



<b>Works approval number</b>	W6635/2021/1
<b>Works approval holder</b>	Australian Nickel Investments Pty Ltd
<b>ACN</b>	111 599 323
<b>Registered business address</b>	2 Kings Park Rd WEST PERTH WA 6005
<b>DWER file number</b>	DER2021/000643
<b>Duration</b>	18/02/2022 to 17/02/2027
<b>Date of amendment</b>	17/04/2023
<b>Premises details</b>	Cosmos Nickel Operations – Paste Plant Goldfields Highway SIR SAMUEL WA 6437 Legal description - Mining tenement M36/371 and part mining tenements M36/127 and M36/180 as defined by the premises map in Schedule 1

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i> )	Assessed design 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.	1,100,000 tonnes per annual period.

This works approval is granted to the works approval holder, subject to the attached conditions, on 17 April 2023, by:

**Alana Kidd**

**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
18/02/2022	W6635/2021/1	Works approval granted.
05/01/2023	W6635/2021/1	Amendment to authorise construction of a pipeline from the processing plant to water management pond 2 to discharge process water.
17/04/2023	W6635/2021/1	Amendment to extend the commissioning period of the Cosmos Paste Plant from 180 calendar days to 360 calendar days.

## 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 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**

	Infrastructure	Design and construction requirements	Infrastructure location
1.	Cosmos Paste Plant	<ul style="list-style-type: none"> <li>▪ Paste plant to be installed at the location indicated by Figure 1 in Schedule 1.</li> <li>▪ Paste plant sized for a maximum production rate of 120m<sup>3</sup>/hr.</li> <li>▪ General layout of the paste plant to be in accordance with Figure 2 in Schedule 1.</li> <li>▪ Reagent mixing and handling areas to be housed within bunded concrete containment slabs serviced by sump pumps.</li> <li>▪ Reclaimed tailings storage area to be enclosed within a perimeter bund to prevent run-off from leaving the area.</li> <li>▪ Paste plant operational areas to be graded to ensure any contaminated stormwater is directed to a designated collection area designed to contain a 1 in 100-year rainfall event.</li> <li>▪ Stormwater diversion infrastructure to be constructed to divert surface water flows around the paste plant operating area.</li> </ul>	As shown in Schedule 1, Figure 1.
		<ul style="list-style-type: none"> <li>▪ Tailings / return water pipelines to be installed in either of the two locations depicted in Figure 3, Schedule 1.</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 3.

	Infrastructure	Design and construction requirements	Infrastructure location
		<ul style="list-style-type: none"> <li>▪ Process water discharge pipeline to be installed at the location depicted in Figure 5, Schedule 1.</li> <li>▪ Process water discharge pipeline 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 5.

## 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 geotechnical or civil 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 Cosmos Paste Plant infrastructure listed in condition 1 once the Environmental Compliance Report has been submitted for that infrastructure 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	Duration
Cosmos Paste Plant	<p>Commissioning to occur over two stages:</p> <ol style="list-style-type: none"> <li>1. Dry commissioning <ul style="list-style-type: none"> <li>- Testing of individual components without addition of any feed or water.</li> </ul> </li> <li>2. Wet commissioning <ul style="list-style-type: none"> <li>- Testing operation of plant components with tailings feed, reagents, water and air under changing process conditions.</li> <li>- Dust suppression sprays to be tested to ensure functionality.</li> <li>- Any spills or leaks of saline water, tailings, chemicals or hydrocarbons outside of containment structures to be contained and cleaned up immediately.</li> </ul> </li> </ol>	For a period not exceeding 360 calendar days in aggregate.

### 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 of the Cosmos paste plant 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, amount of tailings processed and amount of process water discharged;
  - (b) a review of the works approval holder's performance and compliance against the conditions of this works approval;
  - (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; and
  - (d) monitoring data indicating the baseline ambient environmental conditions at the premises.
8. The monitoring of the baseline ambient environmental conditions required under condition 7(d) must be undertaken in accordance with Table 3.

**Table 3: Determination of baseline ambient environmental conditions**

Parameter	Monitoring location	Unit	Frequency	Averaging period	Method	
					Sampling	Analysis
Standing Water Level	Groundwater monitoring bores  MB05, MB06, MB07, MB08, MB15 and MB22  As depicted in Schedule 1, Figure 4	mbgl	Once, prior to discharge of process water into WMP02  This can occur prior or during commissioning of the Paste plant	Spot sample	Spot sample in accordance with AS/NZS 5667.11	Field readings
pH		-				By laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters
Electrical conductivity @ 25°C		µS/cm				
Metals and metalloids: As, Cd, Cr, Co, Cu, Hg, Pb, Ni, Se, Sb & Zn.		mg/L				

## Time limited operations phase

### Commencement and duration

9. The works approval holder may commence time limited operations for the Cosmos Paste Plant infrastructure as 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.
10. The works approval holder may conduct time limited operations for the Cosmos Paste Plant infrastructure constructed as 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 9 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 10(a).

### Time limited operations requirements and emission limits

11. 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 requirement set out in Table 4.

**Table 4: Operational requirements during time limited operations**

Infrastructure	Operational requirements	Infrastructure location
Cosmos Paste Plant	<ul style="list-style-type: none"> <li>Storage and handling of reagents (binder and flocculant) and reclaimed tailings shall be managed to ensure dust emissions are minimized.</li> <li>Stormwater is to be managed so contaminated or potentially contaminated stormwater is captured to prevent release into the environment.</li> </ul>	As shown within Schedule 1, Figure 1
Cosmos paste plant tailings /return water pipelines	<ul style="list-style-type: none"> <li>Pipelines to be inspected daily to confirm integrity.</li> </ul>	As shown within Schedule 1, Figure 3
Cosmos process water discharge pipeline	<ul style="list-style-type: none"> <li>Pipelines to be inspected daily to confirm integrity.</li> </ul>	As shown within Schedule 1, Figure 5
Tailings storage facility (TSF) 1	<ul style="list-style-type: none"> <li>The reclamation of tailings from TSF1 shall be managed to ensure the excavation area is wet down as required to minimize dust generation</li> <li>Any spills of tailings outside of TSF1 shall be contained and cleaned up immediately.</li> </ul>	As shown within Schedule 1, Figure 1

### 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) a summary of the time limited operations, including timeframes amount of tailings processed and amount of process water discharged;
  - (b) a review of performance and compliance against the conditions of the works approval; and
  - (c) 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 11;
  - (c) 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
annual period	a 12 month period commencing from 1 January until 31 December of the immediately following year.
AS/NZS 5667.11	means the Australian/New Zealand Standard Water quality - Sampling - Guidance on sampling of groundwaters, as amended from time to time.
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 operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to

Term	Definition
	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.
WMP	Water Management Pond: refers to the existing water management ponds at the premises.

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**END OF CONDITIONS**



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



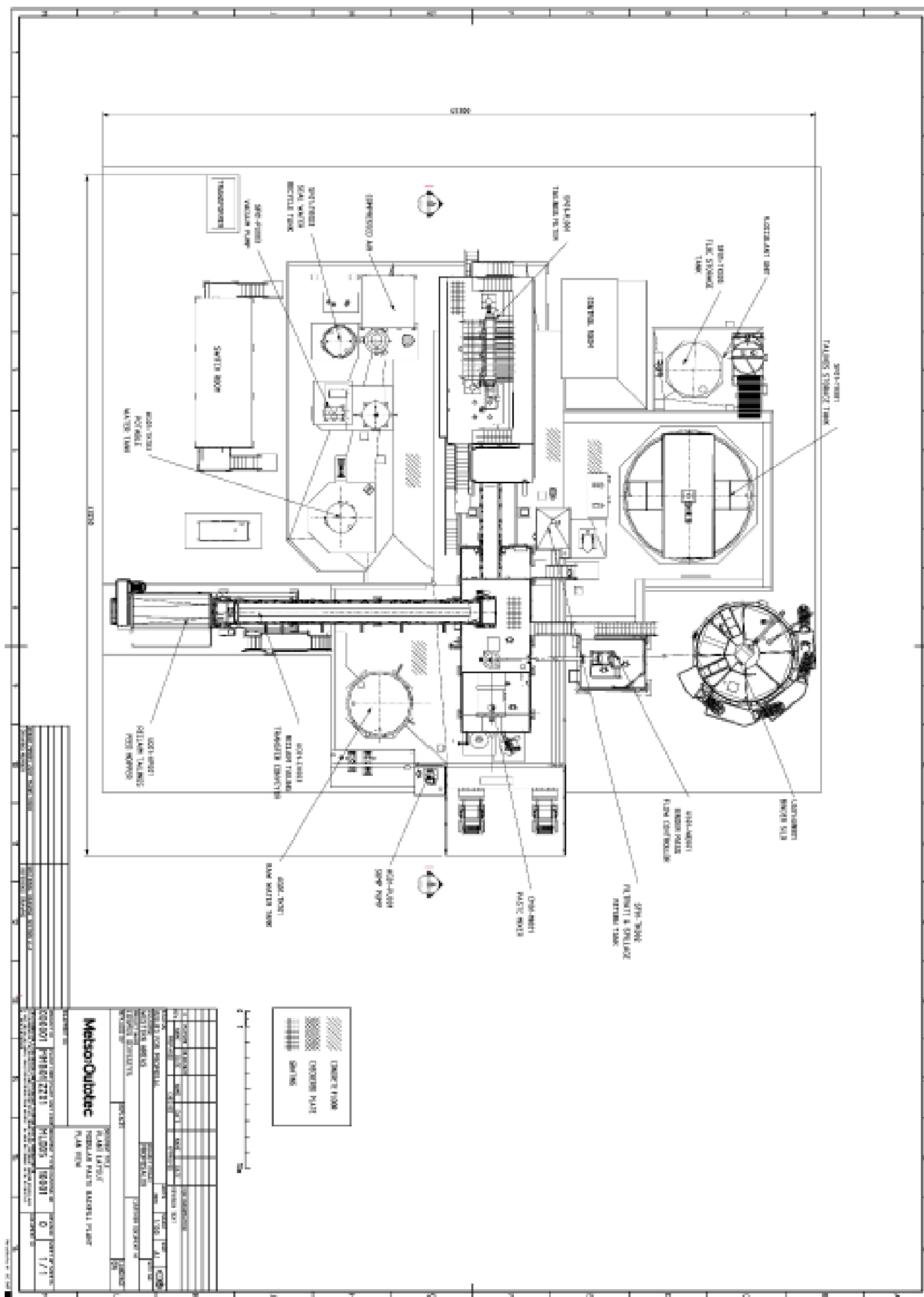


Figure 2: General layout of paste plant





Figure 3: location of proposed pipeline routes (2 options).



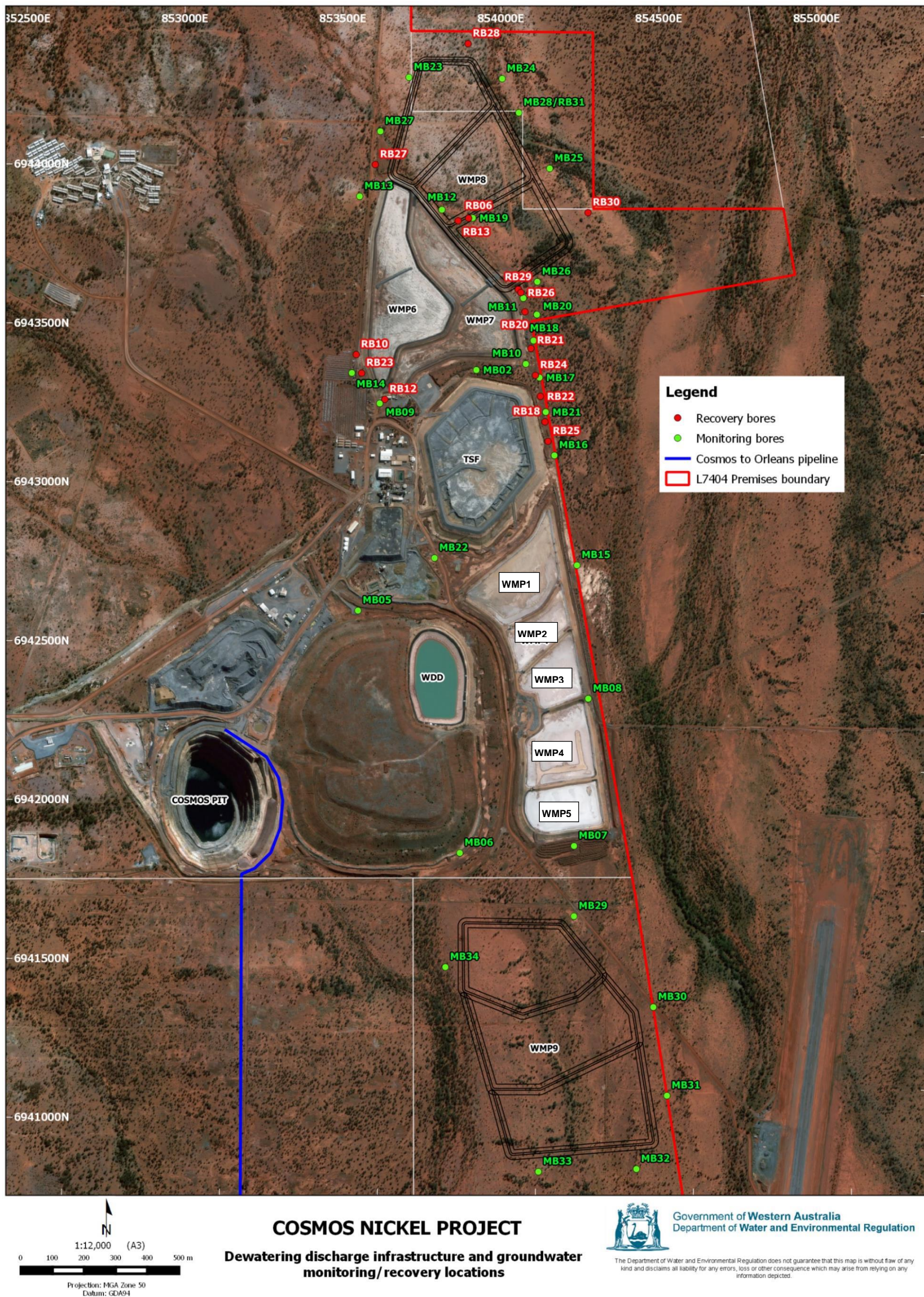


Figure 4: Location of dewatering infrastructure and groundwater monitoring bores from Licence L7404/1999/9



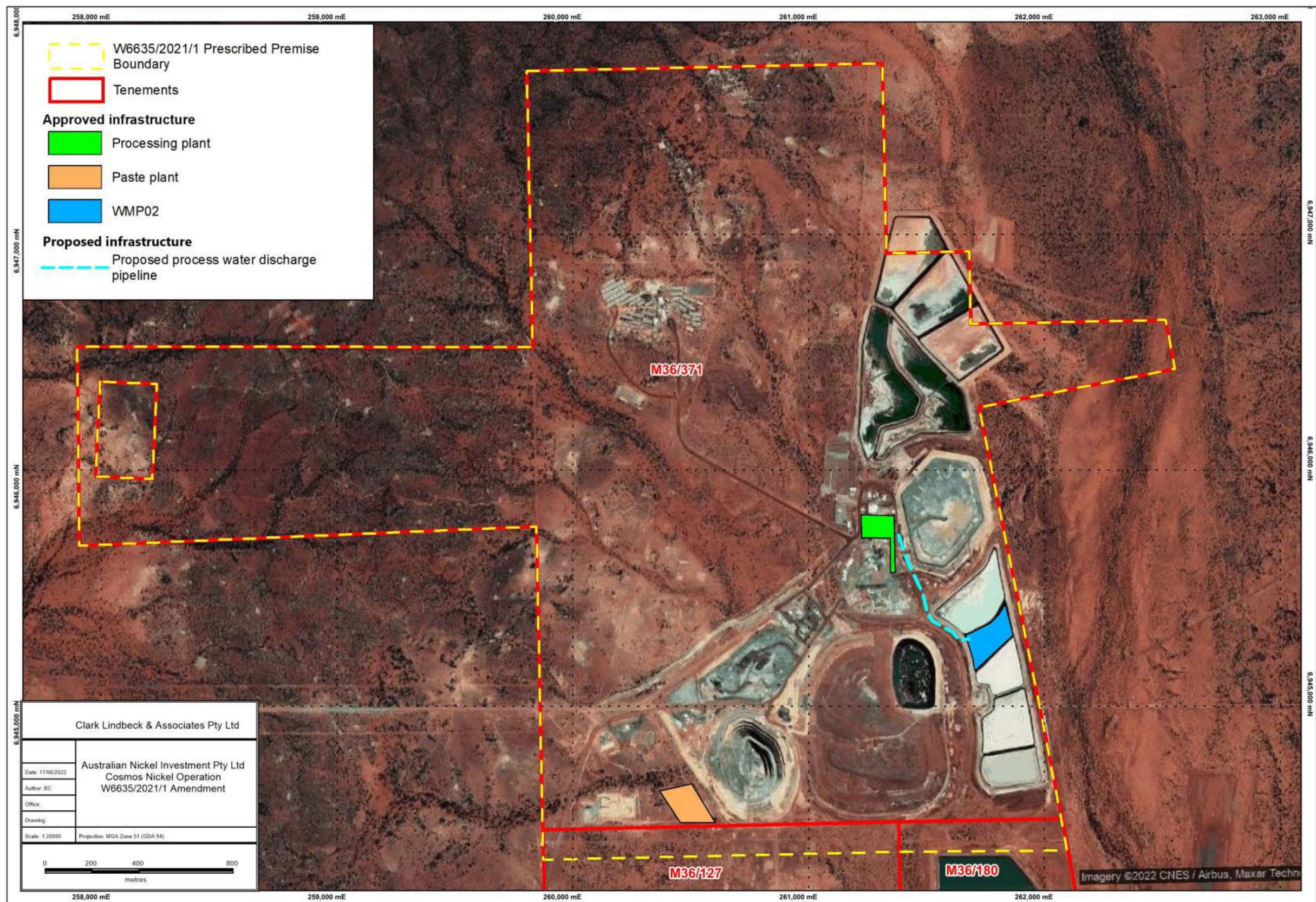


Figure 5: Proposed process water discharge pipeline to water management pond 2