Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L9037/2017/1
Licence holder	Mt Marion Lithium Management Pty Ltd
ACN	666 116 365
Registered business address	20 Walters Drive OSBORNE PARK WA 6017
DWER file number	DER2017/000308-1
Duration	27/06/2017 to 26/06/2035
Date of issue	27/06/2017
Date of amendment	9/09//2025
Premises details	Mount Marion Lithium Project Shire of Coolgardie Mining tenement M15/1000, M15/717 and on private land known as Hamptons Lease Area 53, portion of Lot 105 on Deposited Plan 40396, Volume 2668 Folio 420.

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production capacity**
Category 5: Processing or beneficiation of metallic and non-metallic ore	5,000,000 tonnes per year
Category 6: Mine dewatering	650,000 tonnes per year
Category 12: Screening etc. of material	200,000 tonnes per year
Category 54: Sewage facility, 100 m^3 or more per day	170 m^3/day
Category 57: Used tyre storage (general)	1,000 tyres
Category 64: Class II putrescible landfill	2,000 tonnes per annum
Category 73: Bulk storage of chemicals etc.	480 kL LNG 884 kL Diesel
Category 85B: Water desalination plant	0.73 gigalitres per year

This amended licence is granted to the licence holder, subject to the attached conditions, on 9 September 2025, by:

Alana Kidd
Digitally signed by Alana Kidd
Date: 2025.09.09 10:37:12 +08'00'

Alana Kidd
MANAGER, GREEN ENERGY
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Licence history

Date	Reference number	Summary of changes
27/06/2017	L9037/2017/1	Licence granted.
16/12/2017	L9037/2017/1	Amendment Notice 1 - Amendment to allow 2.1 Mtpa of coarse reject (tailings) material to be disposed to: ▪ western verge of Ghost Crab Pit ▪ northern ramp of Ghost Crab Pit ▪ Backloaded to existing waste rock landforms on M15/1000 and co-mingled with existing waste from mining operations.
31/05/2019	L9037/2017/1	Amendment Notice 2 - Throughputs increased to: ▪ Category 5 – 3.0 Mtpa using upgraded spodumene processing plant ▪ Category 64 – 1250 tpa (operation of additional landfill in waste rock dump) ▪ Category 73 – 480 kL LNG ▪ Category 85 – 70 m^3/day (construction and operation of an additional WWTP and doubling of spray field)
19/09/2019	L9037/2017/1	Amendment to allow: ▪ Use of approximately 10,000 tonnes / annual period of coarse rejects (coarse fraction of the tailings stream) for construction purposes. ▪ Discharge approximately 35,040 tonnes per year of oleic acid sludge material (from the Dissolved Air Flotation (DAF) process) sludge to the Ghost Crab Pit TSF; ▪ Addition of Category 85B to allow disposal of 0.73 GL per annum of RO (reverse osmosis) brine into the Mt Marion pits (N1, N2 and C1), this involves construction of discharge pipelines from the RO Plant and turkey's nests to the discharge pits. ▪ Addition of Category 6 to allow for disposal of 0.65 GL of dewater from the North (N1 & N2) and Central pits (C1) into adjacent pits or to containment structures (turkeys nests) onsite; This involves the construction of discharge pipelines from the North and Central Pits to other Mt Marion pits and/or turkeys nests. ▪ Use of dewater / RO Brine water for dust suppression onsite not allowed ▪ Consolidation of Amendment Notices 1 and 2 into the amended licence.
5/07/2022	L9037/2017/1	Amendment to allow: ▪ Change in Prescribed Premise boundary (inclusion of Hamptons Lease area). ▪ Change in Category 6: Dewatering location (to include the Hamptons Lease area)

		▪ Change to the Category 64: Class II putrescible landfill – throughput increased to 2,000 tonnes and footprint increased to include entire waste rock landform. ▪ Addition of Category 12: Screening of material – throughput of 100,000 tpa. ▪ Change to Category 85: Sewage facility and WWTP capacity: replacement of the two WWTP with 1 new WWTP, throughput of 70 m^3/day. Another new WWTP to be constructed in parallel with the 70m^3/day plant to increase throughput to 90 m^3/day. ▪ Change in Table 9: Infrastructure and Equipment description: - Process Plant: removal of specific conveyor numbers and inclusion of further crushing and screening infrastructure to allow plant to reach current throughput of 3.0 Mtpa, and - Category 73 infrastructure updated to reflect current infrastructure on premises. ▪ Removal of completed conditions.
19/12/2023	L9037/2017/1	Amendment to: Increase throughput of categories 5 (to 5 Mtpa), 12 (to 200,000 tpa) and 73 (diesel to 884 kL). Removal of infrastructure already constructed from infrastructure design and construction requirements table. Addition of annual environmental reporting condition. Restructure licence conditions to latest licence format.
28/08/2024	L9037/2017/1	Amendment to: • Change Licence Holder name and ACN. • Add additional tailings discharge points (spigots) to the existing Ghost Crab In-Pit Tailings Storage Facility • Transfer Wastewater Treatment Plant (WWTP) Stage two and three from works approval W6744/2022/1 to this licence. • Amend the existing Category 85 to Category 54 with a maximum capacity of 170 m^3/ day. • Administrative change of typographical error, increasing diesel storage capacity from 854 kL to 884 kL.
09/09//2025	L9037/2017/1	Amendment to: Category 5 (Tailings Storage Facility) - Amend total freeboard from RL 374 max tailings level (below ~ 6m from lowest point of pit crest) to 0.5m below the pit crest max. Category 5 (Mobile Crushing and Ore Sorting) - Increase the approved footprint. Merge Operational requirement 9 & 10 (dust suppression, intent to have abatement infrastructure available and maintained but not prescribed to be in use at all times) from Table 2 of licence.

Definitions

In this licence, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
Amendment Notice	means an amendment granted under s.59 of the EP Act in accordance with the procedure set out in s.59B of the EP Act.
Annual Period	means a 12-month period commencing from 1 January until 31 December.
Approved Policy	has the same meaning given to that term under the EP Act.
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples.*
AS/NZS 5667.10	means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on the sampling of waste waters.*
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on the sampling of groundwaters.*
BOD	Biochemical Oxygen Demand
BC Act	Biodiversity Conservation Act 2016 (WA)
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
Compliance Report	means a report in a format approved by the CEO as presented by the Licence Holder or as specified by the CEO (guidelines and templates may be available on the Department's website).
Condition	means a condition to which this Licence is subject under s.62 of the EP Act.
Department	means the department established under s.35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act.
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Licence Holder in writing and sent to the Licence Holder's address for notifications, as described at the front of this Licence, in relation to:

	(a) compliance with the EP Act or this Licence; (b) the Books or other sources of information maintained in accordance with this Licence; or (c) the Books or other sources of information relating to Emissions from the Premises.
Discharge	has the same meaning given to that term under the EP Act.
DMIRS	Department of Mines, Industry Regulation and Safety.
DWER	Department of Water and Environmental Regulation.
Emission	has the same meaning given to that term under the EP Act.
Environmental Harm	has the same meaning given to that term under the EP Act.
EP Act	means the *Environmental Protection Act 1986* (WA).
EP Regulations	means the *Environmental Protection Regulations 1987* (WA).
Freeboard	means the distance between the maximum water surface elevation and the top of retaining banks or structures at their lowest point.
HDPE	High density polyethylene
Implementation Agreement or Decision	has the same meaning given to that term under the EP Act.
Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.
Licence	refers to this document, which evidences the grant of a Licence by the CEO under s.57 of the EP Act, subject to the Conditions.
Licence Holder	refers to the occupier of the premises being the person to whom this Licence has been granted, as specified at the front of this Licence.
LNG	liquefied natural gas
Material Environmental Harm	has the same meaning given to that term under the EP Act.
mbgl	metres below ground level
P1 and P2	Priority flora and fauna listed in accordance with the Biodiversity Conservation Act 2016 (WA).
Pollution	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Licence applies, as specified at the front of this Licence and as shown on the map in Schedule 1 to this Licence.
Prescribed Premises	has the same meaning given to that term under the EP Act.

Primary Activities	refers to the Prescribed Premises activities listed on the front of this Licence as described in Schedule 2, at the locations shown in Schedule 1.
RO Brine	Reverse Osmosis Brine
Serious Environmental Harm	has the same meaning given to that term under the EP Act.
Spot sample	a discrete sample taken randomly (with regard to time and/or location) from a body of water.
Unreasonable Emission	has the same meaning given to that term under the EP Act.
Waste	has the same meaning given to that term under the EP Act.
Works	refers to the Works described in Table 3 at the locations shown in Schedule 1 of this Licence to be carried out at the Premises, subject to the Conditions.
WWTP	Wastewater Treatment Plant

Interpretation

In this licence:

(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 licence:

  (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 licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Licence conditions

The licence holder must ensure that the following conditions are complied with:

Infrastructure and equipment

1. The licence holder must ensure that the site infrastructure and equipment listed in Table 2 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 2.

Table 2: Infrastructure and equipment requirements

Site infrastructure and equipment	Operational requirement	Infrastructure location
Ore processing infrastructure		
Crushing circuits: Primary, secondary and tertiary crusher, screens, conveyors, product stackers	1. Dust suppression systems must be used during operation. 2. Dust suppression systems including water sprays fitted to conveyors, head chutes and stackers must be kept maintained. 3. Drive in sumps maintained to capture sediment in stormwater runoff	Refer to Schedule 1, Figure 1: Crushing and beneficiation plant
Beneficiation Plant: Process and raw water tanks, Wet screening and sizing circuit, Dense Media Separation (DMS) plant including fines treatment, Dense media regrind circuit, Classification cyclone and classifiers, Flotation circuit, Thickeners	4. All pipelines containing environmentally hazardous materials are provided with secondary containment adequate to contain any spill for a period equal to the time between routine inspections.	Refer to Schedule 1, Figure 1: Crushing and beneficiation plant
Tailings storage facility (tailings): Ghost Crab in-pit TSF	5. The maximum tailings level must not exceed 0.5m below the pit crest max. 6. Tailings discharge to Ghost Crab to be via multiple spigots, which will be rotated to achieve an even rate of tailings rise within the facility. 7. All piping will be constructed in accordance with AS/NZS 2033:*2008 "Installation of polyethylene pipe systems"* and contained within appropriate sized bunding to contain any potential spills. 8. Where water levels reach 8m BGL within	Refer to Schedule 1, Figure 1: Ghost Crab Tailings Storage Facility

Site infrastructure and equipment	Operational requirement	Infrastructure location
	monitoring/recovery bores MM24MB35, MM24MB36, MM24MB37 and MM24MB38; pumping from the affected bores to the RO plant until the water level decreases below 8m.	
Tailings storage (coarse reject material): Waste rock landforms	9. Waste rock landforms containing coarse reject tailings must have drainage capable of containing any run-off or stormwater originating from the landform surface.	Refer to Schedule 1, Figure 1: Waste Rock Landforms 1 - 5
Ore sorting infrastructure Used in conjunction with mobile crushing plants.	10. Dust suppression systems must be available for use at all times during operation. 11. Dust suppression systems including water sprays fitted to conveyors, head chutes and stackers must be kept maintained. **12.** Dust suppression system must be used when dust uplift is observed in the mobile crushing area.	Refer to Schedule 1, Figure 2: Mobile crushing areas
Categories 5, 6 and 85B water management infrastructure		
Turkey's Nests (Processing and dewatering)	13. Lined with HDPE; and 14. 300 mm freeboard to be maintained.	Refer to Schedule 1, Figure 1: Mining turkeys nest, Processing turkeys nest, Other labelled turkeys nests Any turkeys nest present on the prescribed premises and not labelled in the figures of Schedule 1.
Pipelines: Including tailings, tailings return, dewatering and RO brine pipelines	15. Must be positioned in v-drains with sufficient capacity to contain any spill for a period equal to the time between routine inspections. 16. Must be inspected daily. 17. Isolation valves, telemetry and flow meters are to be maintained to manufacturers specifications	Refer to Schedule 1, Figure 3

Site infrastructure and equipment	Operational requirement	Infrastructure location
Northern Pit 1, Northern Pit 2 Central C01 Pit;	18. A minimum vertical freeboard of 6 meters must be maintained below the lowest crest level at all times.	Refer to Schedule 1, Figure 3
Categories 5 and 12 Crushing and screening infrastructure		
Mobile crushing plants Category 5	19. Bunds maintained around the screening plant and product stockpile area 20. Shields and covers on transfer points to be kept maintained and dust controlled at all times to prevent dust from impacting sensitive receptors.	Refer to Schedule 1, Figure 2: Mobile crushing areas
Mobile crushing plants Category 12		Refer to Schedule 1, Figure 1: Waste rock landforms 1 - 5
Category 54 wastewater treatment infrastructure and management		
Wastewater treatment plants Submerged aerated filter WWTP capacity 70 m^3/day Two Sequence Batch Reactor WWTPs, each of capacity of 50 m^3/day Irrigation field	21. Tank bunding to be maintained so as to contain volume of 110% of the largest tank. 22. Treated effluent is to be discharged via irrigation to the 6.64 ha irrigation field indicated in Schedule 1, Figure 1 23. Sprinklers in the irrigation field are to be maintained and operated such that the effluent does not pond or runoff from the irrigation field.	Refer to Schedule 1, Figure 1: WWTP and spray field
Category 57 Used tyre management		
Used tyre storage	24. Maximum of 1,000 tyres stored across the premises. 25. Stored at two waste disposal facilities and at workshops.	Refer to Schedule 1, Figure 1
Category 64 landfill infrastructure and management		

Site infrastructure and equipment	Operational requirement	Infrastructure location
Class II putrescible landfill	26. Landfill trenches to be located on waste rock landforms within the Waste Rock Landform boundary seen in Figure 1. 27. No more than two landfill trenches are to be open on the waste rock landform at any one time. 28. Tip face to not exceed 30 m in length. 29. Landfill trench not to exceed 2 metres in depth, and 30. Tipping area(s) to be covered each week with a dense (at least 200 mm) layer of inert and incombustible material. 31. Signage to be maintained so as to be legible. 32. Inspected weekly to ensure correct wastes are being disposed of and that trenchers are being covered weekly 33. Waste that has been washed or blown away from the tipping area is to be return to the tipping area at least one in each month.	Refer to Schedule 1, Figure 1: Landfill & biofarm (Ghost Crab WRL) Waste Rock Landform 2 and Landfill
Category 73		
Fuel supply: 3 x 57,000 L diesel tanks, 1 x 53,000 L, and 6 x 110,000 L tanks. LNG: 8 x 60,000L tanks	34. None specified	Refer to Schedule 1, Figure 1: LNG/Fuel Farm
Category 85B Reverse osmosis water treatment infrastructure		
Reverse Osmosis Plant	35. None specified	Refer to Schedule 1, Figure 3: RO plant
Other Activities:		
Biofarm (bioremediation pad) within Ghost Crab waste rock landform Workers' accommodation camp Motor Control Centres within Processing Plant Control rooms/administration offices/workshops Final product stockyard, weighbridge	36. None specified	Refer to Schedule 1, Figure 1 and Figure 3.

Infrastructure design and construction

2. The Licence Holder must install and undertake the Works for the infrastructure and equipment:

(a) specified in Column 1;
(b) to the requirements specified in Column 2; and
(c) at the location specified in Column 3

of Table 3 below.

3. Within 60 days of the completion of the Works specified in Column 1 of Table 3, the Licence Holder must provide to the CEO a compliance document certified by the installer confirming each item of infrastructure or component of infrastructure specified in Column 1 of Table 3 below has been constructed to the requirements specified in Column 2. The compliance document shall be signed by a person authorised to represent the licence holder.

Table 3: Infrastructure design and construction requirements

Column 1	Column 2	Column 3
Infrastructure/ Equipment	**Requirements (design and construction)**	**Site plan reference**
Category 5 infrastructure		
Ore sorting infrastructure	1. Dust suppression systems must be installed that include a. water sprays fitted to conveyors, head chutes and stackers, b. fitting of screens and covers on transfer points.	Category 5 infrastructure refer to Schedule 1, figure 2: Mobile crushing areas
Dewatering and RO Brine disposal infrastructure		
Pipelines: Including tailings, tailings return, dewatering and RO brine pipelines	2. Up to 500 mm diameter welded poly pipeline with v-drains installed.	Refer to Schedule 1, figure 3
	3. Isolation valves and telemetry to be installed.	
	4. A flow meter to be installed on each pipeline to allow discharge volumes to be measured.	
V- drains	5. The v-drains must have sufficient capacity to completely contain any discharges from pipeline leakage or breach for a period equal to the time between routine inspections.	Not depicted
Dewatering and RO Brine turkey nests	6. Constructed with minimum 1.5 mm welded HDPE liner	As shown in Figure 1 in Schedule 1
	7. Fenced to prevent fauna access	
Dust deposition gauges	8. Dust deposition monitors a. Selected and installed in accordance with AS/NZS 3580 b. Minimum 4 units with 1 placed to capture background ambient dust	Locations to be determined. Provided in accordance with Condition 15.

Column 1	Column 2	Column 3
Infrastructure/ Equipment	**Requirements (design and construction)**	**Site plan reference**
	deposition c. Placed between crushing and screening operations to within 30m of *Eucalyptus websteriana* (P1) and *Lepidosperma* sp. Kambalda (P2) populations	

Emissions and discharges

4. The licence holder must ensure that the emissions specified in Table 4, are discharged only from the corresponding discharge point and only at the corresponding discharge point location.

Table 4: Authorised discharge points

Emission	Discharge point	Discharge point location
Tailings (with the exception of coarse reject material)	Ghost Crab Pit in-pit TSF	As shown in Schedule 1: Figure 1
Coarse reject (tailings) materials	Discharge to Waste rock landforms, Or Use for construction purposes only within operational pit areas or within the processing plant footprint.	As shown in Schedule 1, figure 1: Waste Rock Landforms 1 – 5 Northern Pits 1 and 2 Central Pit (C01) Beneficiation plant
Treated effluent from WWTPs	Irrigation spray field	As shown in Schedule 1: Figure 1
Class II waste (putrescible and inert)	Trenches within the Landfill & biofarm (Ghost Crab WRL) and Waste Rock Landform 2 and Landfill	As shown in Schedule 1: Figure 1
Used tyres and rubber	Waste rock landforms 1 -5 Ghost Crab Pit Northern Waste Rock Landform. Ghost Crab Southern Waste Rock Landform	As shown in Schedule 1: Figure 1
Dewatering effluent	Pits: Northern Pit 1, Northern Pit 2 and Central C01 Pit; Ghost Crab in- Pit TSF; and dust suppression within operational areas of process plant and mines.	As shown in Schedule 1: Figure 1 and 4
RO Brine	Ghost Crab Pit in-pit TSF; and Pits: Northern Pit 1, Northern Pit 2 and Central C01 Pit RO Brine is not to be used for dust suppression	As shown in Schedule 1: Figure 1

Dust suppression.

5. The licence holder must ensure that where groundwater and dewater effluent is used for dust suppression, it is applied in a manner that does not impact vegetation.

6. The licence holder must ensure dewatering effluent is only used for dust suppression activities within already cleared areas within the area depicted in Schedule 1, Figure 4, excluding topsoil stockpiles and rehabilitation.

Discharge of dewatering effluent to Ghost Crab In-Pit TSF

7. The licence holder must only discharge up to 16,000 kL/year of dewatering effluent to the Ghost Crab In-Pit TSF.

Emission Limits

8. The licence holder must ensure that the treated wastewater effluent that is discharged to the irrigation spray field for the parameters in Column 1 of Table 5 meets the limits specified in Column 2 of Table 5.

Table 5: Treated effluent quality limits table

Column 1	**Column 2**
Parameters	**Limit**
BOD	<30 mg/L
Total Suspended Solids	<40 mg/L
Total Nitrogen	≤50 mg/L
Total Phosphorus	≤12 mg/L
pH	6.5 – 8.5
Thermo-tolerant Coliforms *(E.coli)*	<1000 cfu/100ml

Monitoring

9. The licence holder must ensure that:

(a) monitoring is undertaken in each monthly period such that there are at least 15 days in between the days on which samples are taken in successive months;

(b) monitoring is undertaken in each quarterly period such that there are at least 45 days in between the days on which samples are taken in successive quarters; and

(c) monitoring is undertaken in each annual period such that there are at least 9 months in between the days on which samples are taken in successive years.

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 indicated otherwise in the relevant table.

11. The licence holder must ensure that all monitoring equipment used on the Premises to comply with the Conditions of this Licence is calibrated in accordance with the manufacturer's specifications.

Discharge Point Monitoring

12. The licence holder must monitor emissions:

(a) from each discharge point;

(b) at the corresponding monitoring location;

(c) for the corresponding parameter;

(d) at the corresponding frequency;

(e) in the corresponding unit; and

(f) using the corresponding method,

as set out in Table 6.

Table 6: Emissions and discharge monitoring

Discharge point	Monitoring location	Parameter	Frequency	Unit	Method
Ghost Crab in-pit TSF	Tailings pipeline flowmeter	Volume of tailings (wet)	Monthly	kL	-
	Tailings decant pond	Level of the tailings decant pond in Ghost Crab Pit	Annually	Metres below lowest point of pit crest and m RHD	-
Waste rock landforms as depicted in Schedule 1, Figure 1	-	Volume of tailings (coarse rejects)	Monthly	Tonnes	Calculated from volume of coarse rejects discharged to waste rock landforms
Dewatering water discharged to Ghost Crab in-pit TSF	Ghost Crab Pit dewatering line flow meter	Volume of dewatering water	Monthly	kL	-
RO Brine discharged to Northern Pts 1 and 2 and Central Pit (C01)	RO Brine line flow meter	Volume of RO Brine	Monthly	kL	
RO Brine discharged to Ghost Crab in-pit TSF	Ghost Crab Pit RO Brine line flow meter	Volume of RO Brine	Monthly	kL	
Dewatering discharged to Northern Pts 1 and 2 and Central Pit (C01)	Dewatering pipeline flow meters	Volume of dewatering	Monthly	kL	
Water used for	Turkeys nests	Volume	Monthly	kL	

Discharge point	Monitoring location	Parameter	Frequency	Unit	Method
dust suppression (mixture of raw water and dewatering effluent)	where dust suppression water is drawn from.	Ra^{226},	Quarterly	Bq/L	AS/NZS 5667.1 AS/NZS 5667.11
		Ra^{228}			
		Pb^{210}			
		Gross α			
		Gross β			
WWTP treated effluent	discharge pipeline (post treatment and pre-discharge)	BOD	Quarterly	mg/L	AS/NZS 5667.10
		Total Suspended Solids		mg/L	
		Total Nitrogen		mg/L	
		Total Phosphorus		mg/L	
		pH		-	
		Thermo-tolerant Coliforms (E.Coli)		cfu/100ml	
Crushing and screening mobile plant	Dust deposition gauges	Deposited dust	Quarterly	g/m2/month	In accordance with AS/NZS 3580.10.1

Ambient Monitoring

13. The licence holder must monitor the groundwater for the parameter listed in Table 6:

(a) at the corresponding monitoring location;

(b) in the corresponding unit;

(c) at no less that the corresponding frequency; and

(d) for the corresponding averaging period.,

as set out in Table 7.

Table 7: Monitoring of ambient groundwater

Parameter	Monitoring location	Unit	Frequency	Averaging period
Standing water level	Monitoring bores MTMPZ1, MTMPZ2, MTMPZ4, MM24MB35, MM24MB36, MM24MB37 and MM24MB38 as depicted in Schedule 1, Figure 5	mbgl	quarterly	Spot samples
pH, electrical conductivity and temperature	MM24MB35, MM24MB36, MM24MB36 and MM24MB3, as depicted in Schedule 1, Figure 5		quarterly	Spot Samples

Monitoring of tailings storage facility water balance

14. The licence holder must undertake monitoring of the water balance for Ghost Crab in pit TSF each monthly period, and (as a minimum) record the following information:

(a) site rainfall;

(b) evaporation rate;

(c) decant water recovery volumes;

(d) volume of tailings deposited;

(e) tailings solid content (w/w%);

(f) volume of water in tailings;

(g) volume of reverse osmosis brine discharged to Ghost Crab in-pit TSF;

(h) volume of dewatering effluent discharged to Ghost Crab in-pit TSF;

(i) estimate of seepage losses; and

(j) volume of water recovered through the seepage recovery bores.

Crushing and screening dust monitoring

15. The licence holder must prepare a dust monitoring plan and submit the plan to the CEO, on or before 30 October 2025 including:

(a) Location and specifications of the monitoring instruments used as well as calibration, maintenance, and operational specifications

(b) Trigger action response with timeframes, where deposition on sensitive receptors exceeds 40 g/m^2/month

(c) Regular data and monitoring location review; and

(d) Assessment of data collection efficiency and identification of trends.

Recording of results of monitoring

16. The licence holder must record the results of all monitoring activity required by conditions 12, 13, 14 and 15.

Specified Actions (dust suppression)

17. The licence holder must develop site-specific concentration ratios for Ra^{226}, Ra^{228}, Pb^{210}, gross alpha and gross beta. These ratios must be developed through monitoring in accordance with the guideline the IAEA *Technical reports series No. 486 (*IAEA, 2019).

18. A report providing the site specific concentration ratios as required by condition 16 must be submitted by 1 December 2025. The report must include results of monitoring of site-specific species, the site specific concentration ratios and a discussion on how they were derived from the monitoring.

19. A soil monitoring plan must be developed to assess the levels of contamination by radionuclides within soil that is potentially impacted by the application of water for dust suppression. The monitoring plan must be developed in accordance with the guidelines, *Guideline Assessment and management of contaminated sites* and the *Technical reports series No. 486 (*IAEA, 2019), and submitted by 1 December 2024.

20. The licence holder must use the site-specific concentration ratios developed in condition 17, the radionuclide levels monitored in accordance with condition 12 and the plan provided under condition 18, to assess the rate of accumulation of radionuclides due to dust suppression activities and calculate the peak radiological impact as expected at the end of mine life. This assessment must be completed and submitted in a report to the CEO by 30 March 2028.

21. If the peak radiological impact as calculated in condition 19 is estimated to exceed 0.88 Bq/g (maximum) or 0.67 Bq/g (average), a dust management plan must be submitted that will ensure the peak radiological impact will not exceed 0.88Bq/g (maximum) or 0.67Bq/g (average). This plan must be submitted to the CEO within 90 days of the report required in condition 19.

Records and reporting

Non-compliance Notification (7 Days)

22. The licence holder must record the following information in relation to complaints received by the licence 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 licence holder to investigate or respond to any complaint.

23. The licence holder must:

(a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and

(b) prepare and submit to the CEO by no later than 30 March each year an Annual Audit Compliance Report in the approved form.

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

(a) the calculation of fees payable in respect of this licence;

(b) the works conducted in accordance with condition 3 of this licence;

(c) any maintenance of infrastructure that is performed in the course of complying with condition 1 of this licence;

(d) monitoring programmes undertaken in accordance with conditions 12, 13, 14 and 15 of this licence; and

(e) complaints received under condition 21 of this licence.

25. The books specified under condition 23 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 licence holder for the duration of the licence; and

(d) be available to be produced to an inspector or the CEO as required.

Annual Environmental Report

26. The licence holder must submit to the CEO by no later than 30 March each year, an Annual Environmental Report for that annual period for the conditions listed in Table 8, and which provides information in accordance with the corresponding requirement set out in Table 8.

Table 8: Annual Environmental Report

Condition	Requirement
12	(a) Cumulative monthly volumes of water or tailings discharged and discharge location per year (b) Laboratory data sheets for WWTP treated effluent for quarterly monitoring (c) Quarterly quantitative dust deposition results (d) Tabulated data summary of monitoring results (e) An interpretation of monitoring data results including comparison to historical trends.
13	Tabulated groundwater monitoring data results and time series graphs for each monitoring well over a 4 year period.
14	(a) Water balance monitoring data (b) An interpretation of monitoring data results including comparison to historical trends.

END OF CONDITIONS

Schedule 1: Maps

Premises map

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

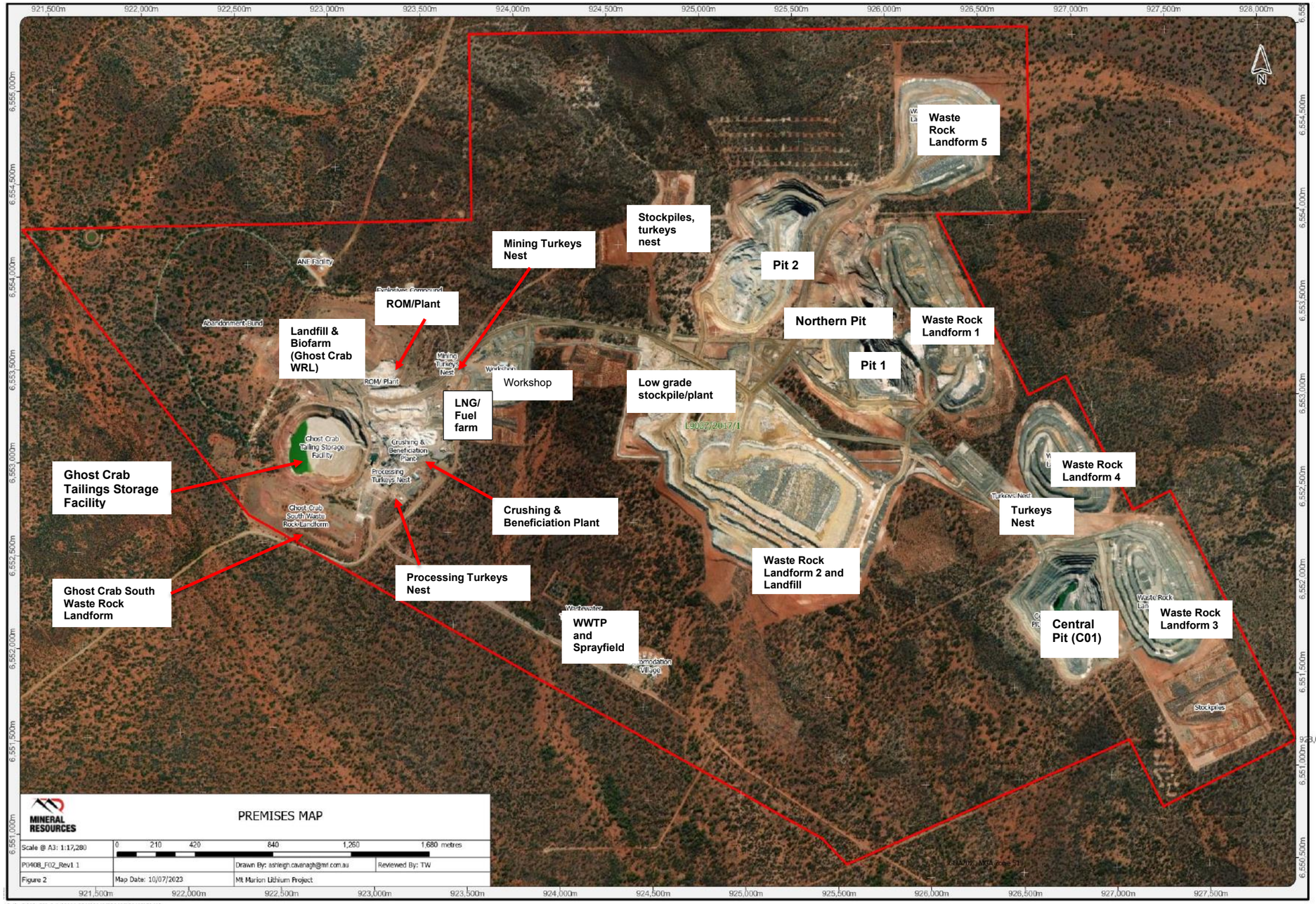

Figure 1: Map of the boundary of the prescribed premises and site layout

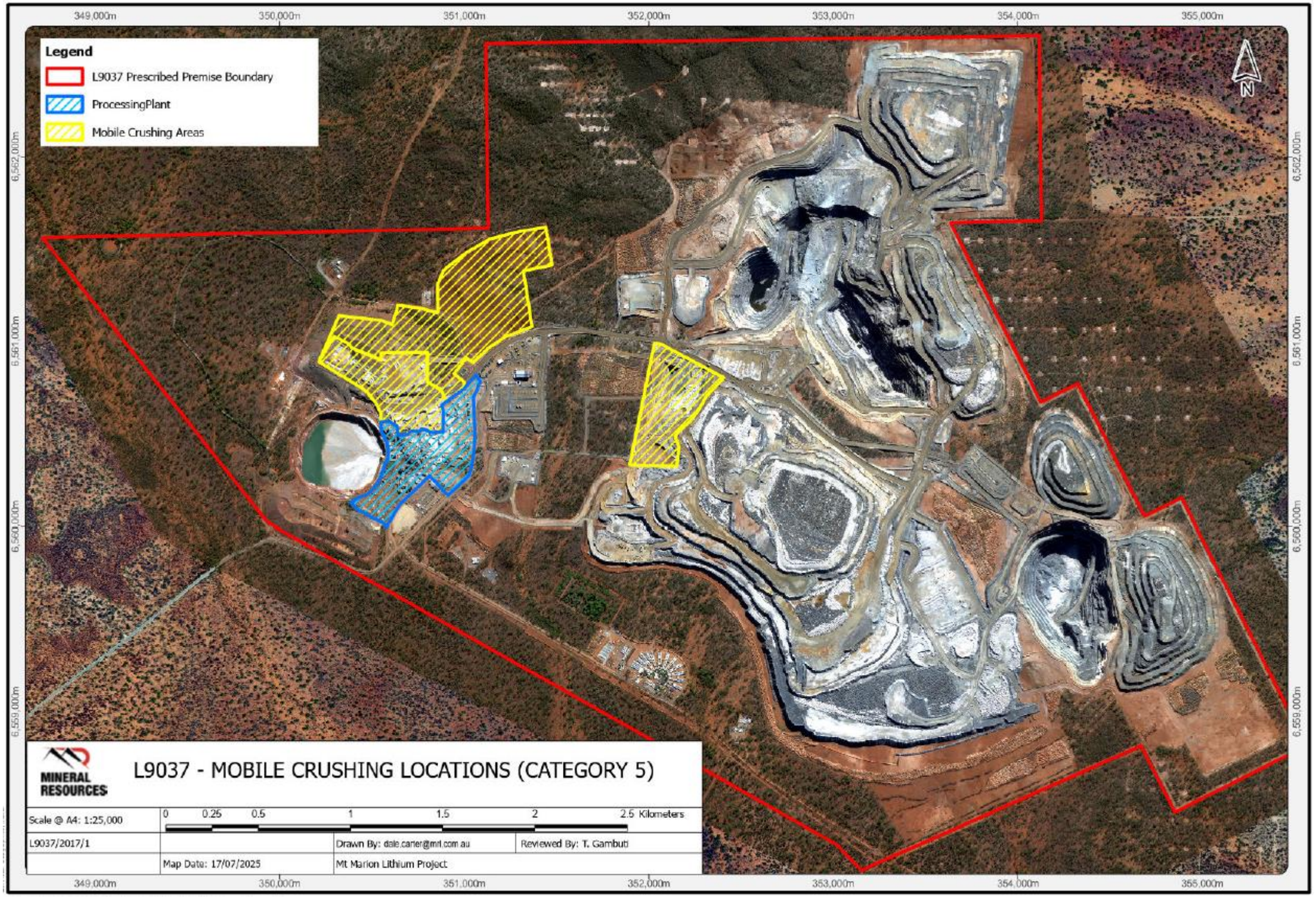

Figure 2: Category 5 Mobile crushing and ore sorting locations including expansion under amendment

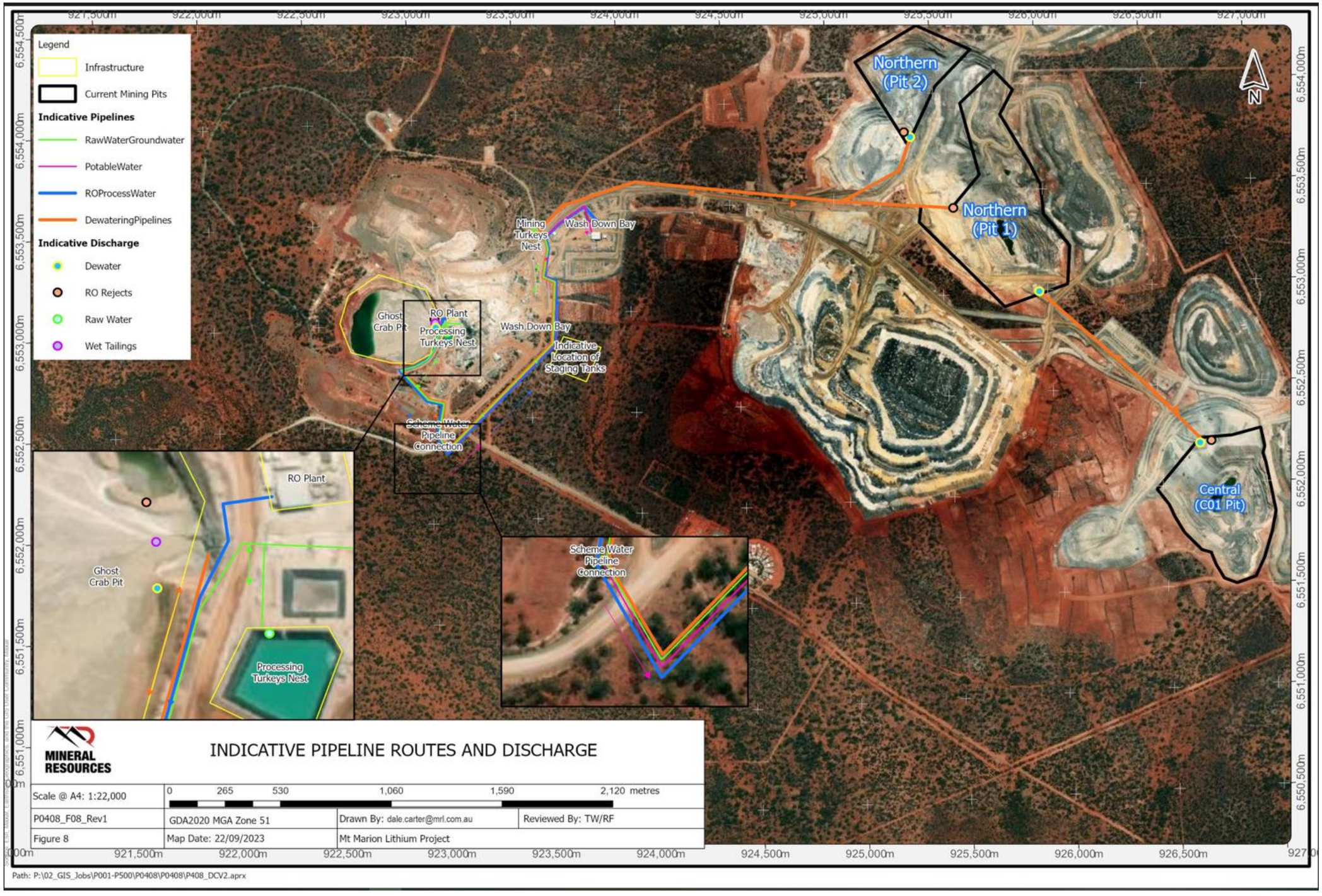

Figure 3: Pipeline routes and discharge points

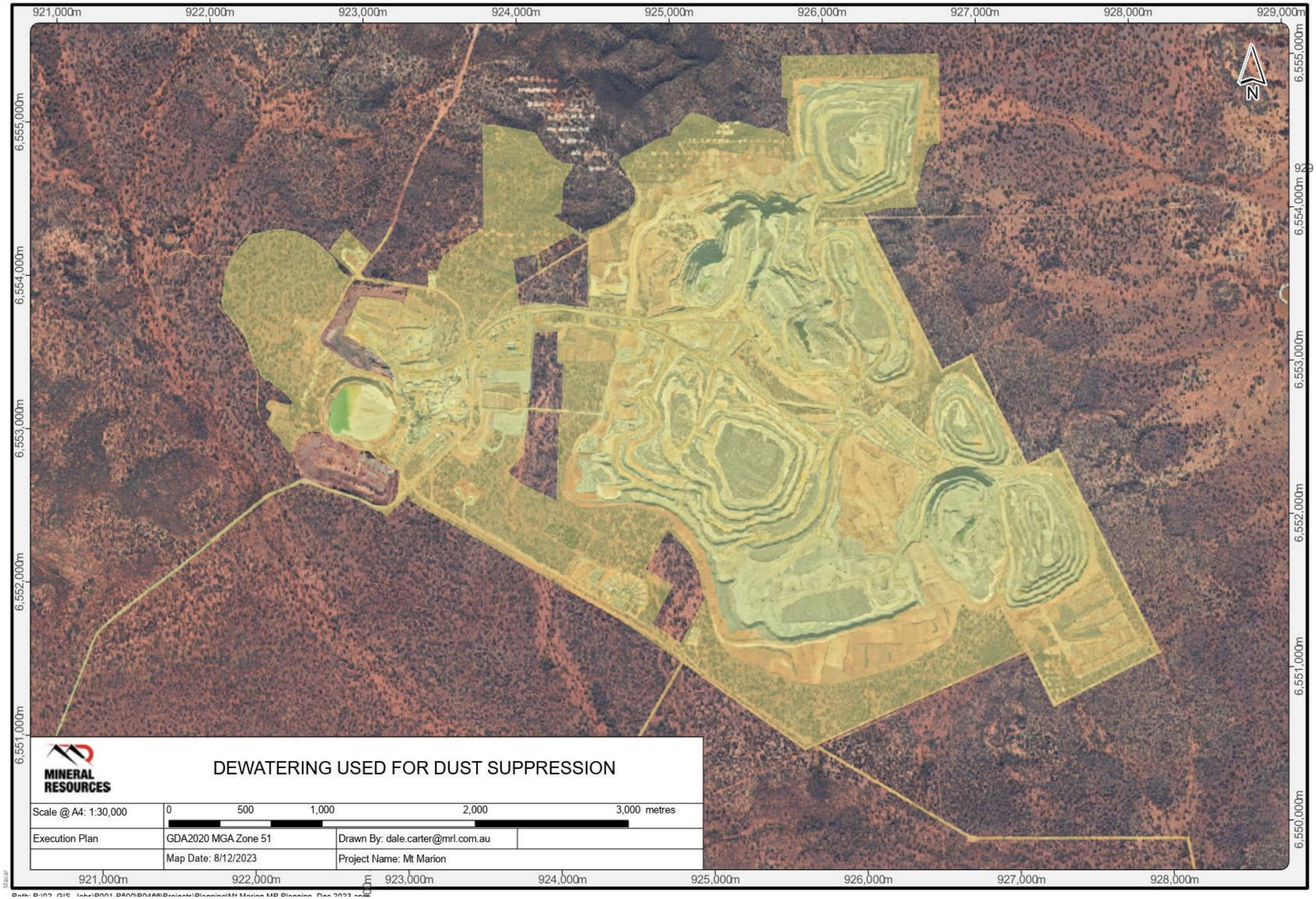

Figure 4: Area of operations and mining where dust suppression using dewatering and groundwater may be applied.

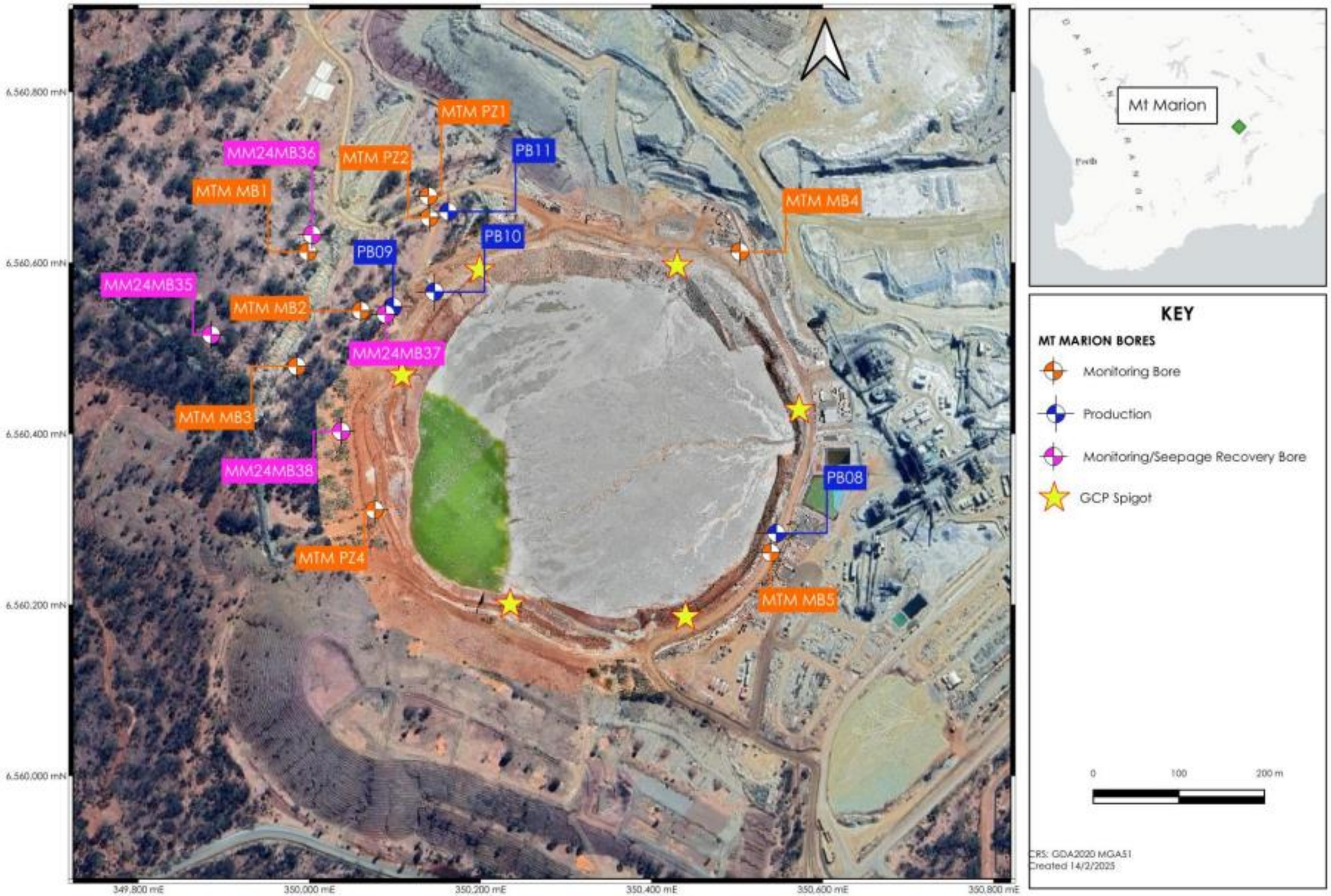

Figure 5: Monitoring bores and nominal tailings spigot locations