Environmental Protection Act 1986

Section 43A

NOTICE OF DECISION TO CONSENT TO AMEND A REFERRED PROPOSAL DURING ASSESSMENT

PERSON TO WHOM THIS NOTICE IS GIVEN

(a) Technology Metals Australia Limited (ABN: 64 612 531 389)
Suite 9
330 Churchill Avenue
SUBIACO WA 6008

PROPOSAL TO WHICH THIS NOTICE RELATES:

Gabanintha Vanadium Project Assessment No. 2190

Pursuant to s. 43A of the *Environmental Protection Act 1986* (EP Act), the Environmental Protection Authority (EPA) gives approval to the assessment of the proposal being completed in respect of the proposal as amended in accordance with the proponent's request:

- Increase Development Envelope in size by 1,742.54 ha to 7,151.99 ha.
- Expansion of the Water Supply Borefield.

The amended proposal content document and figures are attached.

EFFECT OF THIS NOTICE:

1. The assessment of the proposal is to be completed in respect of the proposal as amended in accordance with the decision set out in this notice.

2. The proposal as amended in accordance with this notice is taken to have been referred to the EPA under s. 38 of the EP Act.

RIGHTS OF APPEAL:

There are no rights of appeal under the EP Act in respect of this decision.

Prof. Matthew Tonts
Delegate of the Environmental Protection Authority
CHAIR

8 July 2022

Attachment 1- Amended proposal content document and figure showing the amendments

Table 1: General proposal description

Proposal title	Gabanintha Vanadium Project
Proponent name	Technology Metals Australia Limited
Short description	Technology Metals Australia LTD proposes to construct and operate the Gabanintha Vanadium Project located approximately 615 km north-east of Perth and 40 km south-east of Meekatharra, along the Meekatharra-Sandstone Road. The Project involves the clearing of up to 1,060 ha of native vegetation, open pit mining, the processing of ore from sources inside and outside the Development Envelope, onsite mining and processing waste disposal plus other supporting activities required to produce a range of products including Vanadium pentoxide, Ferro Vanadium, Iron-Vanadium Concentrate, Titanium concentrate and base metal concentrate.

Table 2: Proposal content elements

Proposal element	**Location / description**	**Maximum extent, capacity or range**
Physical elements		
Mining elements, including: • Open pits • Haul roads • Waste rock landforms	Figure 1	Disturbance of up to 1,060 ha within a 7,151.99 ha Development Envelope.
Processing elements, including: • Processing plant with ability for multiple configurations • Run of mine • Low grade stockpile • Integrated waste landform for process waste / tailings storage facility • Evaporation ponds • Reagent storage		
Supporting activities and infrastructure, including: • Power station • Workshops • Fuel storage and refuelling area • Administration complex • Accommodation camp • Wastewater treatment and sprayfield • Borefield and associated infrastructure • Dewatering infrastructure • Access roads		

• Landfill • Ancillary infrastructure		
Operational elements		
Mining and material movement	Figure 1	Annual mining rates (ore and waste) will range from 5.3 – 22.3 Mt/annum with an average of 12 Mt/annum.
Production / end product	Figure 1	Up to 14,400 tonnes of fused vanadium pentoxide (V2O5) per annum (or equivalent vanadium units as Ferro Vanadium (FeV80 or other FeV products)). Up to 400,000 t per annum of titanium concentrate. Up to 50,000 t per annum of base metal concentrate. Up to 2 Mt per annum of Iron-Vanadium Concentrate.
Ore processing	Figure 1	Up to 4 Mt per annum of ore.
Process waste deposition	Figure 1	Disposal of up to 3.9Mt per annum of processing waste to the lined Integrated Waste Landform (IWL/TSF), evaporation ponds or other containment structures.
Groundwater abstraction (mine dewatering and abstraction)	Figure 1	Project water requirements are up to 2.7 GL/annum. To facilitate mining, between 0.2 to 1 GL/annum will be abstracted. Between 1.7 - 2.7 GL/annum will be abstracted from the palaeochannel aquifer depending on the phase of the Project and volume generated by dewatering.
Proposal elements with greenhouse gas emissions		
Peak Annual Average:		
Scope 1	280,770 tCO_2-e	
Scope 2		
Scope 3		
Commissioning		
Commissioning of the Processing Plant and supporting infrastructure will occur between year 1.5 – 3. Ore for the Plant commissioning will be sourced from the North Pit.		
Decommissioning		
Removal of all infrastructure following cessation of mining operations (excluding periods of care and maintenance).		
Rehabilitation and Closure		
The intent for the Project area post closure is to return the area to an agreed post-closure land use. At the end of the Project life the open pits, IWL/TSF and WRLs will be remaining as permanent features. Progressive rehabilitation will be undertaken over the life of the mine. Areas disturbed through implementation of the Project will be designed to be safe and non-polluting and will be		

constructed so that their final shape, size, stability, and ability to support local native vegetation that are comparable to natural landforms in the area.		
Other elements which affect extent of effects on the environment		
Proposal time	Maximum project life	Approximately 30 years (including construction and closure)

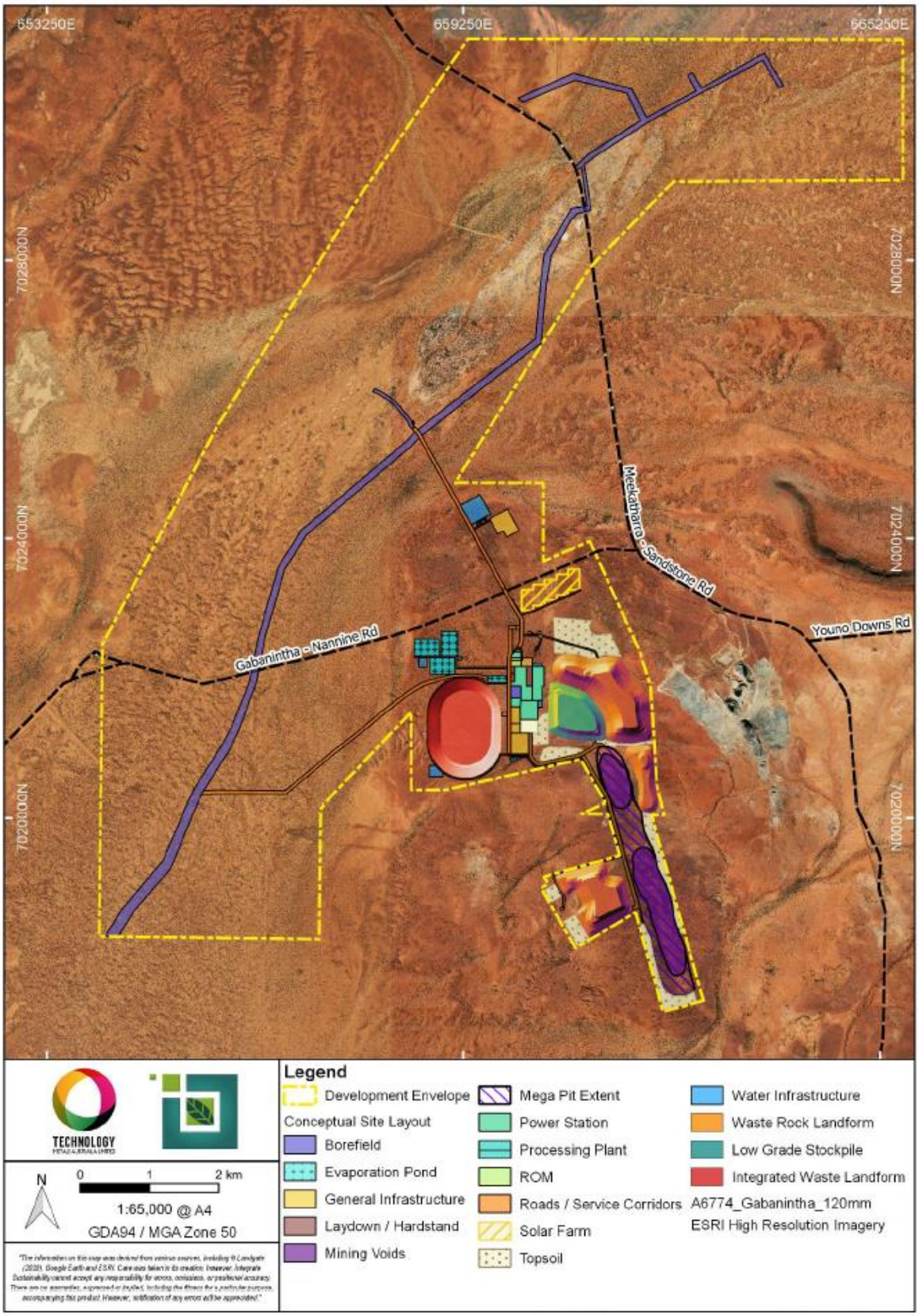

Figure 1: Development Envelope and Indicative Disturbance Footprint (Conceptual Site Layout)

Summary of reasons for decision – request to amend a referred proposal during assessment under s. 43A of the *Environmental Protection Act 1986*

Proposal title: Gabanintha Vanadium Project (Assessment No. 2190)

Environment Online Reference Number: n/a

Date request to amend referred proposal under s. 43A received: 08-06-2022

Proponent: Technology Metals Australia Limited

Proposal referral date: 13-12-2018

Level of assessment: Environmental Review (no public comment)

Existing referred proposal:

Technology Metals Australia LTD proposes to construct and operate the Gabanintha Vanadium Project (the Proposal) located approximately 615 km north-east of Perth and 40 km south-east of Meekatharra, along the Meekatharra-Sandstone Road. The proposal is located within the Shire of Meekatharra.

The Proposal includes a 5,409.45 ha Development Envelope with a 1,060 ha Disturbance Footprint. Activities include the clearing of native vegetation, open pit mining, the processing of ore from sources inside and outside the Development Envelope, onsite mining and processing waste disposal plus other supporting activities required to produce a range of products including Vanadium pentoxide, Ferro Vanadium, Iron-Vanadium Concentrate, Titanium concentrate and base metal concentrate.

Short description of amendment sought:

The Development Envelope is to be expanded by 1,742.54 ha taking the total area to 7,151.99 ha compared to 5,409.45 ha for the current Development Envelope. The additional area is to accommodate and allow flexibility of borefield infrastructure placement within the water supply area along the Hope Palaeochannel and Gabanintha Tributary. The total disturbance area will remain at 1,060 ha (which includes approximately 56 ha within the expansion area), and no changes are planned for any of the site activities, quantity of water abstraction, water consumption and production throughput will remain unchanged (TMT 2022).

Table 1: proposed changes from the original proposal

<table>
<tr><th>Element</th><th>Original Proposal</th><th>s.43a (Amended Proposal)</th></tr>
<tr><td colspan="3">Physical elements</td></tr>
<tr><td>Mining elements, including:
Open pits
Haul roads
Waste rock landforms</td><td rowspan="2">Disturbance of up to 1,060ha within a 5,409.45 ha Development Envelope.</td><td rowspan="2">Disturbance of up to 1,060ha within a 7,151.99 ha Development Envelope.</td></tr>
<tr><td>Processing elements, including:
Processing plant with ability for multiple configurations
Run of mine
Low grade stockpile</td></tr>
</table>

Element	Original Proposal	s.43a (Amended Proposal)
• Integrated waste landform for process waste / tailings storage facility • Evaporation ponds • Reagent storage		
Supporting activities and infrastructure, including: • Power station • Workshops • Fuel storage and refuelling area • Administration complex • Accommodation camp • Wastewater treatment and sprayfield • Borefield and associated infrastructure • Dewatering infrastructure • Access roads • Landfill • Ancillary infrastructure		

Decision: Amendments to proposal as set out in attachment 1 is approved.

Environmental factors relevant to amendment:

- Flora and vegetation: There is no change to the area of the disturbance footprint, which remains at 1,060ha.
- Terrestrial fauna: There is no change to the area of the disturbance footprint, which remains at 1,060ha.
- Subterranean fauna and Inland waters: change to the abstraction location but no change to the groundwater abstraction volume
- Social surroundings: closer proximity to significant Aboriginal heritage site buffer (Mt Yagahong and Yakong).

Summary of likely changes to environmental impacts from proposed amendment

AQ2 (2020) completed groundwater modelling to predict the water supply requirements for the Proposal within the Hope Palaeochannel and Gabanintha Tributary. The hydrostratigraphy of the water supply area comprises two aquifers – an Upper Aquifer and Lower Aquifer with an Intermediate Aquitard located between the two. Further hydrogeological modelling (PSM 2022) was undertaken to forecast the water requirements for the Proposal's life of mine. This modelling has indicated that the water supply borefield will need to be expanded in a north and north-easterly direction within the palaeochannel and tributary.

Table 2: Proposal amendments and changes to environmental impacts

Amendment sought	Changes to environmental impacts
Change to Development Envelope: - Increase in size by 1,742.54 ha - Change location as shown in Figure 1	The increase in the Development Envelope is to accommodate and allow flexibility of infrastructure placement within the water supply borefield. **No change to impact** <u>Flora and vegetation and Terrestrial Fauna</u> The terrestrial environmental impacts will remain the same, as there is no change in the Disturbance Footprint area (1,060 ha). The additional estimated 56 ha disturbance within the extended Borefield area, will be accommodated within the existing 1,060 ha Disturbance Footprint area. <u>Social surroundings</u> It is noted from the Proponent's s43A application that representatives from the Yugunga-Nya Corporation have expressed concerns about impacts from proposed activities to Gabanintha Pool, drainage lines and Mt Yagahong (TMT 2022). The Proponent indicates that the Development Envelope (water supply Borefield expansion) has been designed to ensure there are no impact to Gabanintha Pool and Long Pool. The expansion is outside of the Mt Yagahong exclusion zone (includes registered Aboriginal heritage site Mt Yagahong (ID 11133) and Yakong (ID 11139). The EPA advises that the potential impacts, and the pathways for those impacts, to each of the identified environmental factors remain unchanged. The EPA considers the proposed changes do not alter the key environmental factors likely to be impacted by the original proposal. These impacts will be considered during the assessment.
Water Abstraction Bore Field - Increase in borefield area - Change in groundwater drawdown	The Proposal's water requirements have not changed and remain up to 2.7 GL/annum. Predictive groundwater modelling was used to assess the changes to the Gabanintha Tributary from groundwater abstraction to meet preliminary estimates of the Proposal's water supply demands (AQ2 2020b). The outcomes indicated that the supply demands could not be sustained by the Gabanintha Tributary source within the Development Envelope. Additional groundwater modelling has been recently completed by PSM (2022) to confirm the long-term sustainability and to make recommendation of the most appropriate borefield configuration. A 5 m drawdown area is predicted by year-25 within the vicinity of the production bores located outside current Development Envelope (Integrate Sustainability 2022 and PSM 2022). Pastoral wells and Shire of Meekatharra bores located in the surrounding area and outside of the Development Envelope are within the 2 m drawdown contour at year-25. The drawdown was estimated to not substantially alter or

Amendment sought	Changes to environmental impacts
	affect the roles and performances of these wells and bores (PSM 2022). **Likely change in impacts to:** <u>Inland waters and Subterranean fauna</u> The extension of the water supply borefield (while across a larger area) allows for the application of adaptive management approaches for groundwater abstraction and associated potential effects on Inland waters. The extension to the water supply borefield might slightly increase impacts within the upper Aquifer. However, the EPA advises that potential impacts, and pathways for those impacts, to each of the identified environmental factors will not significantly change. The EPA considers proposed changes do not alter the key environmental factors likely to be impacted by the original proposal. These impacts will be considered during the assessment. Not likely to increase potential for the proposal to be inconsistent with the EPA environmental factor objectives for Inland Waters and Subterranean Fauna.

Summary of consultation

As part of the validation of the Environmental Review Document (ERD) against the Environmental Scoping Document (ESD), the proponent has liaised with the EPA regarding the water requirements for the proposal. As the ERD has not been published, the s43A application to change the proposal can be accommodated within the ERD. The ERD will be published (no public comment) on the EPA website. There are no changes to decision making authorities as part of the s43A application.

Summary of consideration of amendment

The EPA has considered whether, if the proposal were already approved, the amendment would be a significant amendment. This has included considering the likely significance of:

- Effects of the proposed amendment on its own
- Effects of the proposed amendment in the context of the existing referred proposal
- Cumulative environmental impacts
- Holistic impacts.

The EPA has considered whether it has sufficient information about the proposed amendment to be able to reasonably proceed with assessment of the amended proposal with or without performing any additional functions at this stage.

The EPA has considered whether the amended proposal will still be substantially the same character as the existing referred proposal.

The ESD has considered the likely impacts of groundwater abstraction for Inland waters and Subterranean fauna. The EPA notes that since the ESD was published (22 October 2019), Social surroundings (Aboriginal heritage) matters have arisen for the proposal. These matters are not specific to the section 43A change and are part of the assessment. The EPA's review of the ERD:

- may identify new preliminary environmental factors and/or other environmental factors and matters; and
- will consider whether the assessment has been carried out for environmental impacts in all areas which may be affected by the proposal's implementation.

Approval – may be a significant amendment but can proceed with current assessment approach

The EPA considers the amended proposal to be substantially the same character as the existing referred proposal and may be considered a significant amendment if the proposal were already approved. The EPA considers it has enough information to reasonably proceed with assessment of the amended proposal without performing any additional functions at this stage.

Attachments

- Table 3 General Proposal Description
- Table 4 Amended Proposal Content Document
- Figure 1 Development Envelope and Indicative Disturbance Footprint
- Figure 2 Revised Development Envelope Change

Appeals: Decision not appealable.

Prof. Matthew Tonts
CHAIR
Delegate of the Environmental Protection Authority

Date: 8 July 2022

References:
AQ2. 2020. Gabanintha Vanadium Project Water Supply Report. Prepared by AQ2 for Technology Metals Australia Ltd.
Integrate Sustainability Pty Ltd. 2022. Gabanintha Vanadium Project – Environmental Review Document
PSM. 2022. Gabanintha Project - Water Supply Independent Review and Conceptual Borefield Design. Prepared for Technology Metals Australia Ltd.
Technology Metals Australia Limited (TMT). 2022. S 43a amendment application for Gabanintha Vanadium Project (Assessment No. 2190).

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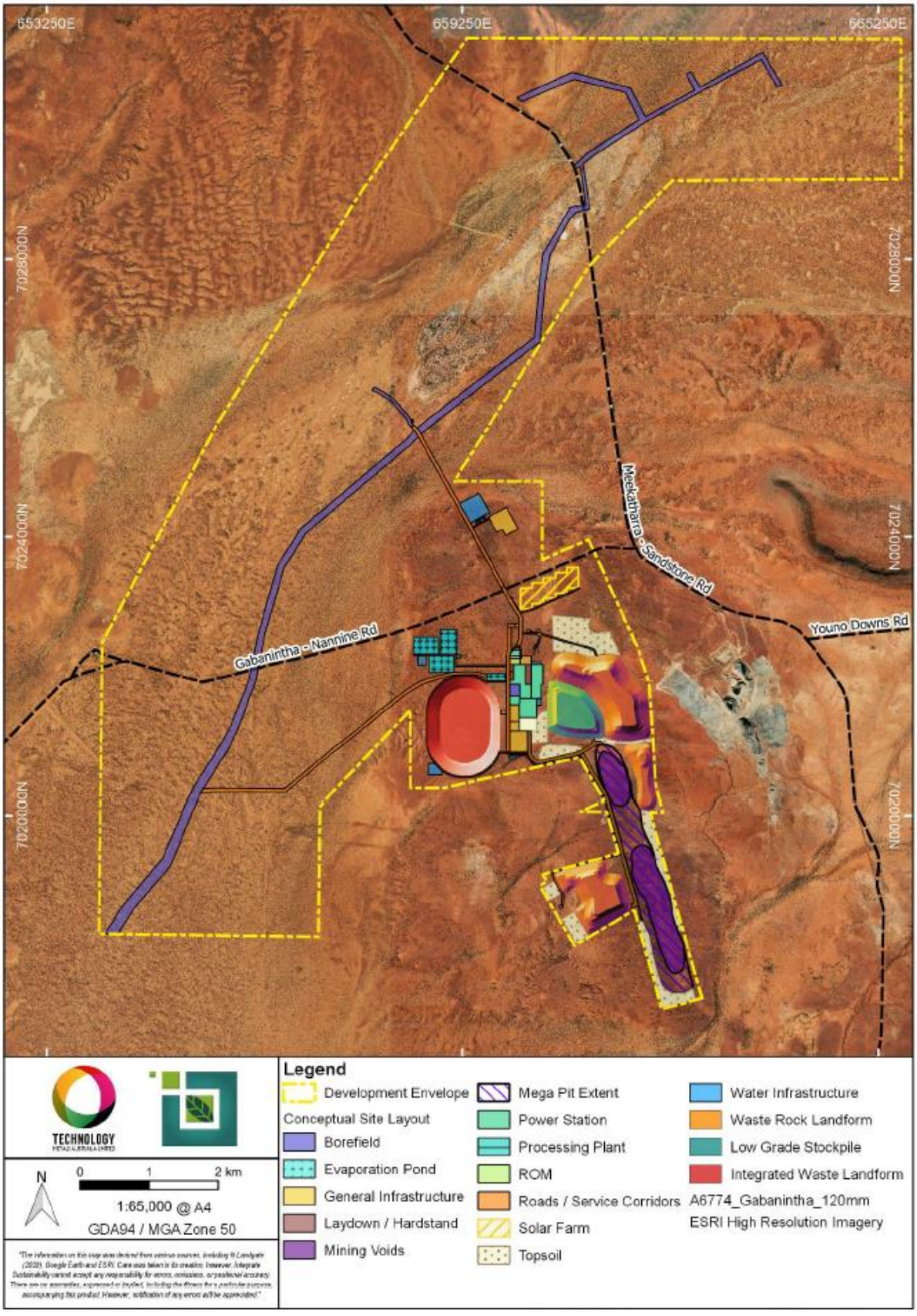

Figure 1: Development Envelope and Indicative Disturbance Footprint (Conceptual site layout)

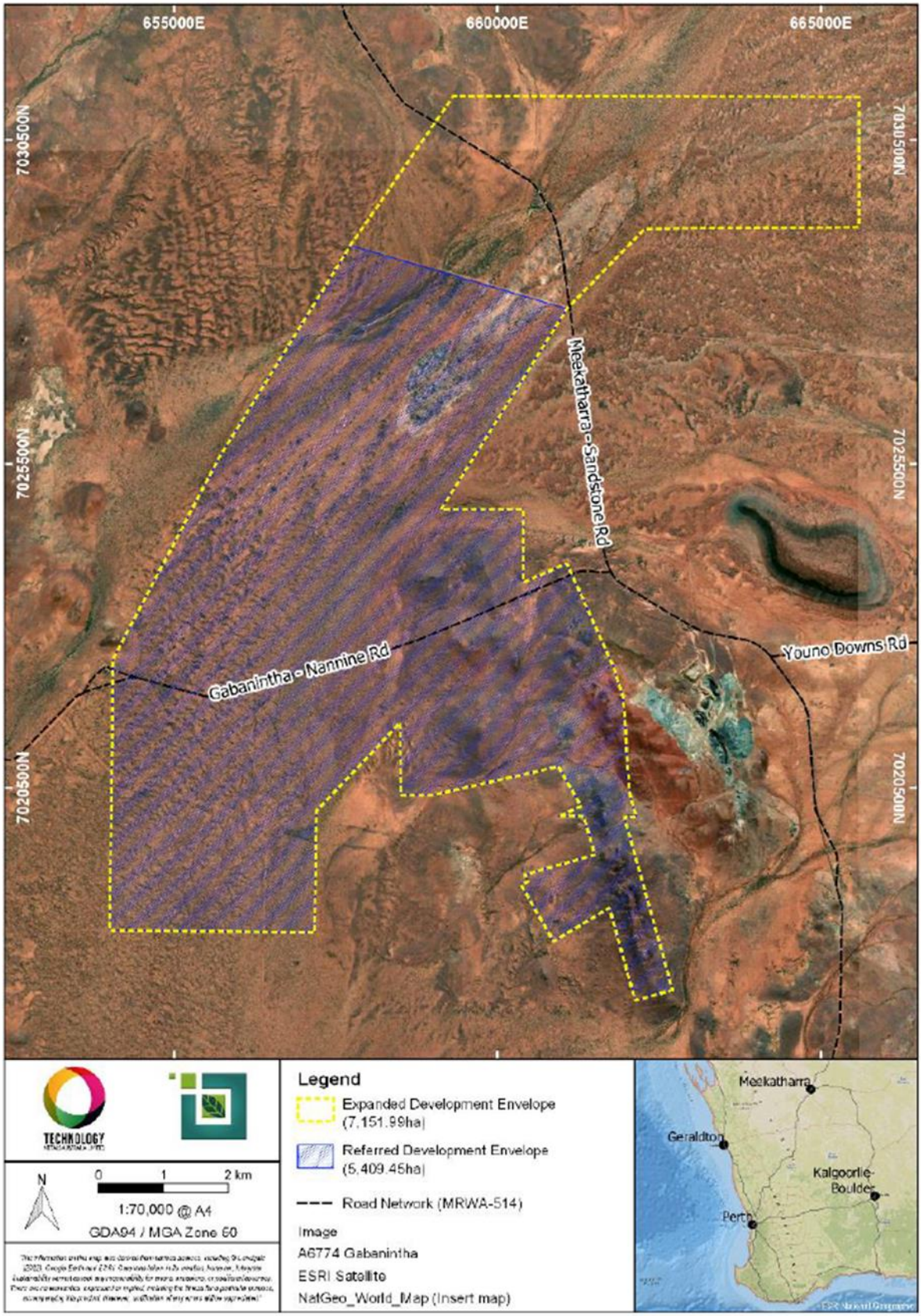

Figure 2 Revised (Expanded) Development Envelope