



<b>Works approval number</b>	W6605/2021/1
<b>Works approval holder</b>	Australian Nickel Investments Pty Ltd
<b>ACN</b>	111 599 323
<b>Registered business address</b>	2 Kings Park Road WEST PERTH WA 6005
<b>DWER file number</b>	DER2021/000490
<b>Duration</b>	06/12/2021 to 05/12/2026
<b>Date of issue</b>	06/12/2021
<b>Premises details</b>	Cosmos Nickel Operations – Processing Plant Goldfields Highway SIR SAMUEL WA 6437 Legal description Mining tenement M36/371 As defined by the premises map in Schedule 1.

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i> )	Assessed production capacity
Category 5: Processing or beneficiation of metallic or non-metallic ore: premises on which – (a) Metallic or non-metallic ore is crushed, ground, milled or otherwise processed; or (b) Tailings from metallic or non-metallic ore are reprocessed; or (c) Tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam.	Stage 1: 900,000 tonnes per annual period Stage 2: 1,100,000 tonnes per annual period.

This works approval is granted to the works approval holder, subject to the attached conditions, on 06 December 2021, by:

**Fiona Westcott**

**A/SENIOR ENVIRONMENTAL OFFICER, 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
06/12/2021	W6605/2021/1	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;
  - (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**

Stage	Infrastructure	Design and construction requirements	Infrastructure location
1.	Cosmos Processing Plant upgrade to 900,000 tpa capacity	<ul style="list-style-type: none"> <li>▪ Installation of the following items of new infrastructure:               <ul style="list-style-type: none"> <li>- Fine ore bin (FOB)</li> <li>- Secondary crusher</li> <li>- Primary crusher product conveyor</li> <li>- Secondary crusher product conveyor</li> <li>- FOB discharge conveyors (2)</li> <li>- Additional rougher cells</li> <li>- Cleaner flotation cells</li> <li>- M1000 Isa mill</li> <li>- Tails thickener</li> <li>- Process water tank</li> <li>- Potable water tank</li> <li>- Filter</li> <li>- NaEX tank</li> <li>- PAX tank</li> <li>- Copper sulphate tank</li> </ul> </li> <li>▪ Refurbishment of the following items of existing infrastructure:               <ul style="list-style-type: none"> <li>- Primary crusher</li> <li>- 515 kW Ball mill</li> <li>- 1800kW Ball mill</li> <li>- Rougher Flotation Cells – 3 x BQR200</li> <li>- Concentrate thickener (existing tails thickener)</li> <li>- Mill feed conveyor</li> <li>- Raw water tank</li> <li>- Filter feed tank</li> <li>- Concentrate shed</li> <li>- Blowers</li> <li>- Air receivers</li> <li>- Flocculant mixing and storage distribution system</li> <li>- Guar mixing, storage and distribution system reutilized for carboxy methyl cellulose (CMC) mixing and storage</li> </ul> </li> <li>▪ A baghouse dust collector is to be installed adjacent to the FOB to collect dust from the screen and run of mine (ROM) bin.</li> </ul>	<p>Processing plant location as shown in Schedule 1, Figure 1</p> <p>Layout of infrastructure as shown in Schedule 1, Figure 3</p>

Stage	Infrastructure	Design and construction requirements	Infrastructure location
		<ul style="list-style-type: none"> <li>Water sprays to be installed at each conveyor transfer point.</li> <li>All components of the reagents mixing and handling facility to be constructed within bunded concrete containment slab equipped with sump pumps. Bunded area to have a minimum capacity of 110% of the largest container stored within it or 25% of the volume of all containers, whichever is larger.</li> <li>Fuel and reagent tanks to be equipped with high level alarms to prevent overflow.</li> <li>Processing plant area to be graded as required to ensure contaminated runoff is directed to stormwater management ponds.</li> </ul>	
	Stormwater management ponds	<ul style="list-style-type: none"> <li>Two stormwater management ponds to be constructed at the locations outlined in Figure 2, Schedule 1.</li> <li>Stormwater management ponds to be sized to contain a 1 in 100 year / 72-hour rainfall event.</li> <li>Stormwater management ponds to be equipped with a pump system to allow captured stormwater to be recirculated back into the process.</li> </ul>	As shown in Schedule 1, Figure 2
	Tailing storage facility (TSF)	<ul style="list-style-type: none"> <li>Tailing distribution pipelines / spigots to be reinstated.</li> <li>TSF decant system to be reinstated to functioning order.</li> <li>TSF toe drain to be cleared of silt.</li> <li>Tailings / return water pipelines to be equipped with telemetry or automatic cut-outs in the event of a pipe failure; or provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.</li> </ul>	As shown in Schedule 1, Figure 1
2.	Cosmos Processing Plant upgrade to 1,100,000 tpa capacity	<ul style="list-style-type: none"> <li>Installation of the following items of new infrastructure: <ul style="list-style-type: none"> <li>Tertiary crusher,</li> <li>Ball Mill, and</li> <li>Addition flotation cells.</li> </ul> </li> <li>Water sprays to be installed at each conveyor transfer point.</li> </ul>	Processing plant location as shown in Schedule 1, Figure 1

## Compliance reporting

2. The works approval holder must within 30 calendar days of each stage of construction required by condition 1 being completed;
  - (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.

## Environmental commissioning phase

### Environmental commissioning requirements

- 4. The works approval holder may only commence environmental commissioning of the infrastructure in each stage of construction listed in condition 1 once the Environmental Compliance Report has been submitted for that stage of construction in accordance with condition 3 of this works approval.
- 5. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 2 may only be carried out:
  - (a) in accordance with the corresponding commissioning requirements; and
  - (b) for the corresponding authorised commissioning duration.

**Table 2: Environmental commissioning requirements**

Infrastructure	Commissioning requirements	Authorised commissioning duration
Cosmos Processing Plant Infrastructure (Stage 1)	Commissioning to occur over three stages 1. Dry commissioning <ul style="list-style-type: none"> <li>- Testing of individual components without addition of any mill feed or water,</li> <li>- Progressive testing and commissioning of electrical systems.</li> </ul> 2. Wet commissioning <ul style="list-style-type: none"> <li>- Testing operation of plant components with water,</li> <li>- Dust suppression sprays to be tested to ensure functionality.</li> </ul> 3. Ore commissioning <ul style="list-style-type: none"> <li>- Testing operation of plant components with mill feed, reagents, water and air.</li> </ul> Any spills or leaks of saline water, tailings, chemicals or hydrocarbons outside of containment structures to be contained and cleaned up immediately.	For a period not exceeding 90 calendar days in aggregate.
Cosmos Processing Plant Infrastructure (Stage 2)	Commissioning to occur over three stages 1. Dry commissioning <ul style="list-style-type: none"> <li>- Testing of individual components without addition of any mill feed or water,</li> <li>- Progressive testing and commissioning of electrical systems.</li> </ul> 2. Wet commissioning	For a period not exceeding 90 calendar days in aggregate.

Infrastructure	Commissioning requirements	Authorised commissioning duration
	<ul style="list-style-type: none"> <li>- Testing operation of plant components with water,</li> <li>- Dust suppression sprays to be tested to ensure functionality.</li> </ul> <p>4. Ore commissioning</p> <ul style="list-style-type: none"> <li>- Testing operation of plant components with mill feed, reagents, water and air.</li> </ul> <p>Any spills or leaks of saline water, tailings, chemicals or hydrocarbons outside of containment structures to be contained and cleaned up immediately.</p>	

## Environmental commissioning report

6. The works approval holder must submit to the CEO an Environmental Commissioning Report within 14 calendar days of the completion date of environmental commissioning for each item of infrastructure specified in Condition 5, Table 2.
7. The works approval holder must ensure the Environmental Commissioning Report required by condition 6 of this works approval includes the following;
  - (a) a summary of the environmental commissioning activities undertaken, including timeframes and amount of ore processed;
  - (b) a review of the works approval holder's performance and compliance against the conditions of this works approval; and
  - (c) 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

8. The Works Approval Holder may commence time limited operations for the infrastructure in each stage of construction specified in condition 1 where the Environmental Commissioning Report for that stage of infrastructure as required by condition 6 has been submitted by the works approval holder.
9. The works approval holder may conduct time limited operations for the infrastructure in each stage of construction specified in condition 1:
  - (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 8 for that stage of infrastructure: or
  - (b) until such time as a Licence for that stage of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*.

### Time limited operations requirements

10. 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 requirement set out in Table 3.

**Table 3: Infrastructure and equipment requirements during time limited operations**

Site infrastructure and equipment	Operational requirement	Infrastructure location
Cosmos processing plant	<ul style="list-style-type: none"> <li>▪ Surface water runoff from within processing plant area to be captured and retained on site.</li> <li>▪ Clean surface water runoff to be diverted around processing plant area.</li> <li>▪ Water sprays to be used to control dust emissions.</li> <li>▪ The baghouse dust collector installed adjacent to the FOB to be operated to control dust emissions.</li> </ul>	As shown in Schedule 1, Figure 1
Tailings Storage Facility (TSF)	<ul style="list-style-type: none"> <li>▪ A minimum top of embankment freeboard of 300mm to be maintained.</li> <li>▪ Daily inspections of TSF embankment freeboard to occur to check for freeboard capacity.</li> <li>▪ Daily inspections of tailings/return water pipelines to occur to check for integrity.</li> <li>▪ TSF toe drain to be maintained and clear of silt / build up.</li> <li>▪ TSF decant system to be maintained and functioning during operation of the TSF.</li> </ul>	As shown in Schedule 1, Figure 1

### Monitoring during time limited operations

11. The works approval holder must undertake the process monitoring in Table 4 according to the specifications in that table.

**Table 4: Process monitoring**

Parameter	Units	Frequency	Averaging period
Volume of ore processed	tonnes	Continuous	Monthly
Volume of tailings deposited into TSF	tonnes		
Volume of water recovered from TSF	m <sup>3</sup>		

### Compliance reporting

12. The works approval holder must submit to the CEO a report on the time limited operations within 30 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.
13. The works approval holder must ensure the report required by condition 12 includes the following:
- a summary of the time limited operations, including timeframes and monitoring data required by condition 11;
  - standing water level and water quality monitoring data available for groundwater monitoring bores MB22, MB17 and MB9 (as shown in Schedule

- 1, Figure 4) during time limited operations (monitoring parameters and timeframes as specified under operating licence L7404/1999/9);
- (c) a review of performance and compliance against the conditions of the works approval; and
- (d) where the manufacture's design specifications and the conditions of this works approval have not been met, what measures will the works approval holder take to meet them, and what timeframes will be required to implement those measures.

## Records and reporting (general)

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 10;
  - (c) monitoring programmes undertaken in accordance with condition 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 5 have the meanings defined.

**Table 5: Definitions**

Term	Definition
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 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</i> (WA).
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA).
premises	the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map Figure 1 in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
time limited	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that

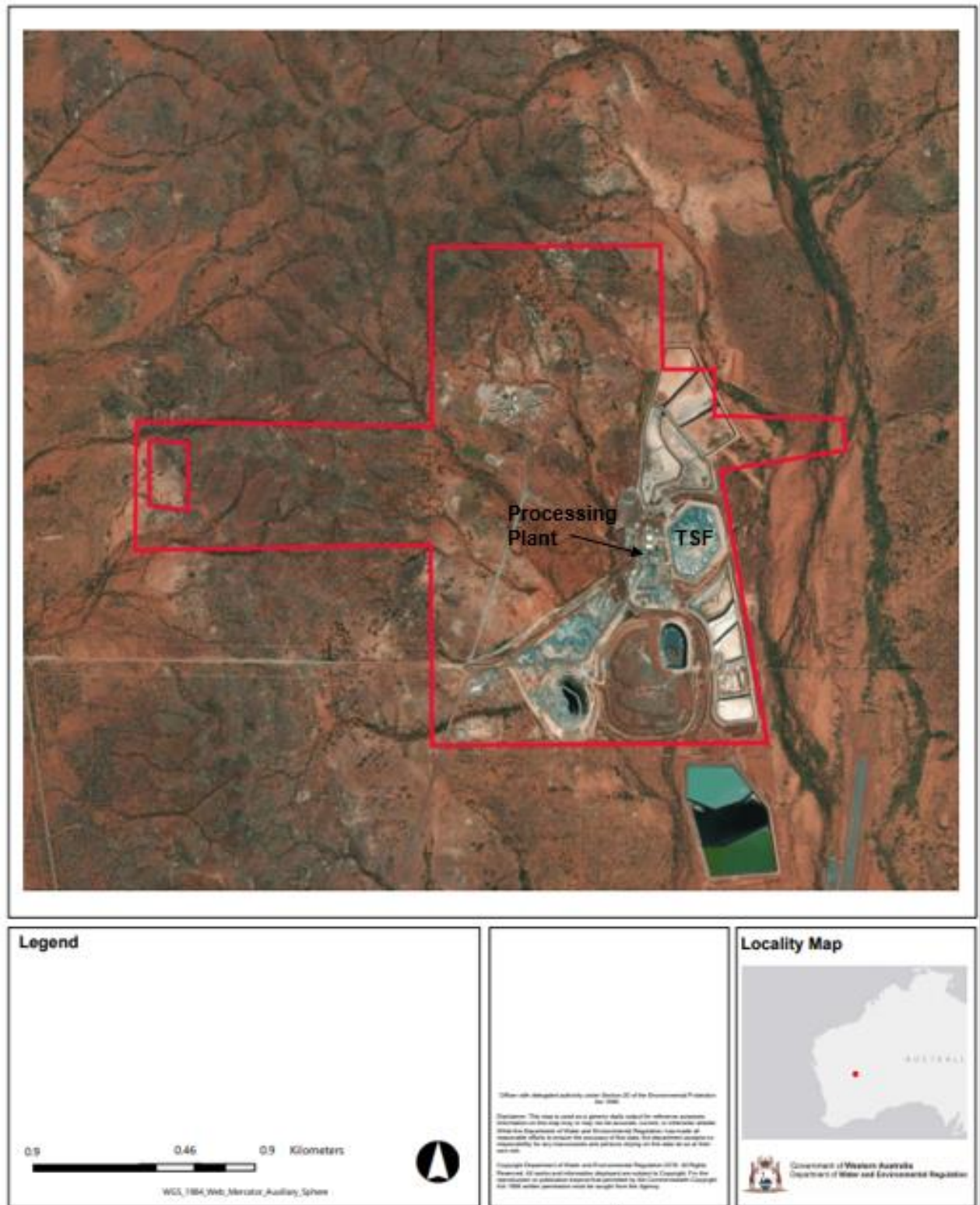
Term	Definition
operations	purpose, subject to the relevant conditions.
tpa	tonnes per annum
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the 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**

## 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: Close up of processing plant area and location of two new stormwater management ponds (shaded blue).**

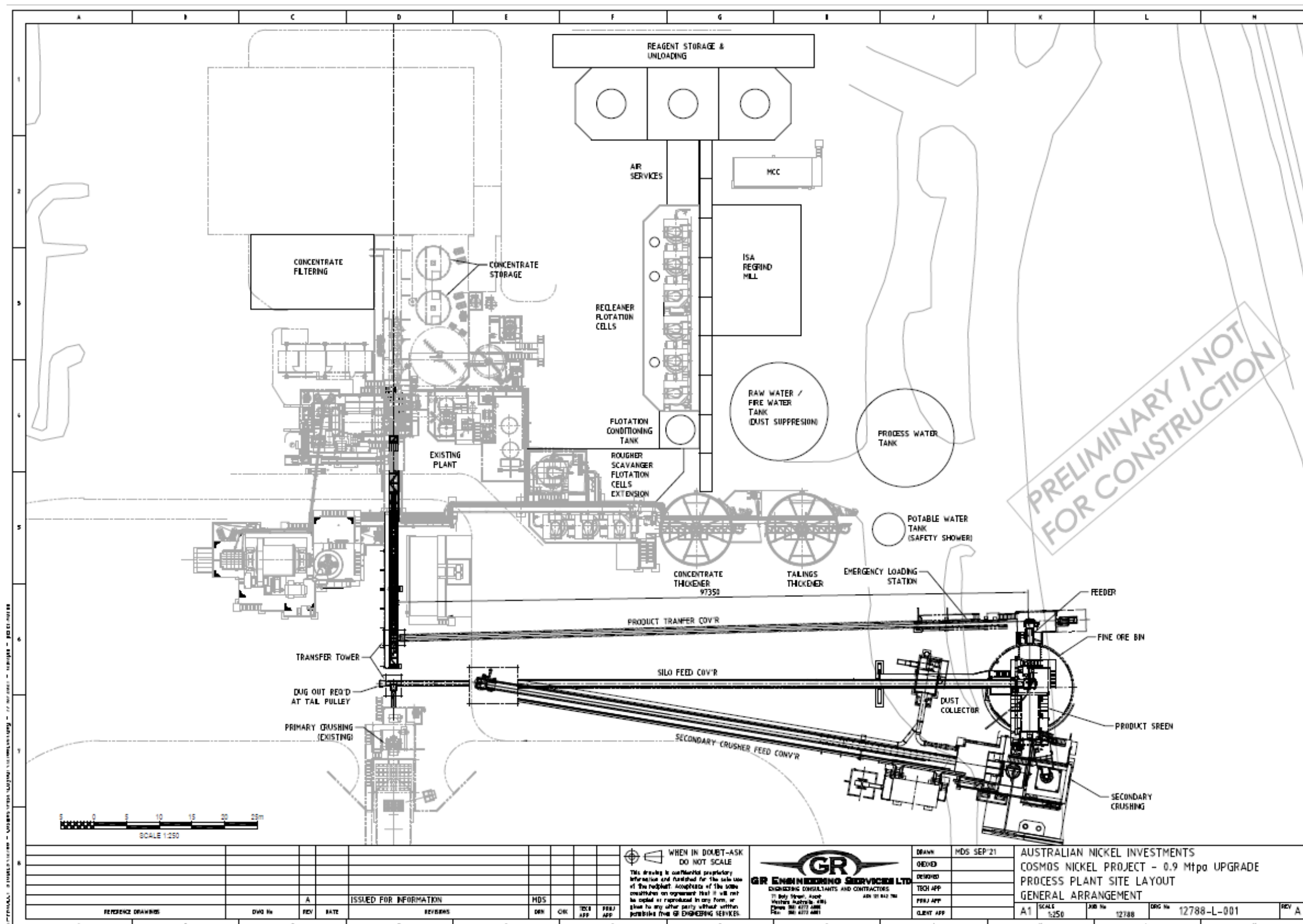


Figure 3: Schematic diagram showing layout of stage 1 processing plant infrastructure.



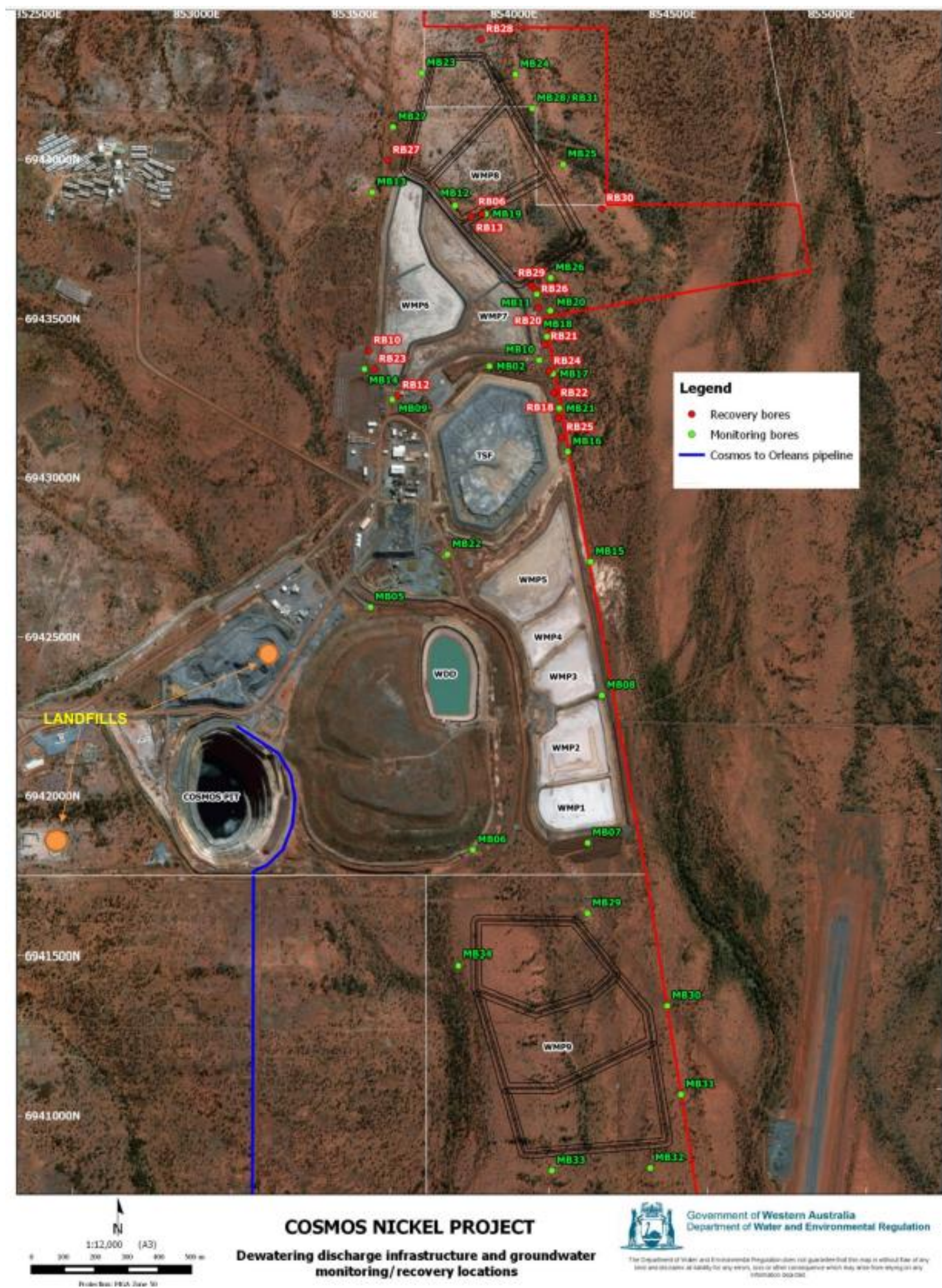


Figure 4: Location of groundwater monitoring bores surrounding the TSF.