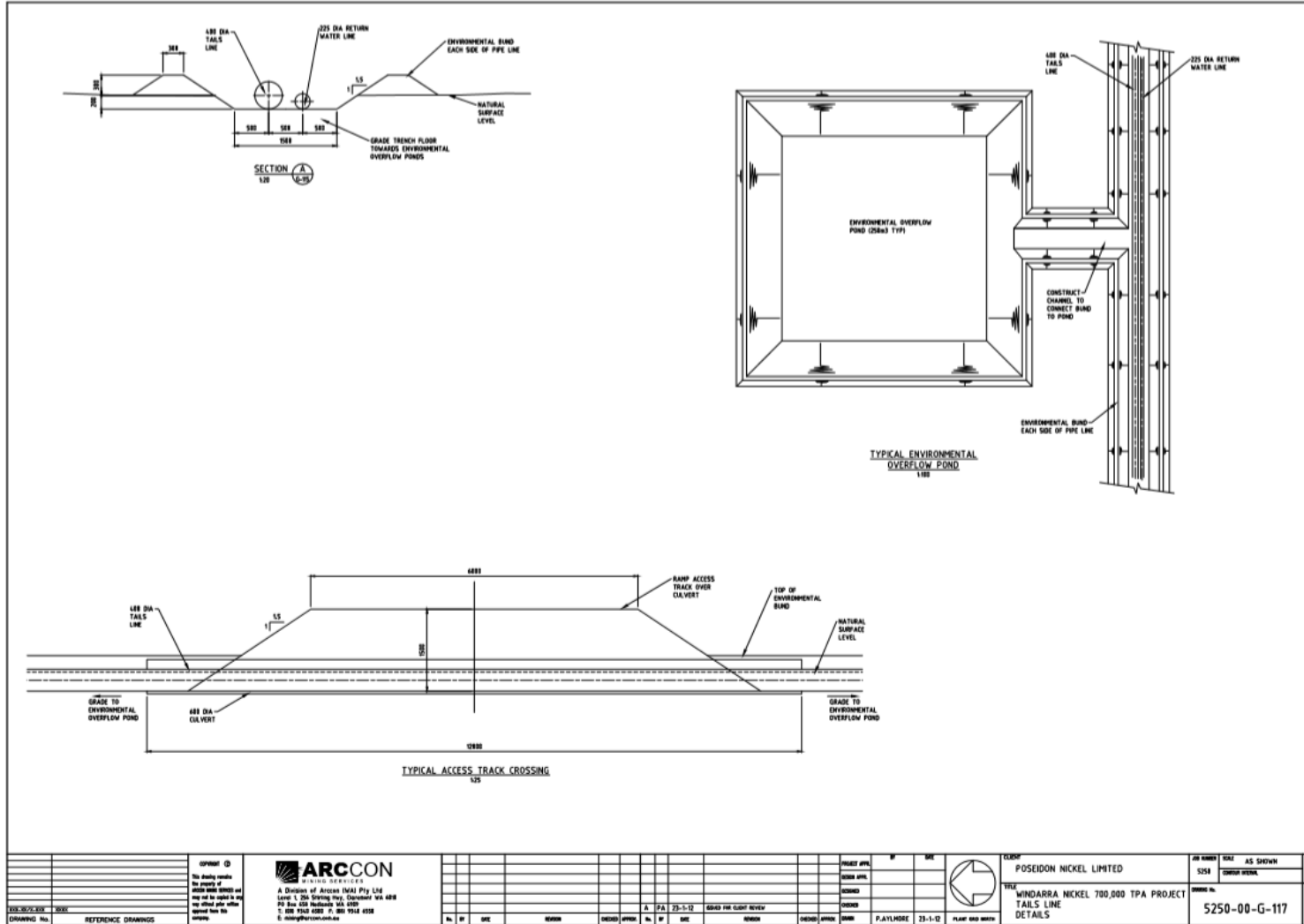


Figure 6: Design drawings for tailings and return water pipeline bunding, leak containment sumps (overflow ponds) and general arrangement of pipeline burial when required (Source: ARCCON (2012))

Design drawings of Lancefield tailings trench

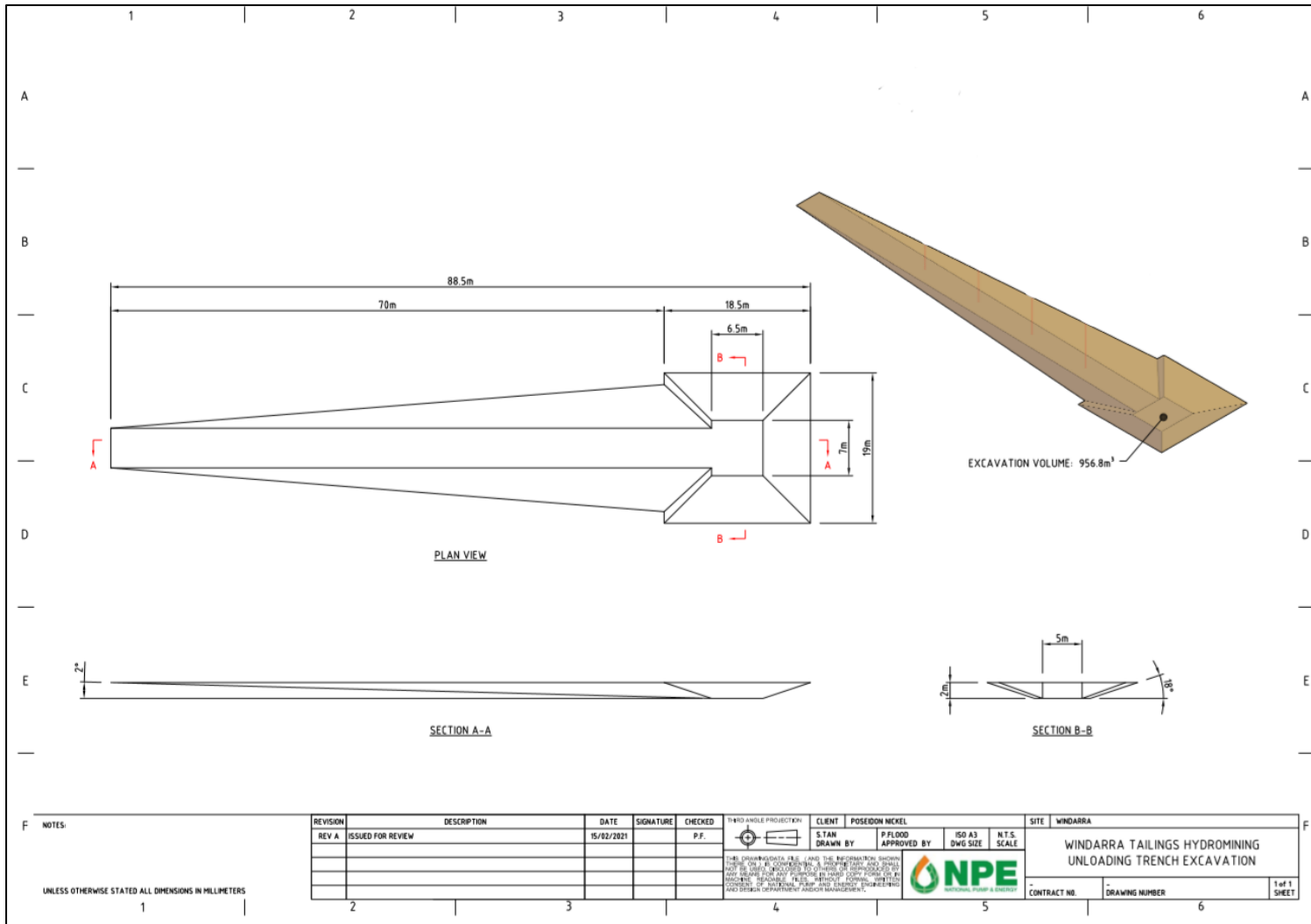


Figure 7: Lancefield tailings trench design

Environmental Protection Act 1986
 Works approval: W5180/2012/1 (as amended 6/06/2024)

Monitoring point locations



Figure 8: Location of the South Windarra in-pit TSF groundwater monitoring bores.

Environmental Protection Act 1986
Works approval: W5180/2012/1 (as amended 6/06/2024)

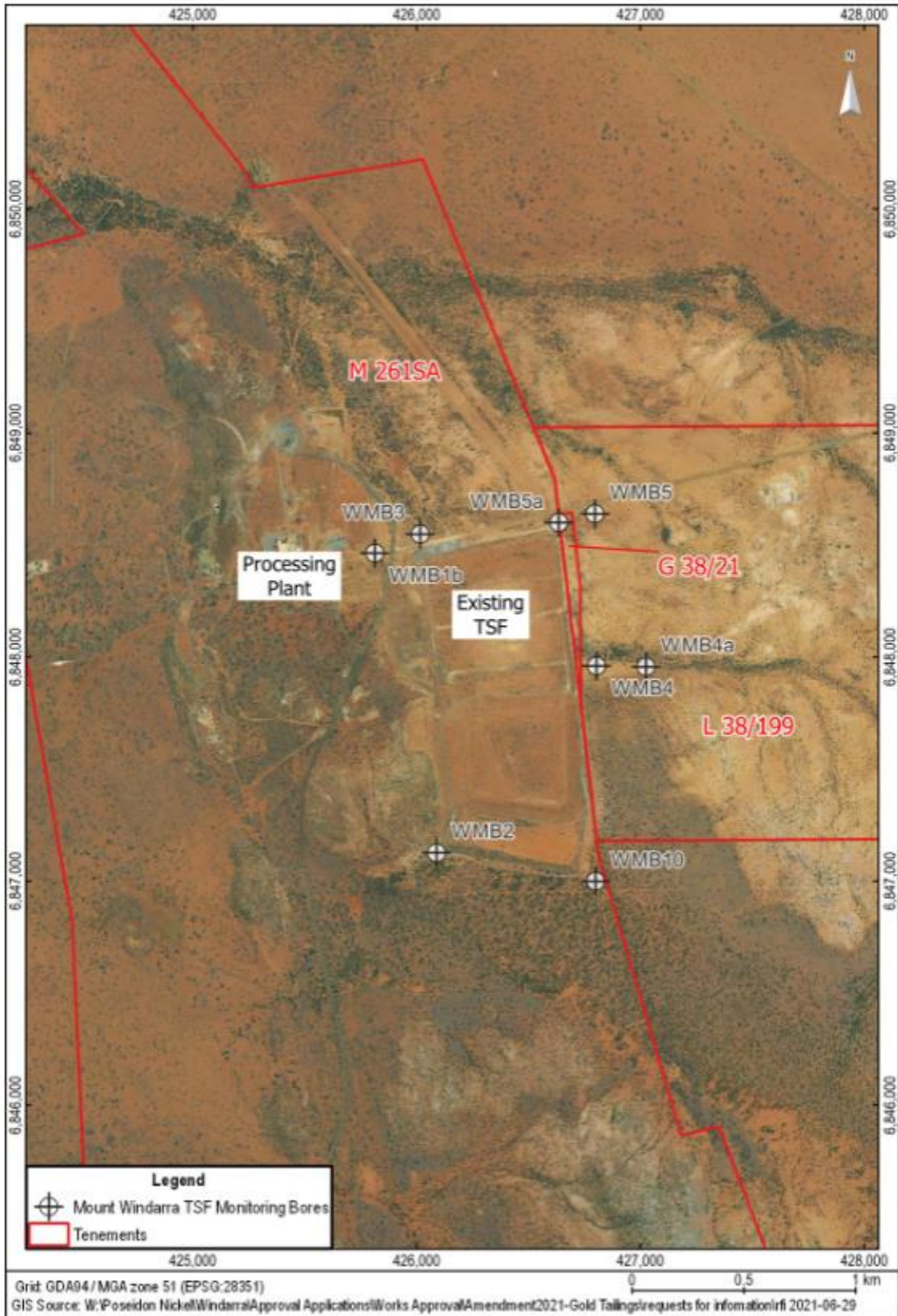


Figure 9: Location of groundwater monitoring bores surrounding the Mount Windarra TSF.

Schedule 2: Monitoring

Quality assurance and quality control requirements

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

- (e) decontamination procedures for the cleaning of tools and sampling equipment before sampling and between samples;
- (f) field instrument calibration for instruments used on site;
- (g) blind replicate samples and rinsate blanks must be collected in the field and sent to the primary laboratory to determine the precision of the field sampling and laboratory analytical program;
- (h) completed field monitoring sheets / sampling logs for each sample collected, showing:
 - (i) time of collection;
 - (ii) location of collection;
 - (iii) initials of sampler;
 - (iv) sampling method;
 - (v) field analysis results;
 - (vi) duplicate type / location (if relevant); and
 - (vii) site observations and weather conditions, and
- (i) chain-of-custody documentation must be completed which details the following information:
 - (i) site identification;
 - (ii) the sampler;
 - (iii) nature of the sample;
 - (iv) collection time and date;
 - (v) analyses to be performed;
 - (vi) sample preservation method;
 - (vii) departure time from site;
 - (viii) dispatch courier(s); and
 - (ix) arrival time at the laboratory.