Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L8621/2011/1
Licence holder	Roy Hill Iron Ore Pty Ltd
ACN	123 722 038
Registered business address	5 Whitham Road PERTH AIRPORT WA 6105
DWER file number	2011/009784-1
Duration	26/03/2012 to 25/3/2034
Date of issue	22/03/2012
Date of amendment	6/06/2024
Premises details	Roy Hill Iron Ore Mine M46/518, M46/519, L47/772, L47/851 and Part of L47/346 and L47/642 NEWMAN WA 6753 As depicted in Schedule 1 and listed in Appendix 2 of this licence

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed design capacity**
Category 5: Processing or beneficiation of metallic or non-metallic ore	102,000,000 tonnes per annual period
Category 6: Mine dewatering	Managed under Ministerial Statement 1189 where the maximum excess water disposal by aquifer injection and recharge basins is 508 GL until 2032
Category 12: Screening, etc. of material	6,570,000 tonnes per annual period
Category 52: Electric power generation	80 MW
Category 54: Sewage facility	633 cubic metres per day
Category 57: Used tyre storage (general)	No more than 8,000 tyres
Category 64: Class II putrescible landfill site	17,300 tonnes per annual period
Category 73: Bulk storage of chemicals, etc	5,530 cubic metres in aggregate
Category 85B: Water Desalination Plant	30 GL per year

This amended licence is granted to the licence holder, subject to the attached conditions, on 6/06/2024 by:

Jarrod Abrahams
Digitally signed by Jarrod Abrahams
Date: 2024.06.06 16:29:13 +08'00'

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

Licence history

Date	Reference number	Summary of changes
22/03/2012	L8621/2011/1	New Licence application (Category 85)
30/05/2013	L8621/2011/1	Licence Amendment to include category 89 landfill
19/09/2013	L8621/2011/1	Licence Amendment to include category 12 and upgrade from category 85 to category 54
8/05/2014	L8621/2011/1	Licence Amendment to include the landfill expansion (Category 89)
05/02/2015	L8621/2011/1	Licence Amendment to add category 57, increase category 64 landfill production and design capacity and excise land for a small WWTP
09/04/2015	L8621/2011/1	Administrative Licence Amendment
5/11/2015	L8621/2011/1	Licence Amendment to include the MSA WWTP constructed under W5718/2014/1 and update template to version 2.9
7/04/2016	L8621/2011/1	Licence Amendment to include category 6 and 73, construction of the northern recharge basin and southern and northern discharge locations to No-Name Creek, administrative changes and remove the Mankarlyikkakurra Exploration Camp
24/11/2016	L8621/2011/1	Licence Amendment to include category 5 for the operation of the ore processing plant (Process Plant), and the tailings storage facility (TSF) constructed under W5067/2011/1, the operation of the Mine Process Plant WWTP constructed under W5732/2014/1, operation of the northern and southern recharge basin, and the construction of a new class II landfill
13/01/2017	L8621/2011/1	Licence Amendment Notice 1 to include the operation of the Tailings Storage Facility (TSF) and commissioning and operation of the evaporation infrastructure (7 evaporators were assessed under W5067/2011/1). The 7 evaporators were installed in Cell 1 (only) on the internal causeway
16/11/2017	L8621/2011/1	Licence Amendment Notice 2 for changes to the design and construction of the Stage 2 raise of the TSF, requirement for the monitoring of groundwater monitoring bores located at the TSF, and removal of Condition 1.2.1 for the Samsung C&T WWTP and Spray Field Exclusion Area following its decommissioning
17/11/2017	L8621/2011/1	Licence Amendment Notice 3: • a new 45MW diesel-fired power station; • new in-pit tyre disposal areas; • additional ore crushing and screening infrastructure; and • use of the Accommodation Village Reverse Osmosis (RO) reject water for dust suppression
29/05/2018	L8621/2011/1	Licence Amendment Notice 4:

Date	Reference number	Summary of changes
		• Addition of three Category 6 creek discharge points for the purpose of mine dewatering – water discharge and unscheduled process water dam maintenance discharge. The approved discharge to existing recharge basins of 378,000 tonnes per annual period remained unchanged. • Category 52 'electric power generation' added to the licence as one of the assessed components of Amendment Notice #3
31/05/2018	L8621/2011/1	Licence Amendment Notice 5: addition of seven 90kW evaporators on Cell 2 of the TSF, with the original seven Minetek 75kW evaporators remaining on Cell 1 (14 evaporator units in total)
5/10/2018	L8621/2011/1	Licence Amendment Notice 6 (two amendment applications combined): • Increase the category 5 approved premises production to 86 million tonnes per annum (Mtpa) (wet) and add a 4 Mtpa Magnetic Separation Plant (MSP) and relocation of the Mine Process Plant Irrigation Area; and • Increase the category 6 dewatering disposal limit to 55 Mtpa as part of a Managed Aquifer Recharge (MAR) Trial for a duration of less than two years with up to 50 reinjection bores and 2 recharge basins to dispose of the excess dewatering water
13/06/2019	L8621/2011/1	Licence Amendment Notice 7: • Construct and operate the Zulu 5 In-Pit Tailings Storage Facility (Z5 IPTSF); • Construct and operate a 15 GL/annum Water Blending Plant (WBP) which incorporates a 14.6 GL/annum Brackish Water Reverse Osmosis (BWRO) Plant (Category 85B); • Increase the approved capacity of the Mine Power Station to 80MW; • Increase the tyre disposal area; and • Remove TSF groundwater monitoring bore TSFMW08
18/10/2019	L8621/2011/1	Licence Amendment Notice 8 for category 5 crusher, and short term discharge of decant to Managed Aquifer Recharge
15/05/2020	L8621/2011/1	DWER initiated Licence Amendment to consolidate/ amalgamate separately issued Licence amendment notices in the main Licence
9/06/2020	L8621/2011/1	CEO initiated Licence administrative amendment for correction of accidentally omitted conditions
10/08/2020	L8621/2011/1	Licence Amendment to expand the MSP with total recovery of up to 9 Mtpa, relocate the Process Water Dam discharge location, change of Mine Process Plant irrigation spray field boundary, removal of construction works where compliance documents submitted, and update MAR injection groundwater monitoring bores
03/11/2020	L8621/2011/1	Licence Amendment to extend the MAR system for an additional three years, construction and operation of a replacement process pond, and

Date	Reference number	Summary of changes
		removal of four Z5IPTSF groundwater monitoring bores
16/07/2021	L8621/2011/1	Licence Amendment for new Direct Ship Ore crushing and screening facility, replacing the current one
10/1/2022	L8621/2011/1	Licence Amendment for a new crushing facility at ROM 4, overland conveyor from ROM 3 to ROM 4, addition of 10 new reinjection/monitoring bores at the SWIB area and addition of new definition for 'continuous'
23/09/2022	L8621/2011/1	Licence Amendment for the following: • Modifications to Category 6 Assessed design capacity in line with Revised Proposal Ministerial Statement 1189; • Installation of up to 65 reinjection bores within the Remote Managed Aquifer Recharge (MAR) Borefield; • Build a Remote MAR Transfer Pond; • Change to a monthly flow weighted average to Total Dissolved Solids (TDS) limit in Condition 20, Table 9; • Increase injection limit in Condition 20, Table 9 up to 50,000 mg/L TDS in the South West Injection Borefield to align with the Revised Proposal; • Update Condition 4, Table 2 to clarify the locations that Inert Waste Type 2 can be disposed of; • Update freeboard in Condition 10, Table 4 of the Zulu 5 In-Pit Tailings Storage Facility (TSF) to match the TSF Operating Manual ANCOLD (2019) Guidelines on Tailings Dams – Planning, Design, Construction, Operation and Closure; • Ability to change monitoring bore to similar suitable bore for monitoring if bores are blocked or damaged; • Request for sampling of mine dewatering water to occur from trunkline as opposed at each individual injection bore in SWIB and Stage 1 Borefield as per Appendix 1; • Clarify what frequency continuous data from flow meters from injection bores and recharge basins for volumetric flow rate and electoral conductivity should be provided in Annual Environmental Report (AER); and • Removal of monitoring bore RHPZ0294S as it is not included in the Water Management Plan and now located within a restricted area for clearing and cannot be installed. There is no requirement for a replacement
01/02/2023	L8621/2011/1	Licence Amendment for the following: • Category 57 – Increase used tyre storage limits from 5,000 to 6,000 tyres – Add three new used tyre storage locations to Licence • Category 64 – Construct and operate extension of landfill 2 (landfill 3) 13.69

Date	Reference number	Summary of changes
		ha trench area – To allow in-pit disposal in additional pit locations – Burial of additional inert waste at existing (4) and proposed (11) in-pit disposal locations – Increase inert type 2 disposal limits from 5,000 tonnes to 12,500 tonnes – Increase clean fill, inert type 1 and putrescible waste disposal limits from 3,000 tonnes to 4,800 tonnes – Disposal of concrete (no steel) and bitumen – Update current licence wording regarding windblown waste – Removal of Landfill and Delta 1 Pit Landfill as these sites have been decommissioned, when the latter located under a waste rock dump • Category 54 – Add a 40 m^3 WWTP to the Licence for the Mine Accommodation Village (additional units) – Increase total capacity throughput limits to 633 m^3 per day • Category 85B – Upgrade the blended water plant (Brackish Water Reserve Osmosis Plant) from 40MLD (15 GL per year) to 80MLD (30 GL per year) • Other updates – Add additional Bioremediation facility location to schedule 1 – Add use of TSF decant waste for dust suppression to the Licence – Administrative changes
06/12/2023	L8621/2011/1	• Operation of the Zulu 6 In-Pit Tailings Storage Facility (Z6 IPTSF) constructed under W6595/2021/1 • Amend the required Evaporator inspection frequency • Removal of monitoring requirements for SWIB pipelines SWIBP1, SWIBPL2, SWIBPL3 and SWIBPL4 • Removal of historical used tyre storage area ROM 3 • Amend conditions relevant to Category 64 • Replace/Update figures • Removal of conditions that are already regulated under Ministerial Statement 1189 • Expand the premises boundary
6/06/2024	L8621/2011/1	Licence amendment for the following: Increase the processing of ore at the Roy Hill Iron Mine from the current 86 million tonnes per annum (Mtpa) to 102 Mtpa. The increase is achieved by:

Date	Reference number	Summary of changes
		• Increasing the maximum ore feed to the Mine Process Plant (MPP) to 90 Mtpa (currently 86 Mtpa); • Increasing the maximum ore feed to Direct Ship Ore (DSO) Plant 1 from 4.5 to 5 Mtpa; • Addition of a new DSO Plant 2 with a maximum ore feed of 5 Mtpa; • Addition of a mobile DSO plant (Arrangement 1) with a maximum ore feed of 3 Mtpa; and • Addition of mobile DSO plant (Arrangement 2) with a maximum ore feed of 3 Mtpa. The amendment also includes the following changes to the Licence: • Change the scope of Category 12 operations to allow flexibility in the location of infrastructure and processing capacity. The annual throughput will remain the same. • Increase the limit of Category 57 to authorise the storage of an additional 2,000 used tyres. The increased storage capacity will be achieved by an additional storage location at the Premises. • Change the vegetation monitoring locations in No Name Creek. • Include additional treated water sources for dust suppression use at the Premises and apply a limit for Total Recoverable Hydrocarbons (TRH). • Update reinjection bore details.

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:

Premises Operations

1. The licence holder must record and investigate the exceedance of any descriptive or numerical limit in this section.

2. The licence holder must only have landfill waste and store used tyres onto the premises if:

   (a) it is of a type listed in Table 1;

   (b) the quantity accepted is below any quantity limit listed in Table 1; and

   (c) it meets any specification listed in Table 1.

Table 1: Waste acceptance

Waste Type	Quantity Limit	Specification[1]
Clean Fill, Putrescible Waste and Inert Waste Type 1	4,800 tonnes per annual period in total	None specified
Inert Waste Type 1 Inert Waste Type 2	12,500 tonnes per annual period in total	None specified
Category 57 used tyres	No more than 8,000 tyres at any one time	Used tyres stored (not landfilled)
Sewage	510 m^3/day	Accepted at the Accommodation Village WWTP through sewer inflow(s) only
	40 m^3/day	Accepted at the Accommodation Village WWTP 2 through sewer inflow(s) only
	48 m^3/day	Accepted at the Mine Services Area WWTP through sewer inflow(s) only
	35 m^3/day	Accepted at the Mine Process Plant WWTP through sewer inflow(s) only

Note 1: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

3. The licence holder must ensure that where waste does not comply with condition 2 it is removed from the premises by a controlled waste contractor, where that is not possible, stored in a segregated storage area or container and removed to an appropriately authorised facility as soon as practicable.

4. The licence holder must ensure that wastes accepted onto the premises are only subjected to the process(es) set out in Table 2 and in accordance with any process limits described in that Table.

Table 2: Waste processing

Waste type[3]	Process(es)	Process limits
Clean Fill; Putrescible Waste; Inert Waste Type 1 and Inert Waste Type 2[1, 2]	Receipt, handling, and disposal of waste by landfilling	Disposal of waste by landfilling must only take place within the Landfill 2 and Landfill 3 shown in Schedule 1, Figure 7 The separation distance between the base of the landfill and the highest groundwater level must be greater than 3 m Disposal of waste must not exceed 4,800 tonnes per annual period The size of the tipping face is kept to a minimum and not larger than 30 m in length Must meet the acceptance criteria for a Class II landfill[3]
Inert Waste Type 1 and Inert Waste Type 2[1, 2]	Receipt, handling, and disposal of waste by landfilling	Disposal of waste by landfilling must only take place within the Bravo, Delta, Echo, Golf, Sierra, Tango and Zulu mined pits shown in Schedule 1, Figure 8 Disposal of Inert Waste Type 1 and Inert Waste Type 2 must not exceed 12,500 tonnes per annual period Tyres disposed of in batches separated from each other by at least 100 mm of soil and each consisting of not more than 1,000 whole tyres
Category 57 used tyres	Storage of used tyres	Not more than 8,000 used tyres stored at the Premises at any one time Used tyres stored in areas as shown on the Premises map in Schedule 1, Figure 2 and Figure 9 Storage of used tyres must only occur in units of not more than 100 tyres Used tyres must be either stacked on their side walls; or if stored on treads, secured with a device made of non-combustible material A separation distance of 6 m must be maintained between units
Sewage	Biological, physical, and chemical treatment	Treatment of sewage waste at the MSA and Mine process Plant WWTP must be at or below the treatment capacity of 48 m^3/day and 35 m^3/day respectively
		Treatment of sewage waste at the Accommodation Village WWTP must be at or below the treatment capacity of 510 m^3/day
		Treatment of sewage waste at the Accommodation Village WWTP 2 must be at or below the treatment capacity of 40 m^3/day

Note 1: Requirements for landfilling tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.
Note 2: Additional requirements for the acceptance and landfilling of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.
Note 3: Defined in the Landfill Definitions.

5. The licence holder must manage the landfilling activities to ensure that restoration of a cell or phase takes place within 6 months after disposal in that cell or phase has been completed.

6. The licence holder must ensure that cover is applied and maintained on landfilled wastes in accordance with Table 3 and that sufficient stockpiles of cover are maintained on site at all times.

Table 3: Cover requirements[1]

Waste Type	Material	Depth	Timescales
Putrescible Waste	Inert and incombustible material	Sufficient to ensure the waste is completely covered and that no waste is exposed	Weekly or as soon as practicable after deposit and prior to compaction
Inert Waste Type 1	No cover required		
Inert Waste Type 2	Soil	1,000 mm	As soon as practical following the achievement of final waste levels in the area(s) in which Inert Waste Type 2 are deposited

Note 1: Additional requirements for the covering of tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.

7. The licence holder must:

   (a) erect and maintain suitable fencing around the irrigation areas and landfill facilities that acts as an effective barrier to unauthorised persons, cattle, horses and other stock; and

   (b) undertake regular inspections of all security measures and repair damage as soon as practicable.

8. The licence holder must ensure that wind-blown waste contained within landfill areas is returned to the tipping area on at least a monthly basis.

9. The licence holder must ensure that the irrigation of treated wastewater meets the following:

   (a) no irrigation generated run-off, spray drift or discharge occurs beyond the boundary of the irrigation area;

   (b) wastewater is evenly distributed over the irrigation area;

   (c) soil erosion is prevented from occurring; and

   (d) a healthy vegetation cover is maintained over the wastewater irrigation areas.

Infrastructure and equipment

10. The licence holder must ensure that the site 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: Infrastructure and equipment requirements

Site infrastructure and equipment	Operational requirement	Infrastructure location
TSF	Storage of tailings material only A minimum top of embankment freeboard of 1,200 mm[1] is maintained Methods of operation minimise the likelihood of erosion of the embankments by wave action The supernatant pond on the TSF is minimised as far as possible Final perimeter embankment height of 456 m RL	As shown in Schedule 1, Figure 2
Cell 1 TSF evaporators	When in use, seven 75kW located on the TSF Cell 1 decant causeway to treat decant water Evaporators only operated between the hours of 7 am and 5 pm	As shown in Schedule 1, Figure 2
Cell 2 TSF evaporators	When in use, seven 90kW evaporators located on the TSF Cell 2 decant causeway to treat decant water Evaporators only operated between the hours of 7 am and 5 pm	As shown in Schedule 1, Figure 2
Z5 IPTSF	Storage of tailings material only Maximum pond elevation of 442.3 mRL with emergency overflow invert level of 443.5 mRL The supernatant pond on the TSF is minimised as far as possible	As shown in Schedule 1, Figures 2 and 5
Z6 IPTSF	Storage of tailings material only Maintain a minimum total freeboard (comprising operational freeboard and beach freeboard) of 500 mm The supernatant pond at the TSF is minimised as far as practicable	As shown in Schedule 1, Figures 2 and 6
Process Water Dam 1	HDPE lined (1.5 mm thickness) with a permeability ≤ 1 x 10^{-9} metres per second (m/s), or an alternative geosynthetic liner that achieves an equivalent	As shown in Schedule 1, Figure 2

Site infrastructure and equipment	Operational requirement	Infrastructure location
	permeability for adequate containment. Storage of mine dewatering water, tailings return water, and water from the Stage 1 borefield prior to use in the mine process plant.	
Process Water Dam 2	HDPE lined (1.5 mm thickness) with a permeability ≤ 1 x 10^{-9} m/s, or an alternative geosynthetic liner that achieves an equivalent permeability for adequate containment. Storage of mine dewatering water, tailings return water, and water from the Stage 1 borefield prior to use in the mine process plant.	As shown in Schedule 1, Figure 2
Central Transfer Ponds	Storage of reject water from the Water Blending Plant Storage of tailings decant water for purposes of dust suppression or for discharge to the SWIB MAR system Three ponds: one 60 ML capacity; and two 100 ML capacity HDPE lined (1.5 mm thickness) Freeboard of 500 mm maintained	As shown in Schedule 1, Figure 2
Mine Power Station	Maximum number of 1.6 MW diesel generators operating at any time will be no more than 50 generators Exhaust emissions from each generator via two 0.45 m diameter stacks at a height of 2.9 m above ground level at a velocity of 34.6 metres per second Two 110,000 litre double skinned diesel storage tanks One 27,000 litre self-bunded lube storage tank Maintain the OWS system to treat stormwater to less than 15 mg/L total petroleum hydrocarbons	As shown in Schedule 1, Figures 2 and 10
Bulk Fuel Yard	Storage of C1 Combustible Liquid (diesel) in Two 2,765,000 litre storage tanks situated inside a HDPE lined bund, with bund	As shown in Schedule 1, Figure 2

Site infrastructure and equipment	Operational requirement	Infrastructure location
	permeability no less than 10^{-9} metres per second Bund height sufficient to prevent surface water ingress up to 500 mm deep Bund floor with both mechanical and fire protection in the form of clean fill and sloped and graded to allow drainage to sump Ring beam has floor leak detection indicators	
Southern Recharge Basin	Discharge mine dewatering water over a rock lined surface at the base of the basin to reduce erosion Maintain diversion drains to divert stormwater around the basins Basins are fully fenced	As shown in Schedule 1, Figure 3 and Schedule 2, Figure 21
Northern Recharge Basin		As shown in Schedule 1, Figure 2 and Schedule 2, Figure 22
Stage 1 Recharge Basin	Receive excess mine pit dewatering water, Reverse Osmosis Plant reject water and Tailing Storage Facility decant return water Minimum 2.25 m deep Spoil material to be stockpiled on the upslope side to prevent surface water runoff entering the basins Minimum operational freeboard of 0.25 m Basins are fully fenced	As shown in Schedule 1, Figure 11 and Schedule 2, Figure 16
Stage 2 Recharge Basin		As shown in Schedule 1, Figure 12 and Schedule 2, Figure 16
Remote MAR Transfer Pond	Storage of mine dewatering water Lined with HDPE liner or alternative liner that achieves the same or better permeability Freeboard of 500 mm maintained and water levels managed with level trips connected to the SCADA system	As shown in Schedule 1, Figure 15
Pipelines from transfer ponds to the SWIB	Pipelines fitted with pressure transducers and connected to the	As shown in Schedule 1, Figures 2, 3 and 4

Site infrastructure and equipment	Operational requirement	Infrastructure location
MAR system and dust suppression storage	SCADA system (for detection of flow or pressure anomalies, and alarms)	
5.0 Mtpa DSO Plant 1, 5.0 Mtpa DSO Plant 2, 3.0 Mtpa DSO Arrangement 1 and 3.0 Mtpa DSO Arrangement 2	Located at least 50m from any surface water body Divert surface water away from crushing and processing areas, including stockpiles, while maintaining existing surface water flows Maintain dust controls at the crusher, screener, conveyors and loading bin to mitigate dust emissions Conveyor discharge point fitted with a telescopic chute Mobile truck fitted with a water cannon and/or spray bars to manage dust emissions at processing, screening, and stockpiles areas Conduct monthly inspections of the dust control infrastructure and equipment to ensure it is fully maintained and operational to mitigate dust emissions Hydrocarbons managed in accordance with *AS1940:2004 The Storage and Handling of Flammable and Combustible Liquids* Spill kits available at each infrastructure location and on-hand during refuelling activities	As shown in Schedule 1, Figures 2 and 3, and located within the area shown in yellow in Schedule 1, Figure 13
Mobile crushing and screening plant	Maximum capacity to process up to 500 tph Located at least 50m from any surface water body Mobile truck with a water cannon and/or spray bars to be used to manage dust emissions on the crushing and screening areas and stockpiles Conduct monthly inspections of the dust control infrastructure and equipment to ensure it is fully maintained and operational to mitigate dust emissions	As shown in Schedule 1, Figures 2 and 3, and located within the area shown in yellow in Schedule 1, Figure 13

Site infrastructure and equipment	Operational requirement	Infrastructure location
	Hydrocarbons managed in accordance with *AS1940:2004 The Storage and Handling of Flammable and Combustible Liquids* Spill kits available at each infrastructure location and on-hand during refuelling activities.	
MSP	Total recovery capacity of 9 Mtpa Maintain stormwater diversion so that stormwater is diverted to the main stormwater diversion drains Infrastructure to be self-contained so any spillage is redirected back into the MSP tailings tanks and Thickeners	As shown in Schedule 1, Figure 2
50Mtpa capacity crushing plant (gyratory crusher and ROM bin) at ROM 4	Maintain dust control features such as skirt modules, internal and external dust curtains, primary and secondary scrapers, water sprayers and dust collectors at the crusher, conveyors and loading bin. Spill kits available at each infrastructure location and on-hand during refuelling activities.	As shown in Schedule 1, Figures 3 and 14
ROM 3 to ROM 2 Overland conveyor	Use of spray bars installed at the discharge onto the overland conveyor	As shown in Schedule 1, Figures 2 and 3
ROM 3 to ROM 4 Overland conveyor	Use of spray bars installed at the discharge onto the overland conveyor	As shown in Schedule 1, Figures 3
25 Mtpa capacity crushing plant (gyratory crusher and ROM bin) at ROM 3	Maintain dust control features such as skirt modules, internal and external dust curtains, primary and secondary scrapers, wind guards, surge bins, water sprayers and dust collectors.	As shown in Schedule 1, Figure 3

Note 1: Determined by the total sum of operational freeboard of 300 mm, beach freeboard of 200 mm and 10,000 year storm requirement of 700 mm.

11. The licence holder must ensure that:

    (a) all tailings delivery pipelines are equipped with automatic cut-outs in the event of a pipe failure;

    (b) all tailings delivery pipelines are provided with secondary containment at the booster station area sufficient to contain any spill for a period equal to the time between routine inspections; and

(c) twice daily inspections are undertaken on the integrity of all the tailings delivery and tailings decant pipelines.

12. The licence holder must:

(a) undertake inspections as detailed in
(b) Table 5;

(c) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and

(d) maintain a record of all inspections undertaken.

Table 5: Inspection of infrastructure

Scope of inspection	Type of inspection	Frequency of inspection
Tailings delivery pipelines	Visual integrity	Daily
Tailings return pipelines	Visual integrity	Daily
Z5 IPTSF, Z6 IPTSF and TSF embankment freeboard	Visual to confirm required freeboard capacity is available	Daily
Transfer Ponds	Visual to confirm required freeboard capacity is available	Weekly
WBP reject water pipelines	Visual integrity	Weekly
Pipelines from the Transfer Ponds	Visual integrity	Weekly
Mine dewater pipelines	Visual integrity	Weekly
Tailings facility evaporators	Visual integrity	Daily when in use
Weather Station	Functionality and calibration	Monthly when evaporators are in use
Evaporator Automated Programmable Logic Control (PLC) system	Functionality and calibration	Annually when in use

13. The licence holder must construct and/or install the infrastructure and/or equipment in accordance with the corresponding design and construction/ installation requirements and at the corresponding infrastructure location as set out in Table 6

Table 6: Design and construction / installation requirements

Infrastructure	Design and construction / installation requirements	Infrastructure location
DSO Plant 2	• Locate at least 50m from any surface water body • Locate within mine pits or immediately adjacent to mine pit areas	As shown in Schedule 1, Figure 2, Figure 3 and Figure 13

Infrastructure	Design and construction / installation requirements	Infrastructure location
	• Divert surface water away from the crushing and processing areas, including stockpiles, while maintaining existing surface water flows • Maximum capacity of 5 Mtpa • Comprised of the following infrastructure: – Primary Jaw Crusher – ROM Bin – Vibrating Grizzly Feeder – Bypass chute – Conveyor • Fitted with dust control features such as chutes, skirt modules, dust curtains, scrapers, wind guards, water sprayers and dust collectors. • Powered by two 800 kVA diesel generators and one in reserve.	
DSO Arrangement 1 DSO Arrangement 2	• Locate at least 50m from any surface water body • Locate within mine pits or immediately adjacent to mine pit areas • Divert surface water away from the crushing and processing areas, including stockpiles, while maintaining existing surface water flows • Maximum capacity of 3 Mtpa at each DSO Arrangement • Comprised of the following infrastructure: – Jaw Crusher – Hopper/Feeder and grid – Cone crusher/chamber – Metal detection and purge system – Purge chute – Conveyors – T-Link Telematics • Dust controls – Transfer points (water sprays, chutes) – Conveyors (water sprays) – Loading bin (ROM material controlled by precondioning via watercart) – Water sprayers/cannons and/or water carts at stockpiles • Powered by two 150 kVA diesel generators (product stockpilers) and two 25 kVA diesel generators (crusher cabs)	As shown in Schedule 1, Figure 2, Figure 3 and Figure 13
Mine Power Station	• Comprised of 56 x Caterpillar 3516B (XQ2000) diesel generators • Exhaust emissions from each generator via two 0.45m diameter stacks at a height of 2.9m above ground level at a velocity of 34.6m/s.	As per the map of the Mine Power Station shown in Schedule 1, Figure 2 and Figure 10

Infrastructure	Design and construction / installation requirements	Infrastructure location
MAR System – recharge basins	• Install two unlined recharge basins (Stage 1 and Stage 2) to be located outside flood channels to dispose of excess dewatering water, to the following dimensions and characteristics: ➢ Each basin is to be a minimum 2.25 m deep; ➢ Spoil material from the basin construction to be stockpiled on the upslope side of the construction to prevent surface water runoff entering the basin; ➢ Basins to be located outside of flood channels and surface water runoff areas to prevent groundwater egress or surface water ingress; and ➢ Constructed for minimum operational freeboard of 0.25m. • Pipework to the basins to be connected to the higher quality dewatering network only via direct feed HDPE pipelines. • Feed lines to contain: • Isolation valves; • Magnetic flow meter; and • Electrical conductivity sensor. • Float valves to be installed: • One solenoid control (acting as the primary control); and • One mechanical control (acting as the secondary control) to allow for maintenance of freeboard. • Level transmitter to manage water level and primary solenoid control. • All instrumentation connected to a telemetry panel which will transfer data back to a centralised Supervisory Control and Data Acquisition screen. • Ability for manual shutdown of feed water delivery. • Stock exclusion fencing and human exclusion signage erected.	Located as shown on the maps in Schedule 1, Figure 11 and Figure 12, and Schedule 2, Figure 16
Process Water Dam 2	• Capacity of between 70,000 kL and 75,000 kL • Lined with 1.5 mm thick HDPE with a permeability no less than 1 x 10^{-9} metres per second, or an alternative liner that achieves the same or better permeability.	Located within the area defined as Process Water Dam 2 in Schedule 1, Figure 2
Remote MAR Borefield	• Installation of an additional 65 reinjection and monitoring bores within the Remote MAR Borefield area.	Located within the area defined as

Infrastructure	Design and construction / installation requirements	Infrastructure location
		Remote MAR Borefield in Schedule 2, Figure 19

14. The licence holder must operate the DSO Plant 2, DSO Arrangement 1, DSO Arrangement 2, Mine Power Station, MAR System - recharge basins (Stage 1 and Stage 2), and Process Water Dam 2 in accordance with the conditions of this Licence, following submission of the compliance document required under condition 29 and 30 .

15. The licence holder must ensure the limits specified in Table 7 are not exceeded.

Table 7: Production or design capacity limits

Category[1]	Category description[1]	Premises production or design capacity limit
5	Processing or beneficiation of metallic or non-metallic ore	102,000,000 tonnes per annual period
6	Mine dewatering	Managed under Ministerial Statement 1189 where the maximum excess water disposal by aquifer injection and recharge basins is 508 GL until 2032
12	Screening, etc. of material	6,570,000 tonnes per annual period
52	Electric power generation	80 MW
73	Bulk storage of chemicals, etc	5,530 cubic metres in aggregate as per Bulk Fuel Facility specifications in Condition 10, Table 4
85B	Water desalination Plant: premises at which salt is extracted from water if wastewater is discharged onto land or into waters (other than marine waters).	30 G/L per year

Note 1: *Environmental Protection Regulations 1987,* Schedule 1.

Emissions and discharges

General

16. The licence holder must record and investigate the exceedance of any descriptive or numerical limit specified in condition 18 of this licence.

Authorised discharge points for emissions

17. The licence holder must ensure that the emissions specified in Table 8, are discharged only from the corresponding discharge point and only at the corresponding discharge point location.

Table 8: Authorised discharge points

Emission	Discharge point	Discharge point location
Point source emissions to air		
Exhaust gases	56 x Caterpillar 3516B (XQ2000) diesel generators Exhaust emissions from each generator via two 0.45 m diameter stacks at a height of 2.9 m above ground level	At the location shown in Schedule 1, Figure 2 and 10
Point source emissions to groundwater		
Disposal of excess mine pit dewatering water, RO Plant reject water and decant water from TSF and/or reject water from the WBP via Transfer Pond/s	SWIB Injection Bores	As shown in Schedule 2, Figure 18 and listed in Appendix 1
Disposal of excess mine pit dewatering water	Stage 1 Borefield Injection Bores	As shown in Schedule 2, Figure 17 and listed in Appendix 1
Disposal of excess mine pit dewatering water, RO Plant reject water and decant water from TSF and/or reject water from the WBP via Transfer Pond/s	Remote MAR Borefield	As shown in Schedule 1, Figure 4 , Schedule 2, Figure 19 and listed in Appendix 1
Point source emissions to surface water		
Discharge of water stored in the Process Water Dam	No Name Creek	As shown in Schedule 2, Figure 31
Emissions to land		
Disposal of excess water from mine dewatering where dewatering production exceeds other mine site demands for dust suppression and construction and when the mine process plant is shut-down for maintenance	Southern Recharge Basin	As shown in Schedule 2, Figure 21
	Northern Recharge Basin	As shown in Schedule 2, Figure 22
Disposal of excess mine pit dewatering water, RO Plant reject water and decant water from TSF and/or from the WBP via Transfer Pond/s	Stage 1 Recharge Basin	As shown in Schedule 1, Figure 11
	Stage 2 Recharge Basin	As shown in Schedule 1, Figure 12
Discharge of treated wastewater discharged from the Accommodation Village WWTP and WWTP2 to the on-site irrigation area	Accommodation Village Spray Irrigation Area	As shown in Schedule 2, Figure 24
Discharged of treated wastewater discharged from the Mine Services Area WWTP to the on-site irrigation	Mine Services Area Irrigation Area	As shown in Schedule 2, Figure 25

Emission	Discharge point	Discharge point location
area		
Discharge of treated wastewater discharged from the Mine Process Plant WWTP to the on-site irrigation area	Mine Process Plant Irrigation Area	As shown in Schedule 2, Figure 23
Discharge of treated water from the OWS at the Bulk Fuel Yard to the environment via a headwall with rock protection	OWS discharge location at Bulk Fuel Yard	As shown in Schedule 2, Figure 26
Discharge of treated water from the OWS at the Power Station to the Premises stormwater system that discharges to the environment via a sediment trap	OWS discharge location at Power Station	As shown in Schedule 2, Figure 27
Discharge of excess TSF decant water for the use of dust suppression	Within the prescribed premises boundary	Premises map, Schedule 1, Figure 1
Discharge of treated wastewater from Turkey Nests at the MSA workshop, LV/HV washdown and HV washdown for use as dust suppression	Mine Services Area (MSA) - MSA Turkeys Nest B Standpipe	As shown in Schedule 2, Figure 27
Discharge of treated wastewater from Turkey Nests at the MSA workshop, LV/HV washdowns and HV washdowns for use as dust suppression	Mine Services Area (MSA) - MSA Turkeys Nest C Standpipe	As shown in Schedule 2, Figure 32
Discharge of treated wastewater from Turkey Nests at the Haulage Workshop, LV/HV washdowns and HV washdowns for use as dust suppression	Haulage Workshop - Haulage Turkeys Nest Standpipe	As shown in Schedule 2, 32

18. The licence holder must ensure that emissions from the discharge points listed in Table 9 for the corresponding parameter do not exceed the corresponding limit when monitored in accordance with conditions 23, 28 and 29 of this licence.

Table 9: Emission and discharge limits

Discharge point	Parameter	Limit	Averaging period
Emissions to land			
OWS discharge location (at Bulk Fuel Yard)	Total Recoverable Hydrocarbons	15 mg/L	Spot sample
OWS discharge location (at Power Station)			
Dust suppression at the Mine Services Area			

Discharge point	Parameter	Limit	Averaging period
(MSA) - MSA Turkeys Nest B Standpipe			
Dust suppression at the Mine Services Area (MSA) - MSA Turkeys Nest C Standpipe			
Dust suppression at the Haulage Workshop - Haulage Turkeys Nest			
Southern Recharge Basin	Total Dissolved Solids	6,000 mg/L	Spot sample
Northern Recharge Basin			
Stage 1 Recharge Basin	Total Dissolved Solids (Electrical Conductivity)	30,000 mg/L (less than 40,000 µS/cm)	Monthly
Stage 2 Recharge Basin			
Point source emissions to surface water			
Process Dam Water discharge to No Name Creek	Total Dissolved Solids	6,000 mg/L	Spot sample during discharge (discharge occurs once every 5 years)
	Electrical Conductivity	8,759 µS/cm	

Monitoring

General monitoring

19. The licence holder must ensure that:
    (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1 unless otherwise indicated in the relevant table;
    (b) all wastewater sampling is conducted in accordance with AS/NZS 5667.10;
    (c) all surface water sampling is conducted in accordance with AS/NZS 5667.6;
    (d) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
    (e) all samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters to be measured unless otherwise indicated in the relevant table.

20. The licence holder must ensure that:
    (a) monthly monitoring is undertaken at least 15 days apart; and
    (b) quarterly monitoring is undertaken at least 45 days apart.

21. 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.

22. The licence holder must, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

Monitoring of emissions to land

23. The licence holder must undertake the monitoring in Table 10 according to the specifications in that Table.

Table 10: Monitoring of emissions to land

Emission point reference	Parameter	Units	Reference period	Frequency
Southern Recharge Basin and Northern Recharge Basin	Volumetric flow rate[1]	m^3/day	Daily	Continuous (cumulative)
	Duration of discharge	Dates/days	-	Daily
	Electrical Conductivity[1]	µS/cm	Spot sample	Continuous during discharge
	Total Dissolved Solids[1]	mg/L		
	Total Dissolved Solids[1]			Quarterly (unless there is no discharge during the Quarter)
Stage 1 Recharge Basin and Stage 2 Recharge Basin	Volumetric flow rate[1]	m^3/day	Daily	Continuous (cumulative)
	Duration of discharge	Dates/days	-	Daily
	Electrical Conductivity[1]	µS/cm	Spot sample	Continuous during discharge
	Total Dissolved Solids[1, 2]	mg/L		
	Total Dissolved Solids[1]			Quarterly (unless there is no discharge during the Quarter)
Accommodation Village WWTP and WWTP 2 (Prior to discharge to the irrigation areas)	Cumulative Volume	m^3	Monthly	Continuous
	Biochemical Oxygen Demand	mg/L	Spot sample	Quarterly
	Total Suspended Solids	mg/L		

Emission point reference	Parameter	Units	Reference period	Frequency
	pH[1]	pH units		
	Total Nitrogen	mg/L		
	Total Phosphorus	mg/L		
	E. coli	cfu/100 mL		
	Total Dissolved Solids	mg/L		
Mine Services Area WWTP (Prior to discharge to the irrigation areas)	Cumulative Volume	m^3	Monthly	Continuous
	Biochemical Oxygen Demand	mg/L	Spot sample	Quarterly
	Total Suspended Solids	mg/L		
	pH[1]	pH units		
	Total Nitrogen	mg/L		
	Total Phosphorus	mg/L		
	E. coli	cfu/100 mL		
Mine Process Plant WWTP (Prior to discharge to the irrigation areas)	Cumulative Volume	m^3		
	Biochemical Oxygen Demand	mg/L	Spot sample	Quarterly
	Total Suspended Solids	mg/L		
	pH[1]	pH units		
	Total Nitrogen	mg/L		
	Total Phosphorus	mg/L		
	E. coli	cfu/100 mL		
OWS discharge location (Bulk Fuel Yard)	Total Recoverable Hydrocarbons	mg/L	Spot sample	Quarterly (unless there is no discharge during the quarter)
OWS discharge location (Power Station as shown in Attachment 2)				
MSA Turkeys Nest B				

Emission point reference	Parameter	Units	Reference period	Frequency
MSA Turkeys Nest C				
Haulage Turkeys Nest				

Note 1: In field non-NATA accredited analysis permitted.
Note 2: Calculation from Electrical Conductivity

Monitoring of inputs and outputs

24. The licence holder must undertake the monitoring specified in Table 11 according to the specifications in that table.

Table 11: Monitoring of inputs and outputs

Input/ Output	Parameter	Units	Averaging Period	Frequency
Waste Inputs	Inert Waste Type 1, Inert Waste Type 2, Putrescible Waste and Clean Fill	Tonnes, m^3 or number of used tyres	N/A	Each load disposed of at the premises

Process monitoring

25. The licence holder must undertake monitoring of the water balance for the TSF, Z5 IPTSF and Z6 IPTSF each monthly period, and (as a minimum) record the following information:
    (a) site rainfall;
    (b) evaporation rate;
    (c) decant water recovery volumes;
    (d) seepage recovery volumes;
    (e) volumes of tailings deposited; and
    (f) estimate of seepage losses.

Ambient environmental quality monitoring

26. The licence holder must undertake the monitoring in Table 12 according to the specifications in that Table.

Table 12: Monitoring of ambient groundwater quality

Monitoring point reference as depicted in Schedule 2	Parameter	Units	Averaging period	Frequency
RHPZ0091	Standing Water Level	m(AHD)	Spot sample	Quarterly

Monitoring point reference as depicted in Schedule 2	Parameter	Units	Averaging period	Frequency
RHPZ0092	pH[1]	pH units		
	Electrical Conductivity[1]	µS/cm		
	Total Dissolved Solids	mg/L		
	Total Hardness			
	Aluminium (Al) Arsenic (As) Barium (Ba) Boron (B) Cadmium (Cd) Chloride (Cl) Chromium (Cr) Copper (Cu) Iron (Fe) Lead (Pb) Manganese (Mn) Mercury (Hg) Molybdenum (Mo) Nickel (Ni) Selenium (Se) Silver (Ag) Sodium (Na) and Zinc (Zn)			
RHPZ0091 RHPZ0092 RHPZ0035	Total Recoverable Hydrocarbons	mg/L		
<u>TSF monitoring bores:</u> TSFMW01 TSFMW02 TSFMW03 TSFMW04 TSFMW05 TSFMW06 TSFMW07	Standing Water Level[1]	m(AHD) and mbgl	Spot sample	Monthly

Monitoring point reference as depicted in Schedule 2	Parameter	Units	Averaging period	Frequency
Z5 IPTSF[2] monitoring bores: RHPZ0242 RHPZ0393[3] RHPZ0117 RHPZ0119 RHPZ0314 RHPZ0399 Z6 IPTSF monitoring bores: RHPZ0598 RHPZ0599 RHPZ0600 RHPZ0507S				

Note 1: In field non-NATA accredited analysis permitted.
Note 2: Sampling and analysis of Zulu5 IPTSF monitoring bores to commence immediately following installation.
Note 3: RHPZ0352 was buried by the waste dump in June 2021 and replaced by RHPZ0393.

27. The licence holder must undertake the monitoring in Table 13 according to the specifications in that Table.

Table 13: Monitoring of receiving environment

Monitoring point reference	Parameter	Details	Frequency
No Name Creek Discharge location receiving Process Water Dam discharge as specified in Schedule 2, Figure 31.	Establishment, GPS record and operation of permanent photo monitoring points at each emission point to determine vegetation and ecosystem condition	Establishment of fixed focal length - photo points at the following locations to enable capture of a representative picture of vegetation condition: • NNC Emission Point PP (discharge location); • NNC Discharge Vegetation PP; and • NNC wetting end PP.	First photo to be taken at each fixed location prior to commencement of initial discharge at each emission point and thereafter quarterly from each photo point
	Distance (m) of (wetting front) flow travelled down creek line.	GPS record of furthest wetting front distance within creek line during each discharge event. To occur when creek is not flowing as a result of a rainfall event.	Within 24 hours of the cessation of every discharge event

Monitoring of point source emissions to surface water

28. The licence holder must undertake the monitoring as specified in Table 14.

Table 14: Monitoring of point source emissions to surface water

Emission point reference	Parameter	Units	Frequency
No Name Creek Discharge location receiving Process Water Dam discharge as specified in Schedule 2, Figure 31	Volume of discharge[1]	m^3/day	Continuous during discharge
	Duration of discharge	Dates/days	
	pH[2]	pH units	Spot sample at the commencement of each discharge event
	Temperature[2]	^oC	
	Dissolved oxygen[2]	mg/L and %	
	Electrical Conductivity[2]	µS/cm	
	Total Dissolved Solids[2]	mg/L	
	Other parameters: Total Alkalinity ($CaCO_3$), SO_4, HCO_3, CO_3, Al, Ag, As, B, Ba, Be, Ca, Cl, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, S, Se, Si, Sn, Sr, Ti, Tl, U, V, Zn, NO_2, NO_3, NH_4, Total Nitrogen, Total Phosphorus, TSS.		
	Total Hardness by calculation	Mg $CaCO_3$/L	
	Al, As, Cd, Co, Cr, Cu, Hg, Mn, Mo, Ni, Pb, Zn, V	mg/L[3]	Twice daily during Process Water Dam discharge[3]

Note 1: Flow meter must be operational and calibrated in accordance with the manufacturer's specifications and relevant Australian Standard.
Note 2: In field non-NATA accredited analysis permitted.
Note 3: Twice daily samples are to be used as representative samples to determine EP Regs, Schedule 4, Part 3, Table 2, point: 'Waste that can potentially accumulate in the environment or living tissue (for each kilogram discharged per day)'. Flow rate from Process Water Dam will need to be used to determine volume discharged per day, multiplied by quantity present in representative samples. This information will be required to be presented in Annual Fee calculations, when Process Water Dam is emptied.

Records and reporting

29. The licence holder must within 60 calendar days of an item of infrastructure or equipment required by condition 13 being constructed and/or installed:

    (a) undertake an audit of their compliance with the requirements of condition 13 and

    (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.

30. The Environmental Compliance Report required by condition 29, must include as a minimum the following:

    (a) certification by a suitably qualified professional engineer that the items of

infrastructure or component(s) thereof, as specified in condition 13, have been constructed in accordance with the relevant requirements specified in condition 13.

(b) as constructed plans for each item of infrastructure or component of infrastructure specified in condition 13; and

(c) be signed by a person authorised by the licence holder and contains the printed name and position of that person.

31. The licence holder must implement and maintain a system which ensures that a record is made of:

(a) the waste types and quantities accepted at the site;

(b) the waste types and quantities disposed of at the site; and

(c) any documentary evidence to demonstrate compliance with the Class II landfill acceptance criteria.

32. 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.

33. 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 90 days after the end of that annual period an Annual Audit Compliance Report in the approved form.

34. The licence holder must submit to the CEO by no later than 90 days after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 15, and which provides information in accordance with the corresponding requirements set out in Table 15.

Table 15: Annual Environmental Report

Condition or Table (if relevant)	Requirement
--	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken
--	Summary of results from the TSF evaporator vegetation health/soil monitoring program for that annual period, including any exceedance of triggers and management responses, as described within RHIO's Saline Water Disposal Vegetation Management Plan (OP-PLN-00072)

Condition or Table (if relevant)	Requirement
Condition 2, Table 1 Condition 15, Table 7	Actual throughput for the reporting period for approved categories under Schedule 1 of the *Environmental Protection Regulations 1987*, including individual throughput values for the MSP
Condition 10, Table 4	Location(s) occupied by the DSO Plant 1, DSO Plant 2, DSO Arrangement 1, DSO Arrangement 2 and mobile crushing and screening facility during the annual period, including the date commenced at each location and the date ceased at each location
Condition 10, Table 4	Summary of any failure or malfunction of any infrastructure listed in Table 4 and any action taken post inspection
Condition 10, Table 4	TSF evaporator hours of use
Condition 17, Table 8	An updated description of the irrigation area(s) reporting any decline in health, against previous years, and corrective actions
Condition 18, Table 9	Table demonstrating daily averaged TDS values (using the hourly data) as recorded during creek discharge events
Condition 23, Table 10	Monthly records and cumulative volume for each WWTP
	Specified monitoring of emissions to land
Condition 25	Annual water balances of TSF, Z6IPTSF and Z5IPTSF Table format for each TSF (monthly and cumulative annual data) Calculations to be provided for seepage loss
Condition 26, Table 12	Specified monitoring of ambient groundwater quality in table format (and with historical graphical presentation in addition is preferred)
Condition 26, Table 12	Standing water level data for TSF, Z5 IPTSF and Z6 IPTSF monitoring bores In a table format providing: monthly standing water level data (and with historical graphical presentation in addition is preferred)
	Groundwater monitoring bores regional and groundwater monitoring bores adjacent to the production injection wells to be provided in a tabular format
Condition 27, Table 13	Monitoring of receiving environment: Demonstration of vegetation and stream ecosystem condition. Report providing: • GPS location, photographic information and comparison of vegetation and stream ecosystem condition between established photographic points; • Information on annual assessment of vegetation health as per the Roy Hill Vegetation Health Monitoring Program. Specifically: ➢ General site condition; ➢ Soil surface states; ➢ Projected Foliar Cover (PFC), stratum cover dominance and weeds;

Condition or Table (if relevant)	Requirement
	➢ Recruitment; ➢ Ample plants; and ➢ Quantitative parameters; and • Discussion on the findings of the vegetation assessment in comparison with the Management objectives and strategies found in EPA, 2013 (for 'Zone 3a – Kulbee Alluvial Flank – Natural water regimes).
Condition 27, Table 13	Monitoring of receiving environment: Record of flow distance. In table format providing comparison of flow volumes and maximum distance flow has travelled down the creek line for each discharge event.
Condition 28, Table 14	Monitoring of emissions to surface water. In table format providing dates of creek discharge duration and results obtained in accordance with Table 14
Condition 31	Records of waste types and quantities received at the site and disposed of at the site
Condition 32	Complaints summary

35. The licence holder must ensure that the Annual Environmental Report also contains an assessment of the information contained within the report against previous monitoring results and/or background data.

36. 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 13 of this licence;

    (c) any maintenance of infrastructure that is performed in the course of complying with condition 10, of this licence;

    (d) monitoring programmes undertaken in accordance with conditions 23, 24, 25, 26, 27 and 28 of this licence; and

    (e) complaints received under condition 32 of this licence.

37. The books specified under condition 36 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.

38. The licence holder must submit the information in Table 16 to the CEO according to the specifications in that Table.

Table 16: Non-annual reporting requirements

Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form
-	Copies of original monitoring reports submitted to the licence holder by third parties	Not Applicable	Within 30 days of the CEOs request	As received by the licence holder from third parties

Notifications

39. The licence holder must ensure that the parameters listed in Table 17 are notified to the CEO and in accordance with the notification requirements of the Table.

Table 17: Notification requirements

Condition or table (if relevant)	Parameter	Notification requirement[1]	Format or form[2]
Condition 2, Table 1 Condition 4, Table 2 Condition 15, Table 7 Condition 18, Table 9	Breach of any limit specified in the licence	Part A: As soon as practicable, but no later than 5pm of the next usual working day from the incident being identified.	N1
Condition 22	Calibration report	As soon as practicable.	None specified

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act.
Note 2: Forms are in Schedule 3.

Definitions

In this licence, the terms in Table 18 have the meanings defined.

Table 18: Definitions

Term	Definition
acceptance criteria	has the meaning defined in Landfill Definitions
ACN	Australian Company Number
AHD	means Australian Height Datum
Annual Audit Compliance Report	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website)
annual period	a 12 month period commencing from 1 January until 31 of December of that same year
AS1940:2004	means the Australian Standard AS/NZS 1940 – The storage and handling of flammable and combustible liquids
AS/NZS5667.1	means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples*
AS/NZS5667.6	means the Australian Standard AS/NZS 5667.6 *Water Quality – Sampling Guidance on sampling of rivers and streams*
AS/NZS5667.10	means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters*
AS/NZS5667.11	means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling Guidance on sampling of groundwaters*
Australian and New Zealand Guidelines for Fresh and Marine Water Quality	refers to the default guideline values for freshwater available at http://www.waterquality.gov.au/anz-guidelines
averaging period	means the time over which a limit is measured or a monitoring result is obtained
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer of the Department. "submit to / notify the CEO" (or similar), means either: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
cfu/100ml	means colony-forming units per 100 millilitres

Term	Definition
Clean fill	has the meaning defined in Landfill Definitions
continuous	means a data recovery rate of above 90% averaged annually
Department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3
discharge	has the same meaning given to that term under the EP Act
DSO	Direct Ship Ore
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 licence
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point
GDV	means groundwater dependent vegetation
GL	means gigalitres
GL/a	means gigalitres per annum
HDPE	means high-density polyethylene
HV	Heavy Vehicle
IPTSF	means In-Pit Tailings Storage Facility
Inert Waste Type 1	has the meaning defined in Landfill Definitions
Inert Waste Type 2	has the meaning defined in Landfill Definitions
kL	means kilolitres
kW	means kilowatts
Landfill Definitions	means the document titled "*Landfill Waste Classification and Waste Definitions 1996*" as amended from time to time and published by the Chief Executive Officer of the Department of Water and Environmental Regulation
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within

Term	Definition
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted
LV	Light Vehicle
m	means metre
m^3	means cubic metres
MAR	means managed aquifer recharge
mbgl	means metres below ground level
ML	means million litres or megalitres
mm	means millimeters
monthly period	means a one-month period commencing from day 1 of a month until day (1-1) of the immediately following month
MPP	means Mine Process Plant
mRL	means metres Reduced Level
MSA	means mines services area
MSP	means Magnetic Separation Plant
Mtpa	means million tonnes per annum
NATA	means the National Association of Testing Authorities, Australia
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis
NEPM	means National Environmental Protection Measures
NNC	means No Name Creek
OWS	means oily water separator
PLC	means Programmable Logic Control
PM_{10}	used to describe particulate matter that is smaller than 10 microns (µm) in diameter
premises	refers to 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 licence)
prescribed premises	has the same meaning given to that term under the EP Act
putrescible	has the meaning defined in Landfill Definitions
quarterly	means the 4 inclusive periods from 1 January to 31 March, 1 April to 30 June, 1 July to 30 September and 1 October to 31 December in that year

Term	Definition
restoration	means the completion of the engineering of a landfill cell and may include capping and/or final cover
Reduced level (RL)	means the height or elevation above the point adopted as the site datum for the purpose of establishing levels
RO	means Reverse Osmosis
ROM	means run of mines
RSS	means rising stage samplers
SCADA	means Supervisory Control and Data Acquisition
Schedule 1	means Schedule 1 of this licence unless otherwise stated
Schedule 2	means Schedule 2 of this licence unless otherwise stated
Schedule 3	means Schedule 3 of this licence unless otherwise stated
sewage	means waste containing faecal matter or urine and conveyed in sewers
SIF	means spray irrigation field
spot sample	means a discrete sample representative at the time and place at which the sample is taken
SWIB	means Southwest Injection Borefield
suitably qualified engineer	means a person who: 1) holds a Bachelor's degree recognised by Engineers Australia; 2) has a minimum of 5 years of experience in a supervisory role in engineering; and 3) is employed by an independent third party external to the Licence Holder's business; or 4) is otherwise approved in writing by the CEO to act in this capacity.
TDS	means total dissolved solids
Total freeboard	means a combined operational freeboard and beach freeboard
Total nitrogen	means the sum of total kjeldahl nitrogen (ammonia as nitrogen plus organic nitrogen) and nitrate as nitrogen plus nitrite as nitrogen
Total phosphorus	means the sum of all forms of phosphorus (orthophosphate, condensed phosphate, and organic phosphate)
TSF	means tailing storage facility
tph	means tonnes per hour
µS/cm	means micro-Siemens per centimetre
usual working day	means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia

Term	Definition
waste	has the same meaning given to that term under the EP Act
WBP	means Water Blending Plant
WLDL	means (Level Troll) Water Level Data Loggers
WWTP	means wastewater treatment plant
Z5 IPTSF	means Zulu 5 In-Pit TSF
Z6 IPTSF	means Zulu 6 In-Pit TSF

END OF CONDITIONS

Schedule 1: Maps

Premises map

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

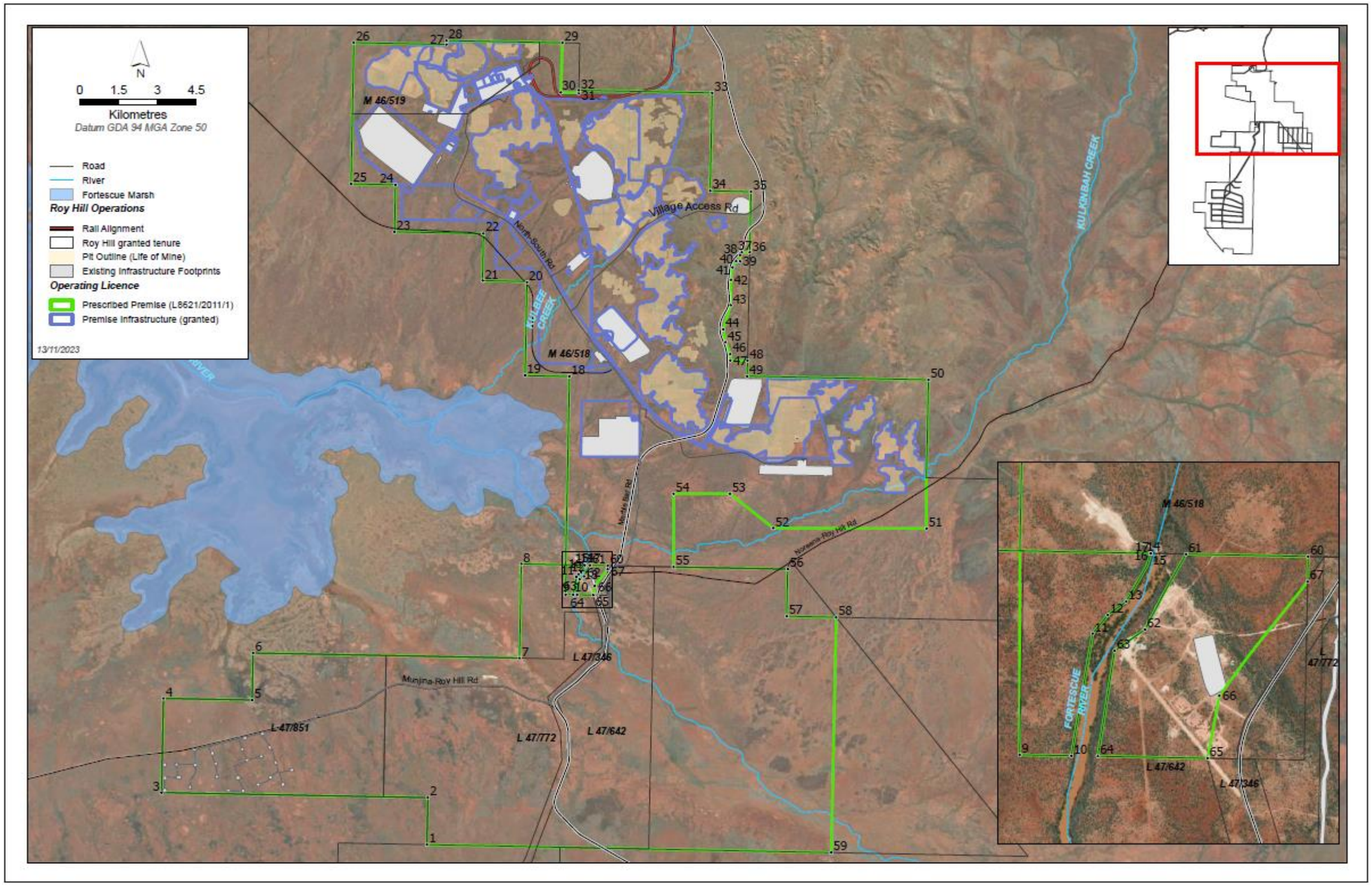


Figure 1: Map of the boundary of the prescribed premises

Infrastructure

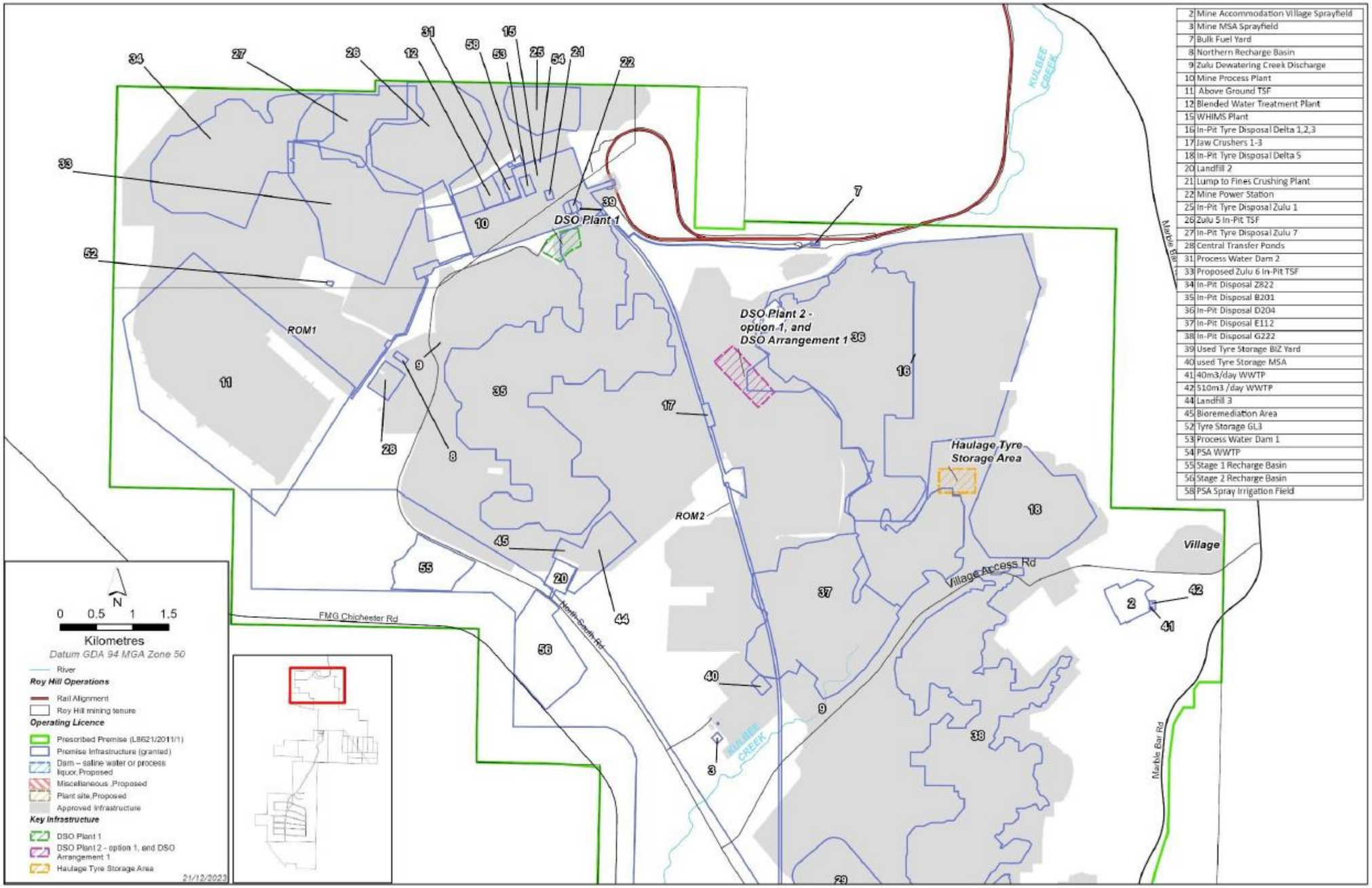


Figure 2 : Infrastructure - Northern portion

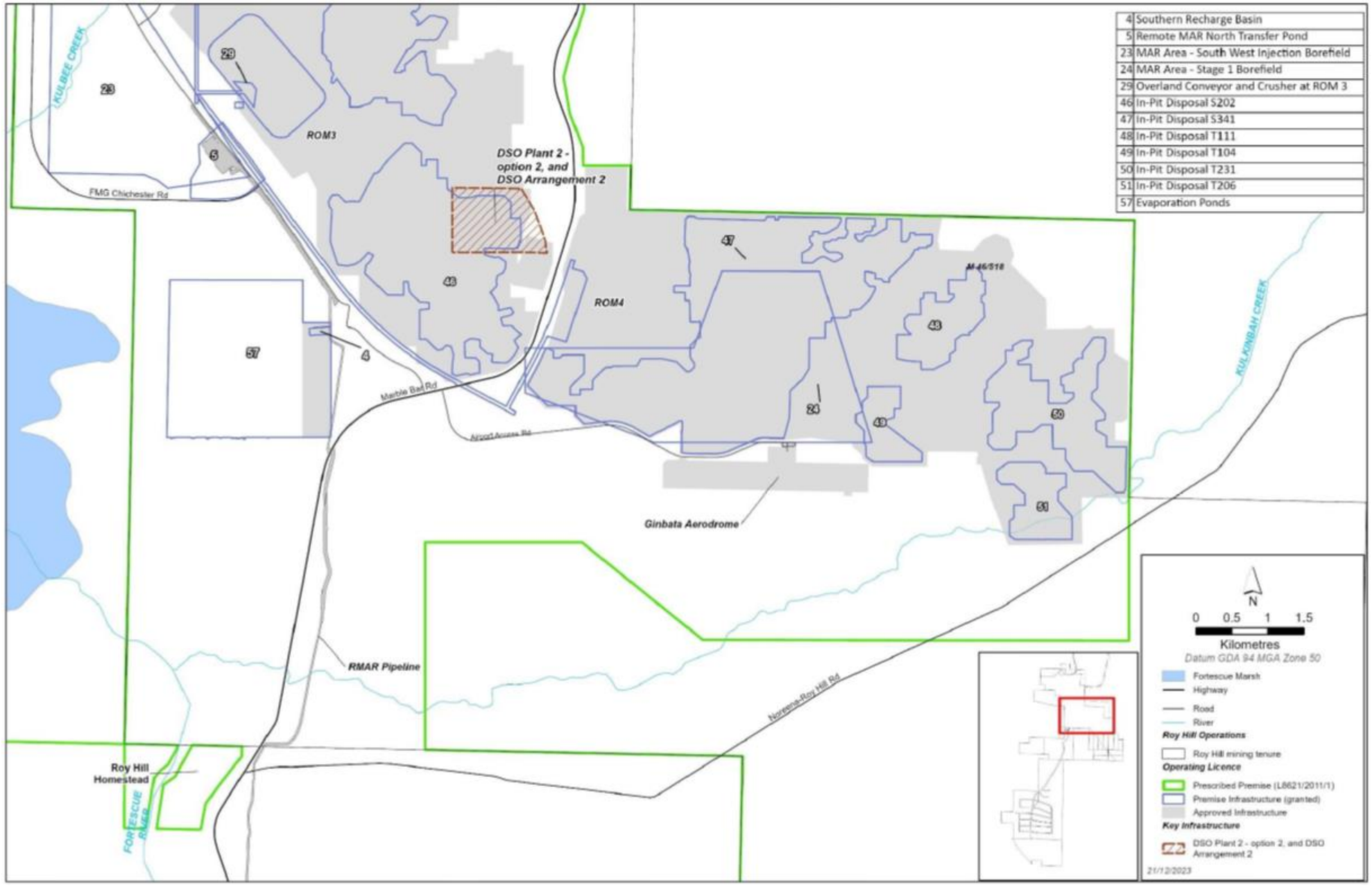


Figure 3: Infrastructure - Southern portion (Part A)

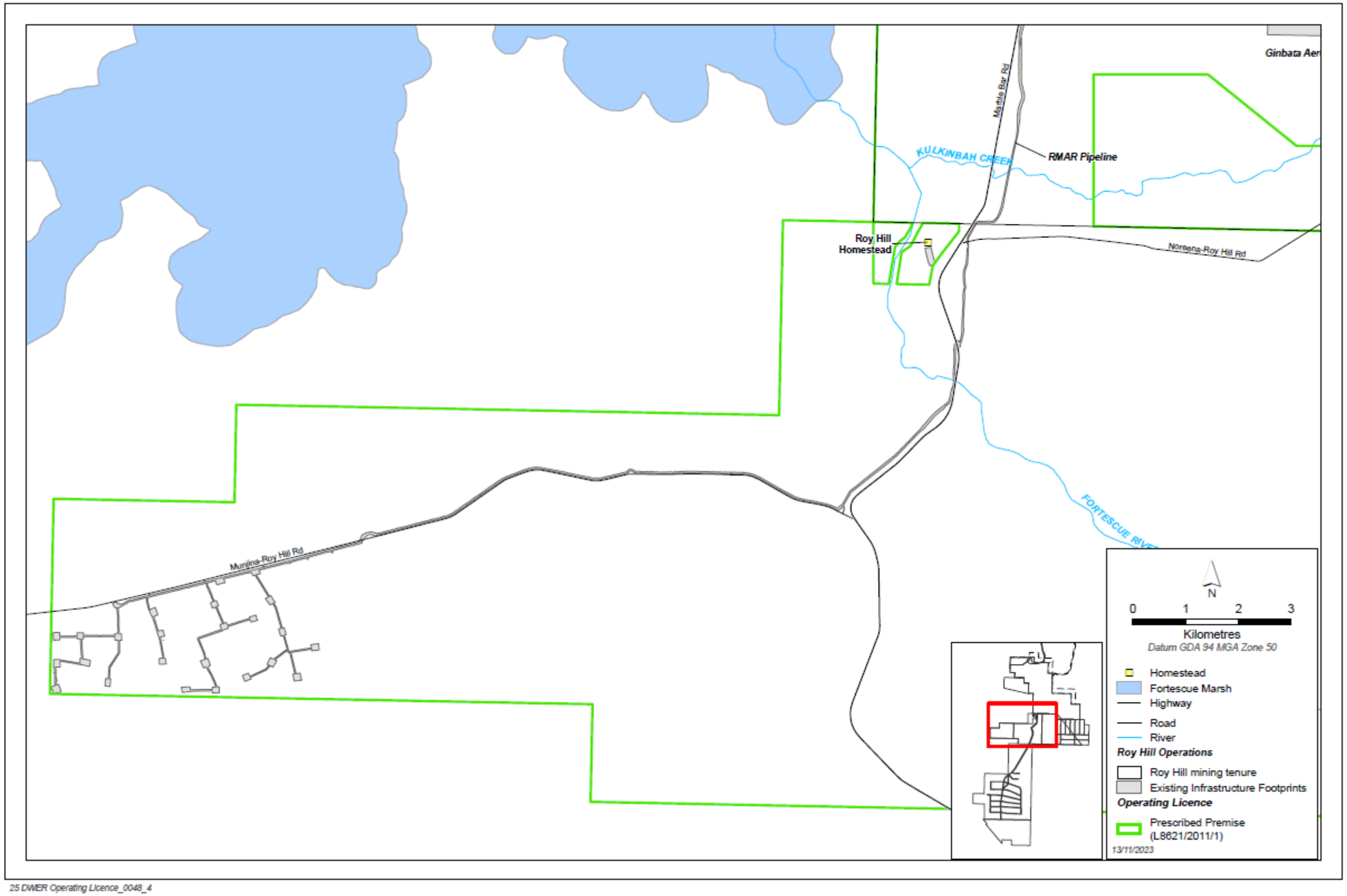
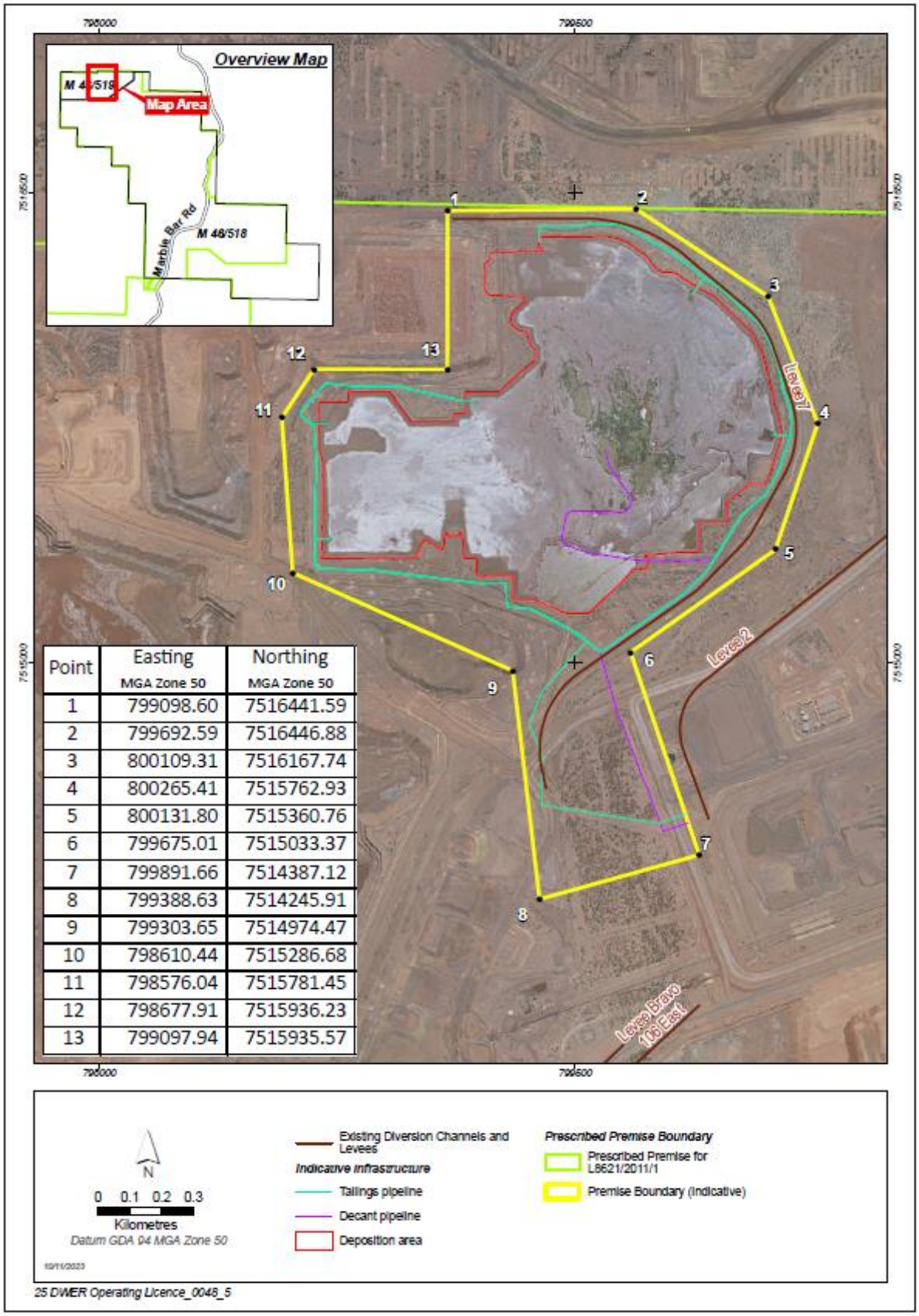


Figure 4: Infrastructure - Southern portion (Part B)

In-Pit Tailing Storage Facilities



Point	Easting MGA Zone 50	Northing MGA Zone 50
1	799098.60	7516441.59
2	799692.59	7516446.88
3	800109.31	7516167.74
4	800265.41	7515762.93
5	800131.80	7515360.76
6	799675.01	7515033.37
7	799891.66	7514387.12
8	799388.63	7514245.91
9	799303.65	7514974.47
10	798610.44	7515286.68
11	798576.04	7515781.45
12	798677.91	7515936.23
13	799097.94	7515935.57

Figure 5: Z5 IPTSF deposition area, tailing delivery and decant lines

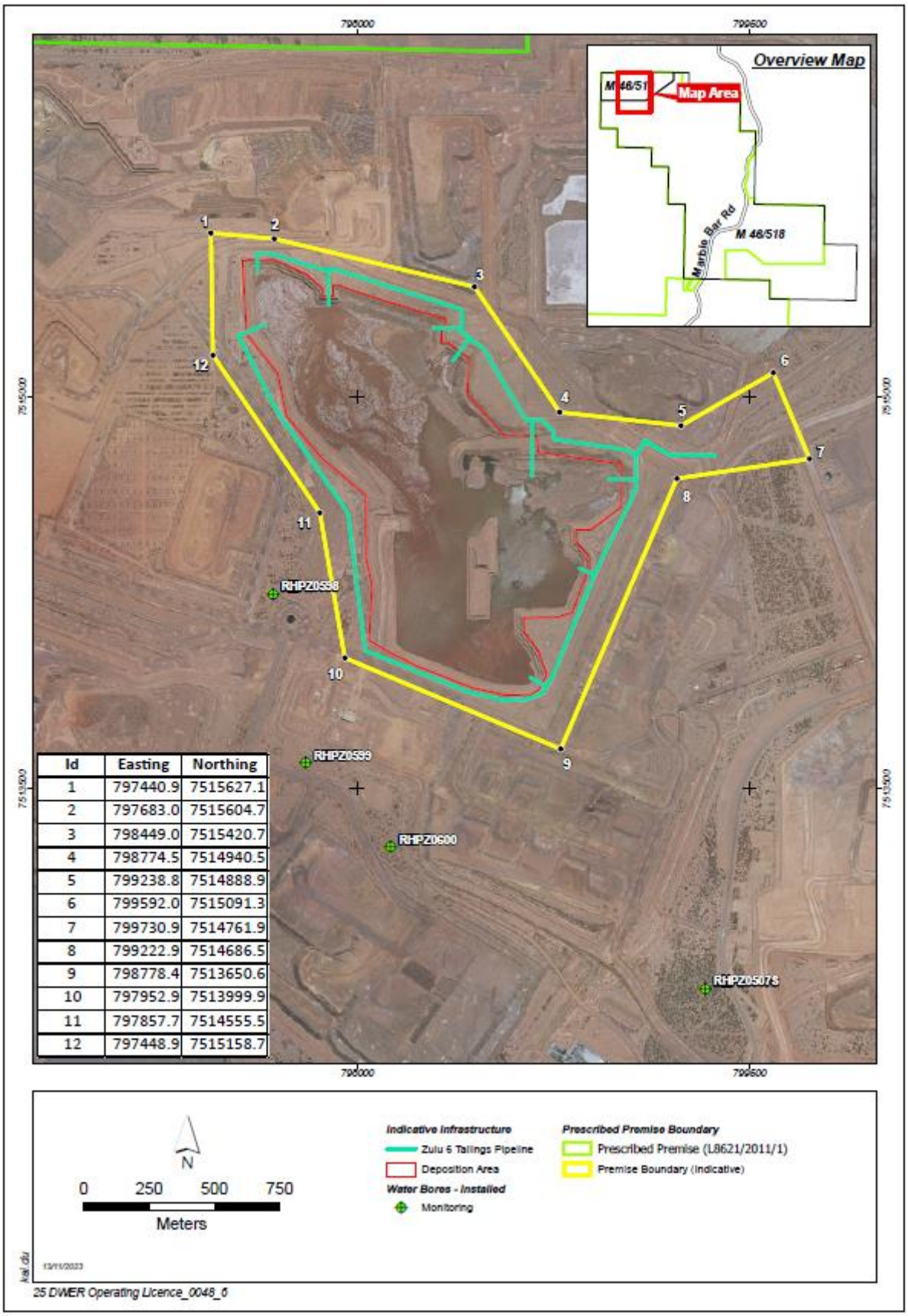


Figure 6: Z6 IPTSF deposition area, tailing delivery and decant lines

Landfill Areas and In-pit Disposal Maps

The areas in which the storage of tyres and disposal of waste by landfilling may take place is shown in Figure 7, 8 and 9 below.

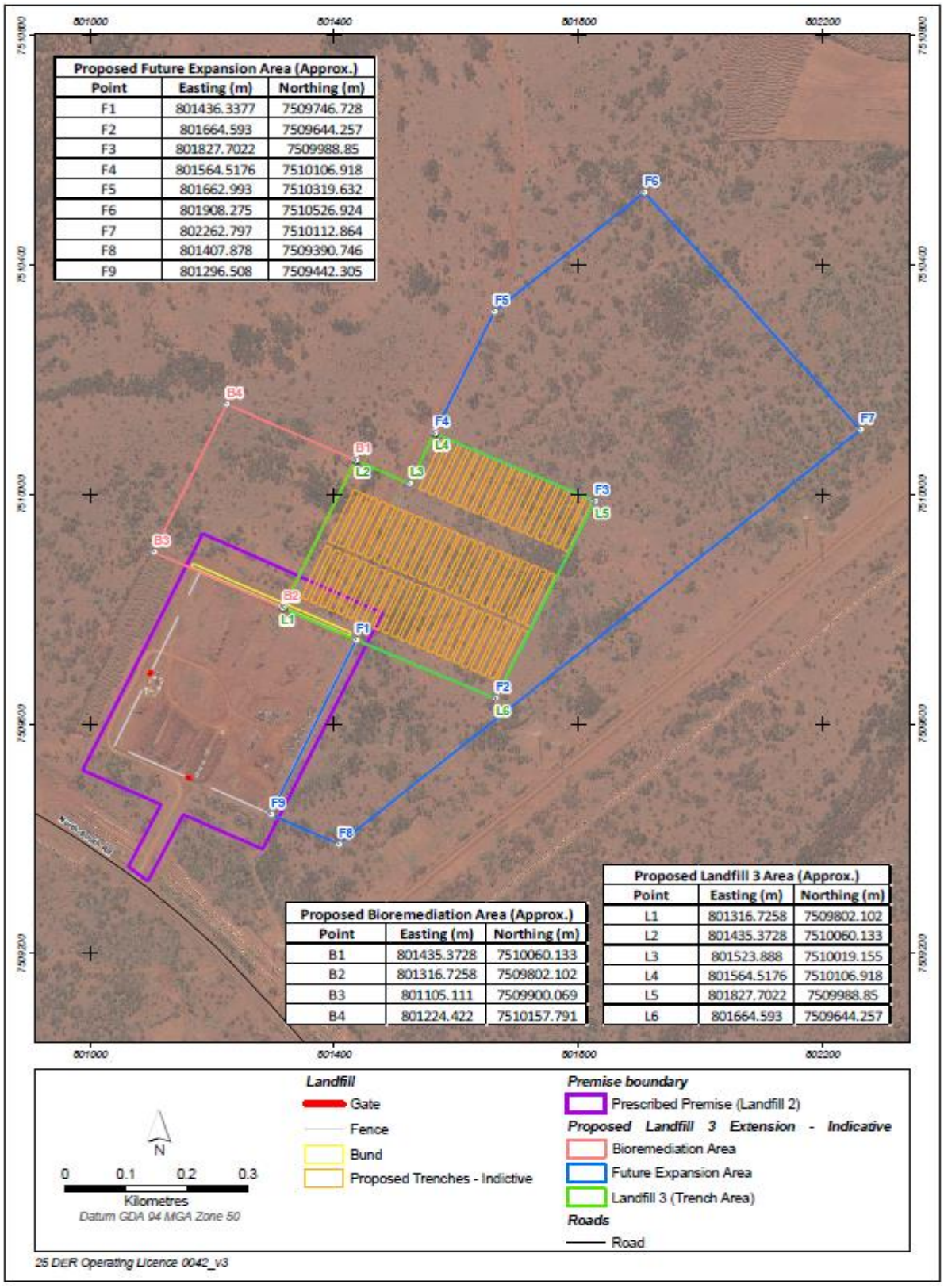


Figure 7: Landfill 2 and Landfill 3 areas

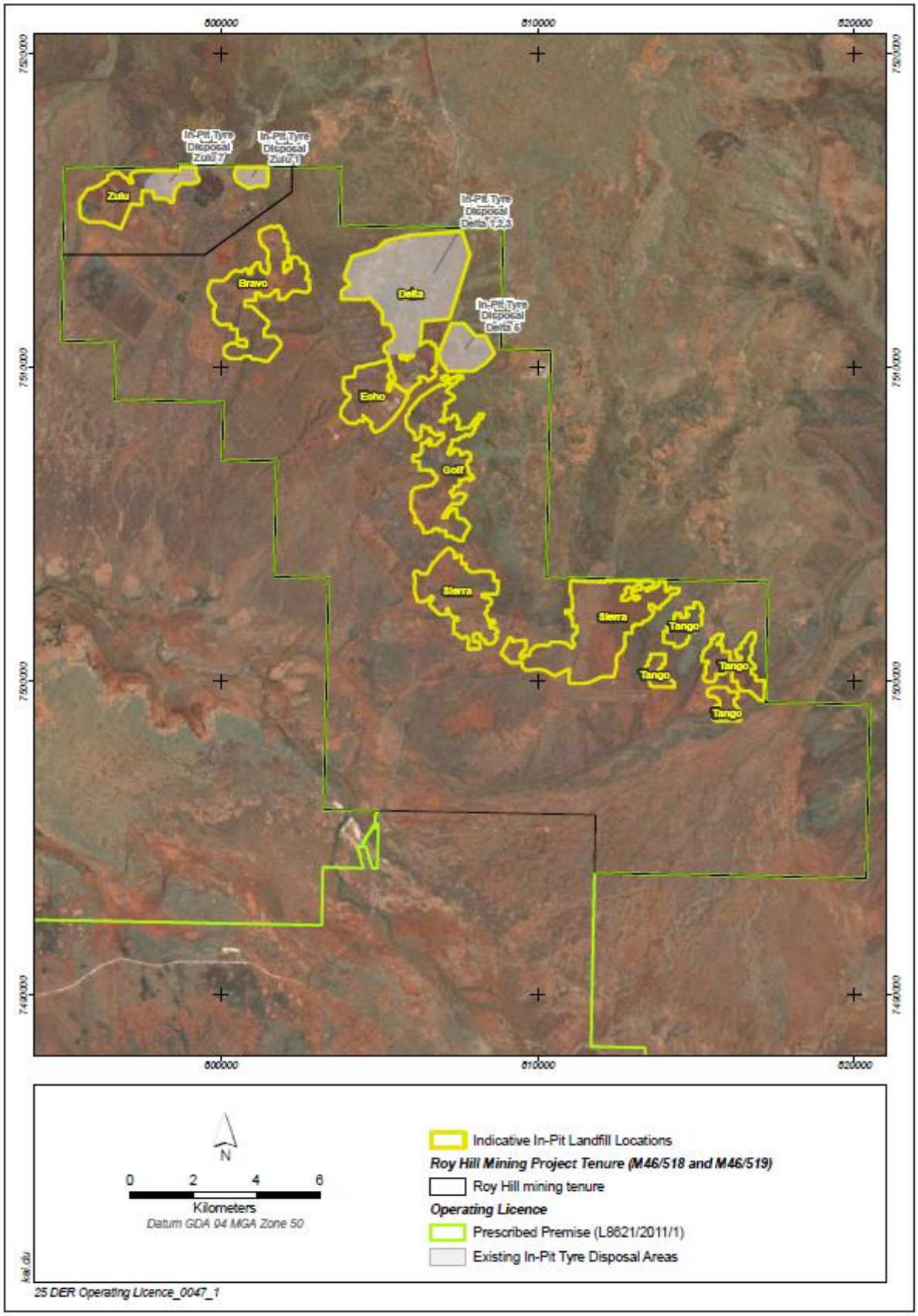


Figure 8: In-pit disposal locations

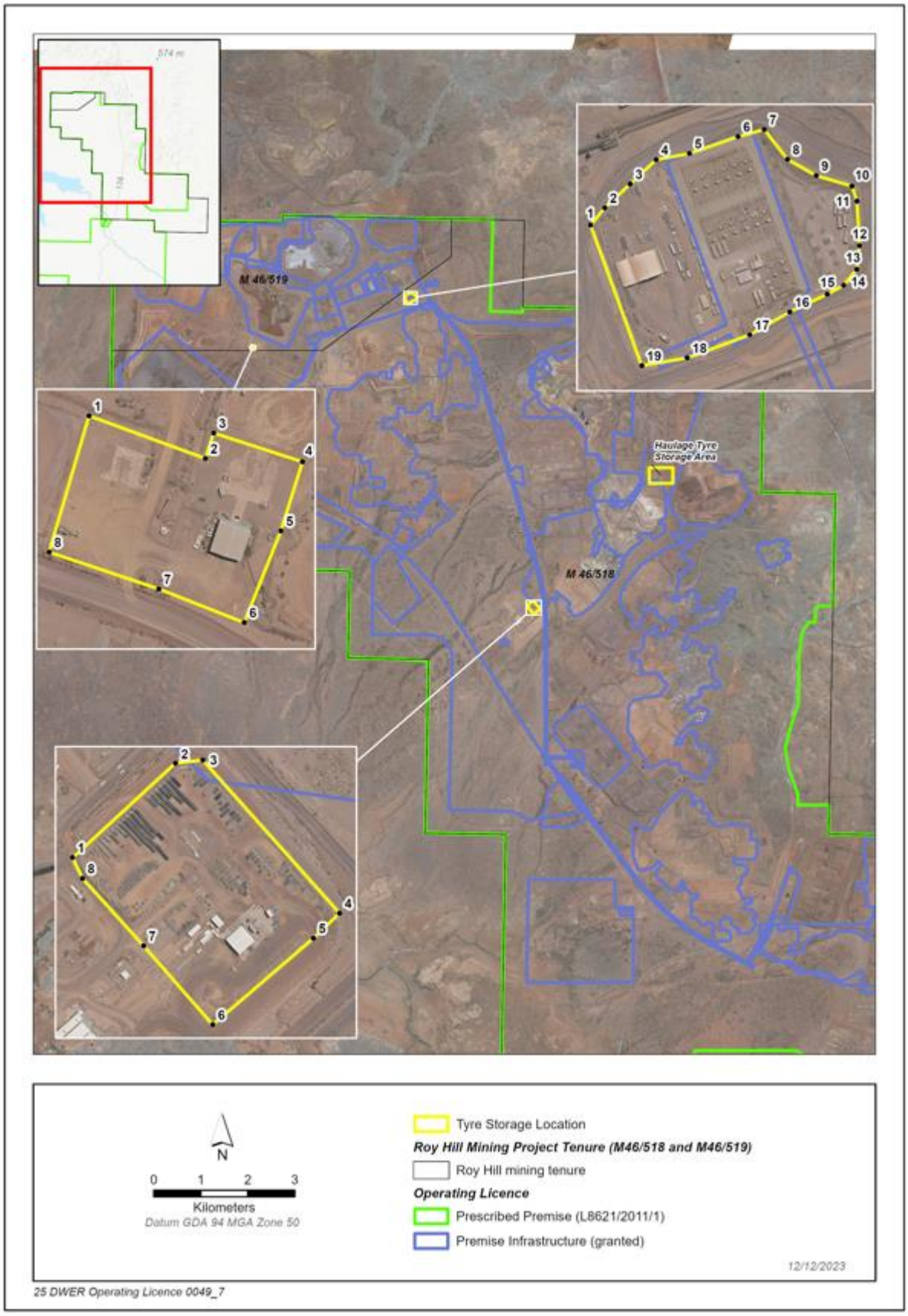


Figure 9: Tyre storage locations

Map of the Mine Power Station

The layout of the Mine Power Station, including diesel and oil storage tanks, fuel unloading facility and oily water separator, is shown below.

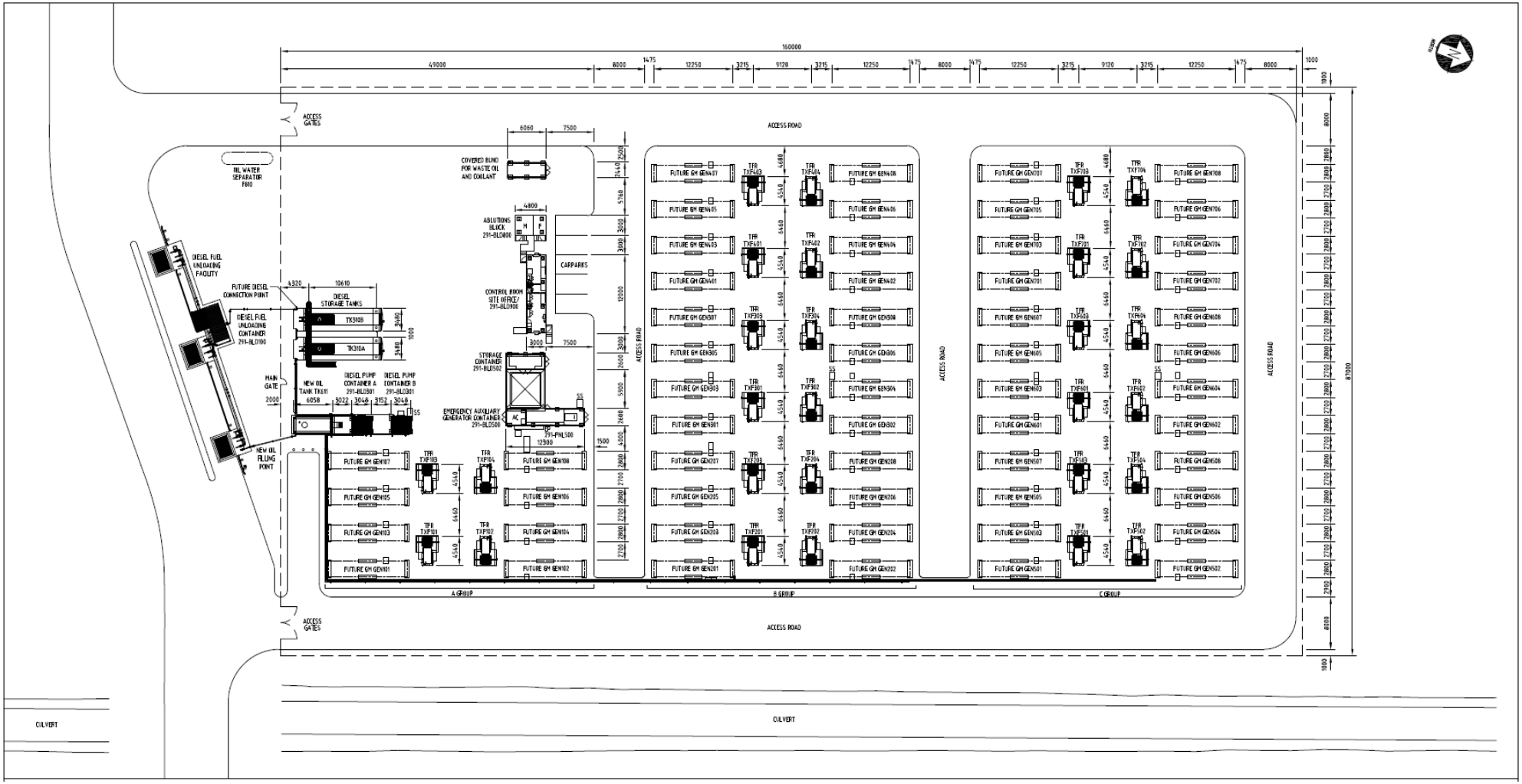


Figure 10: Mine Power Station Layout

Maps of the MAR System

The layout of the Stage 1 and Stage 2 Recharge Basins as defined in Table 6 is shown in the two maps below.

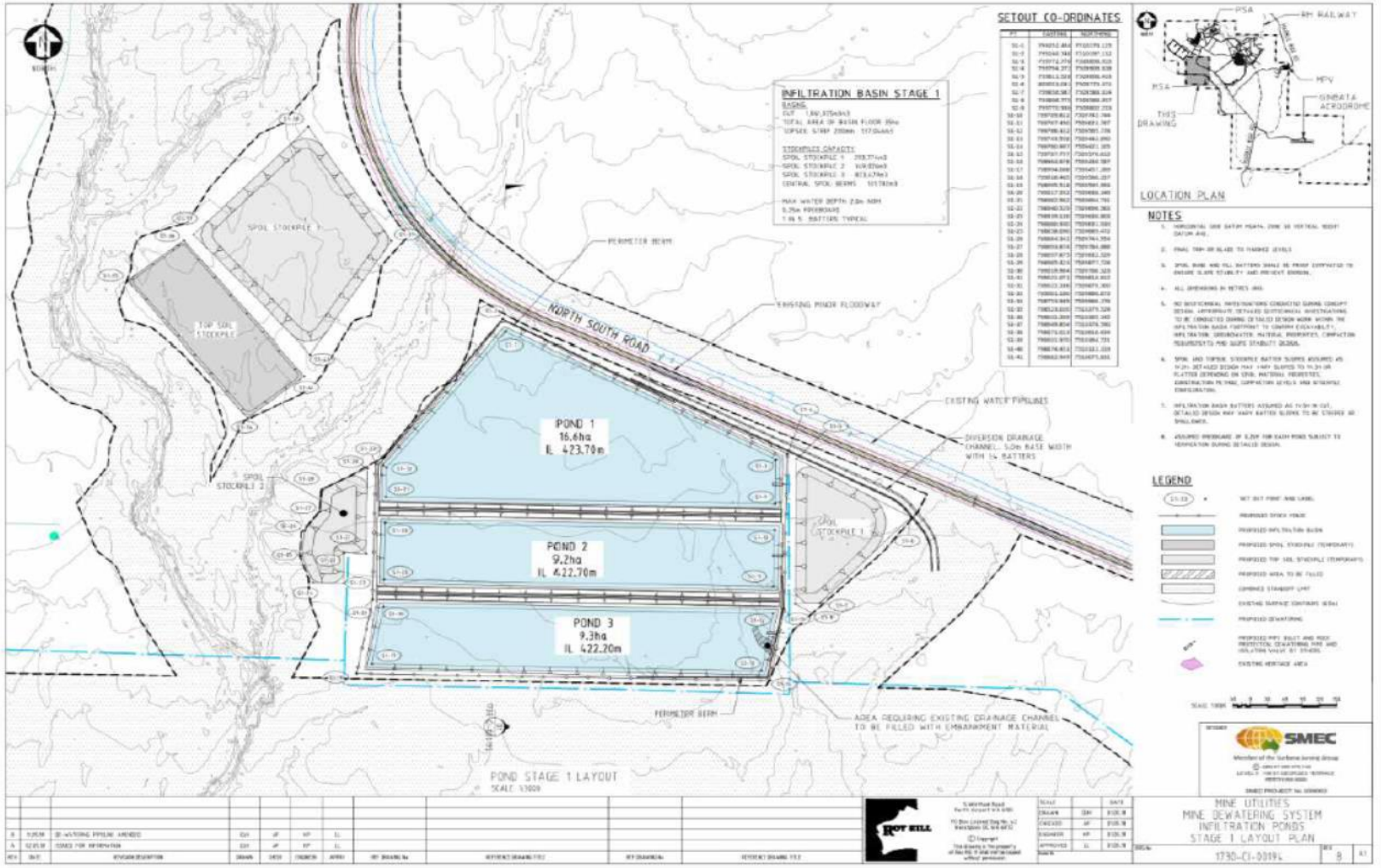


Figure 11: Stage 1 MAR recharge basin layout

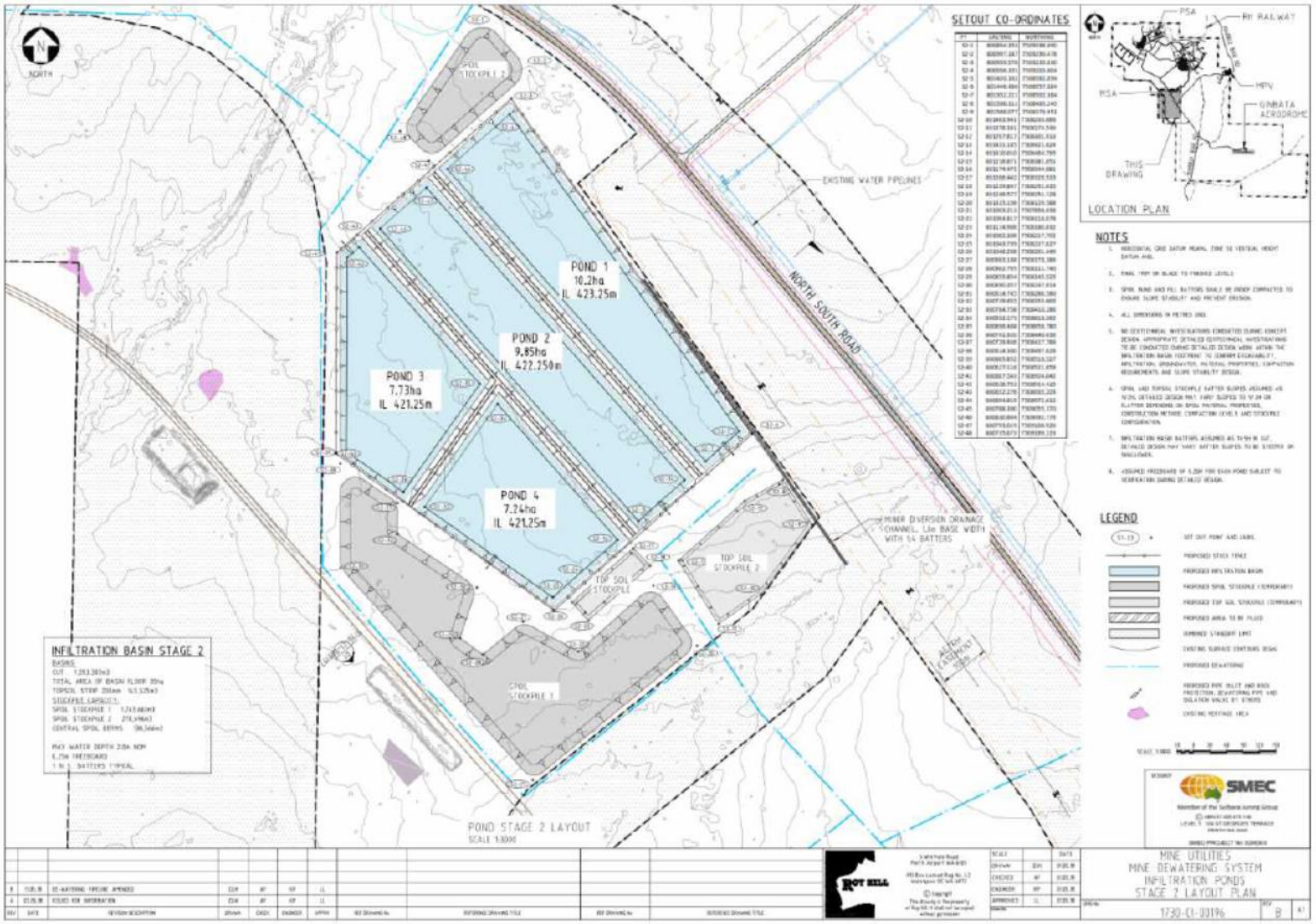


Figure 12: Stage 2 MAR recharge basin layout

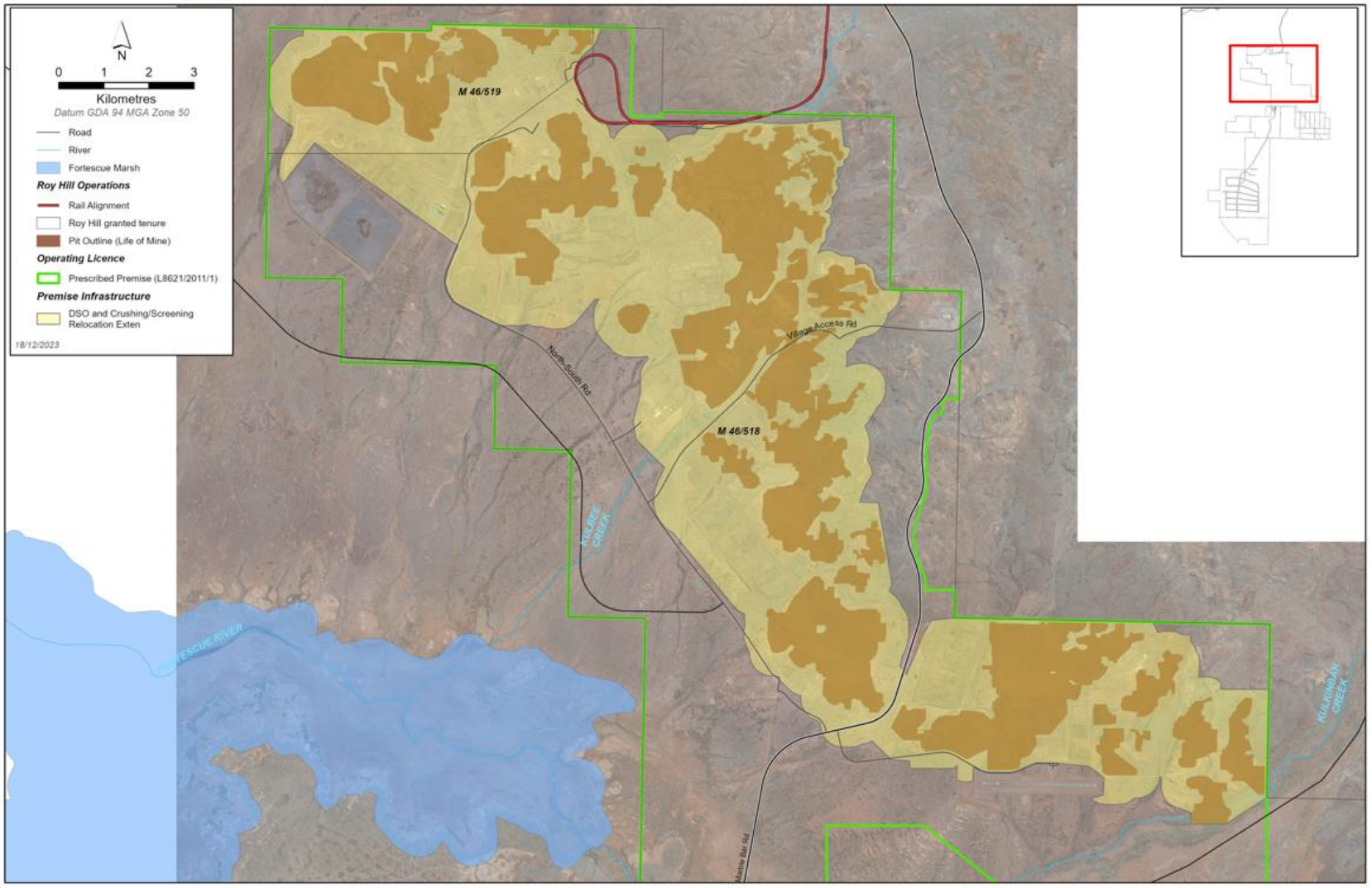


Figure 13: Relocation extent of crushing and screening plant, DSO Plant 1 and DSO Plant 2, and DSO Arrangement 1 and DSO Arrangement 2

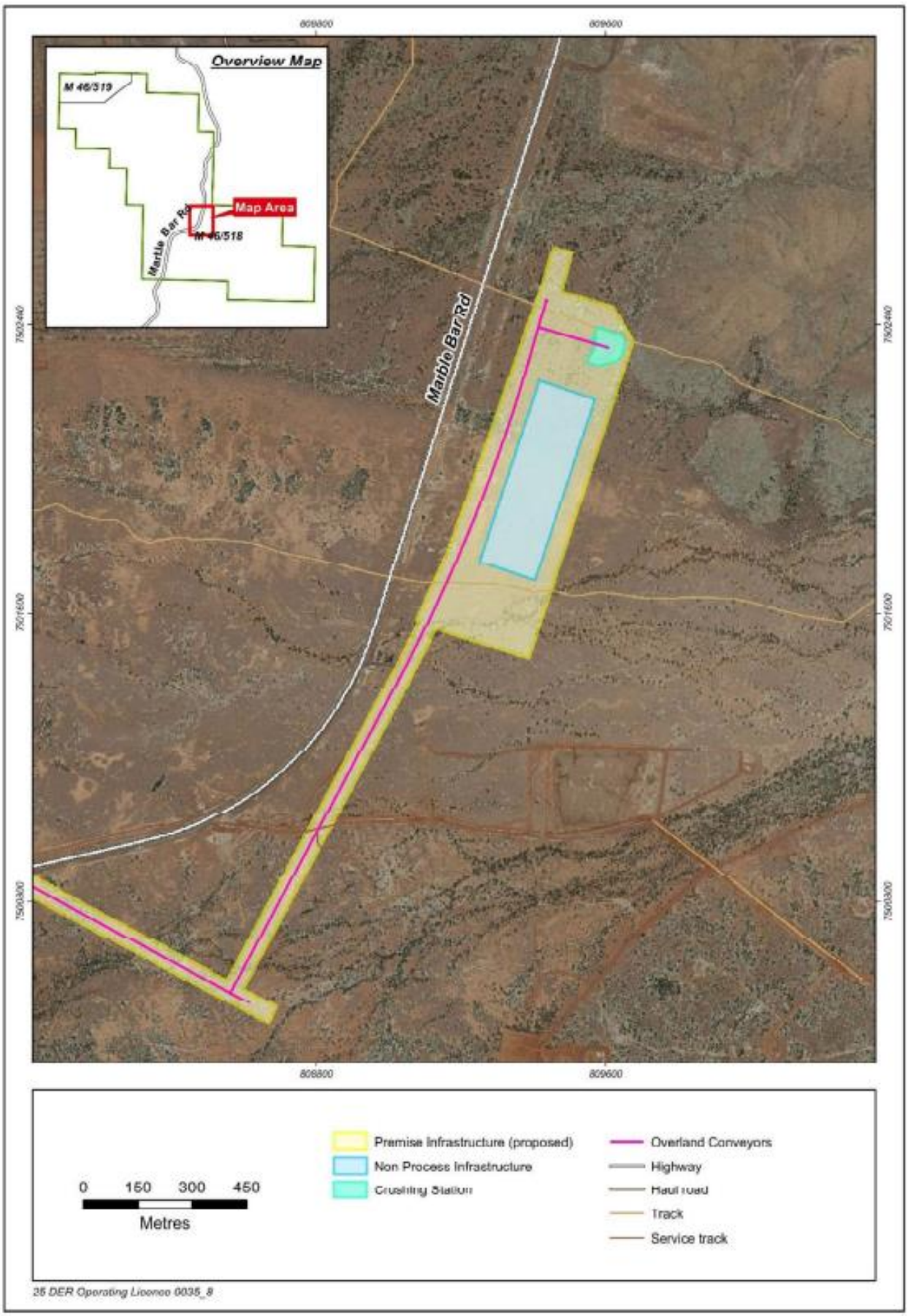


Figure 14: ROM 4 crushing area location

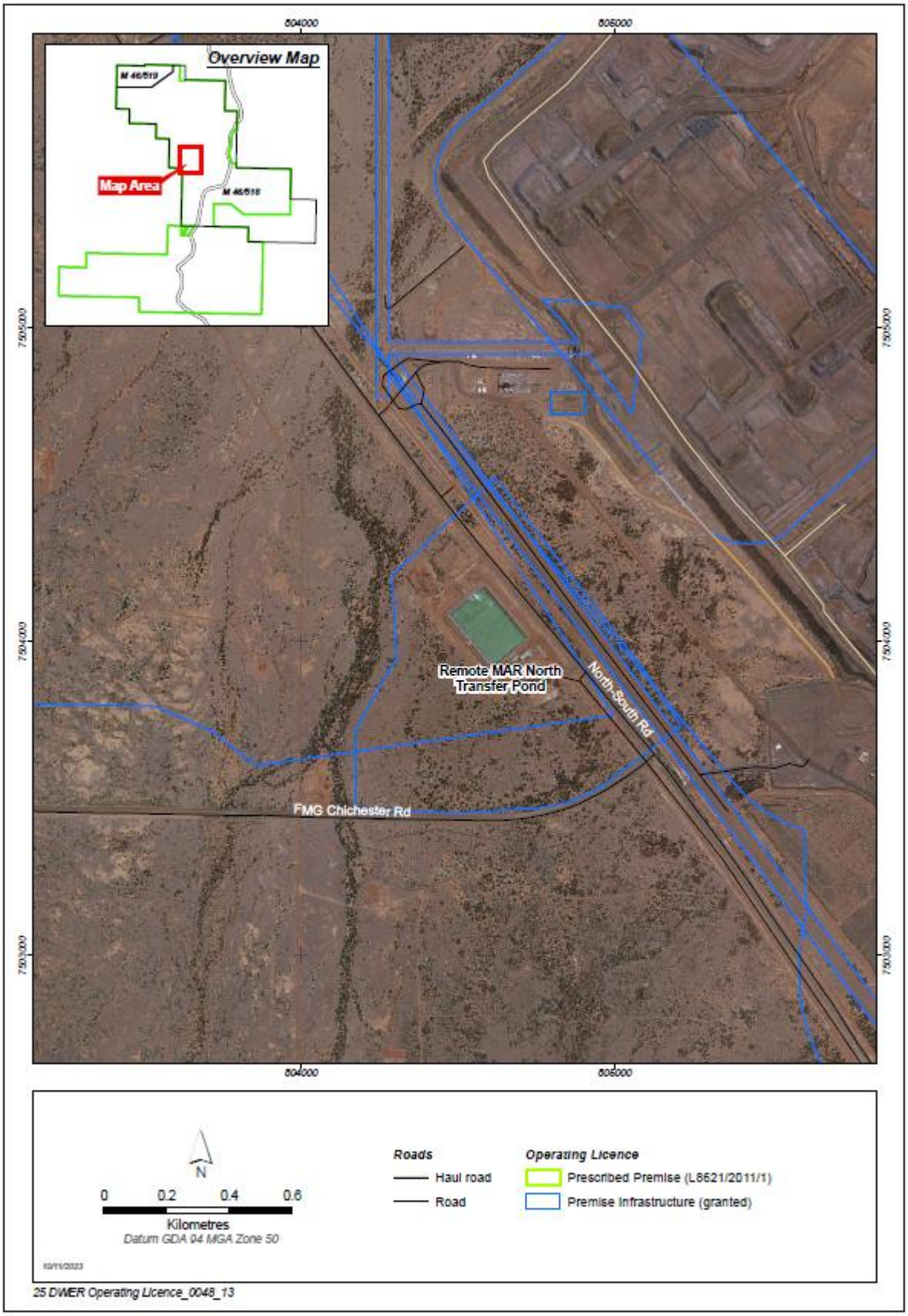


Figure 15: Remote MAR Transfer Pond Location

Schedule 2: Maps of emission and monitoring points

Maps of emission points for the MAR area

The locations of the emission points defined in Table 8 are shown in the maps below.

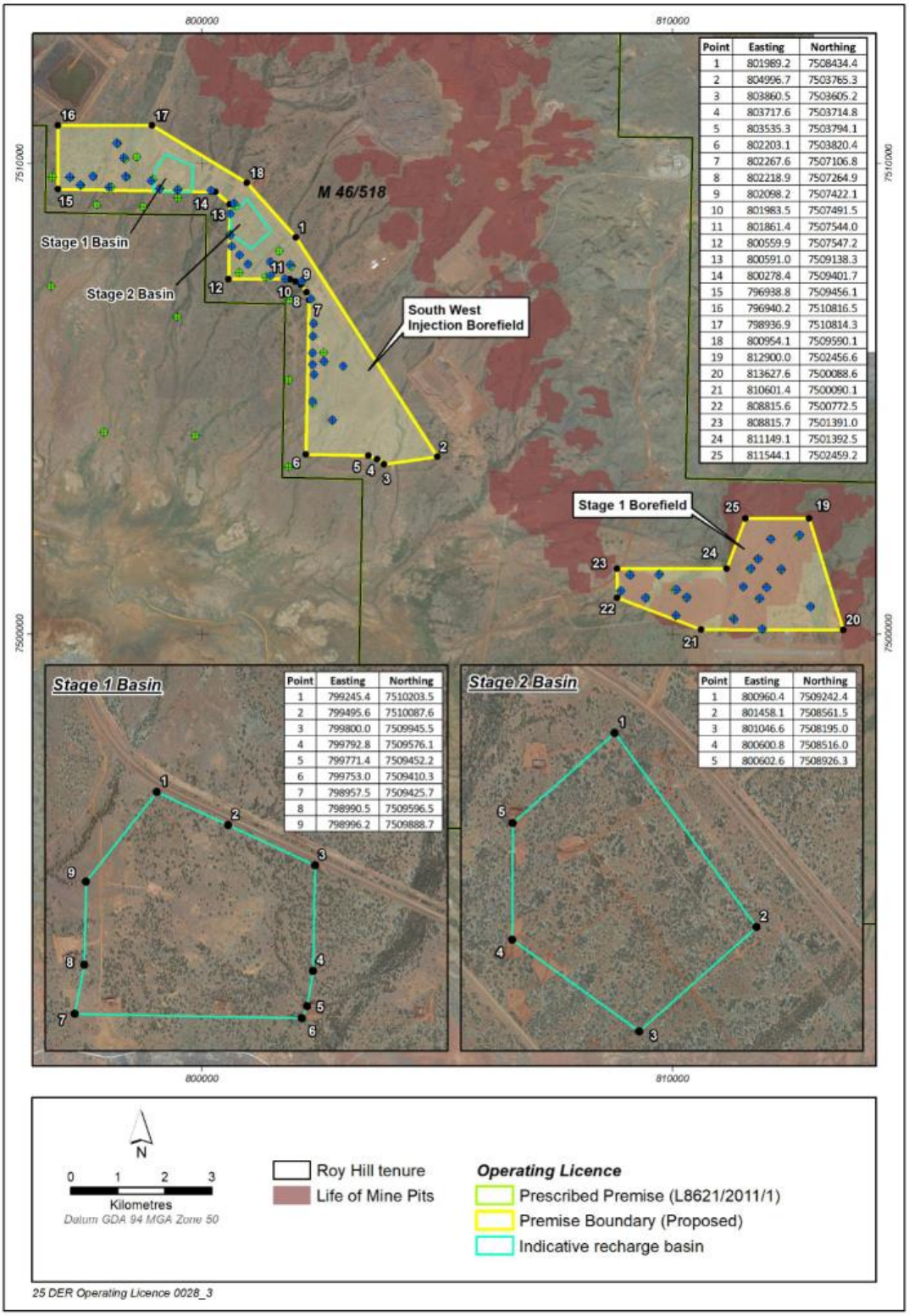


Figure 16: MAR area

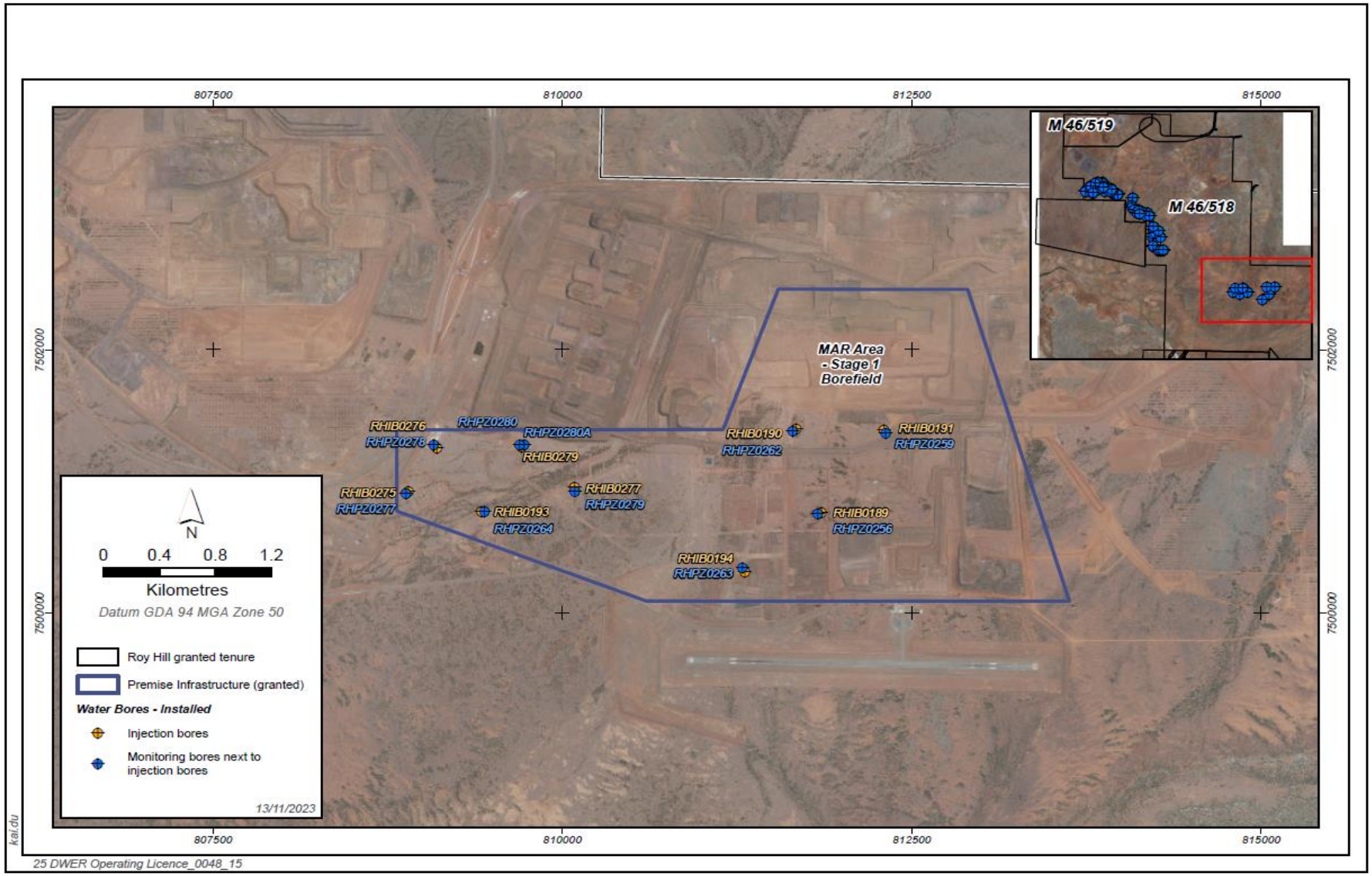


Figure 17: Stage 1 MAR Injection Borefield

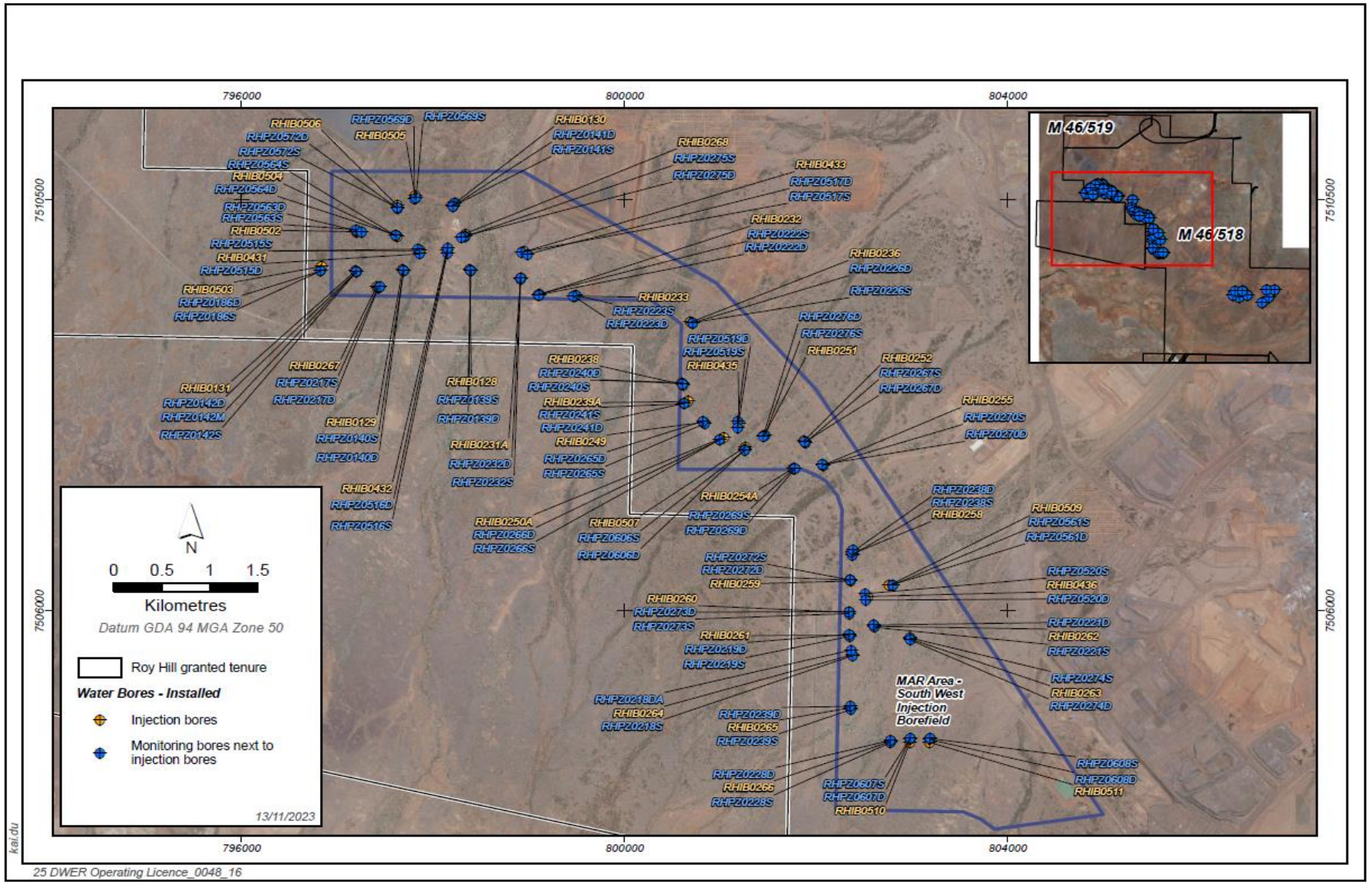


Figure 18: SWIB MAR Injection Borefield

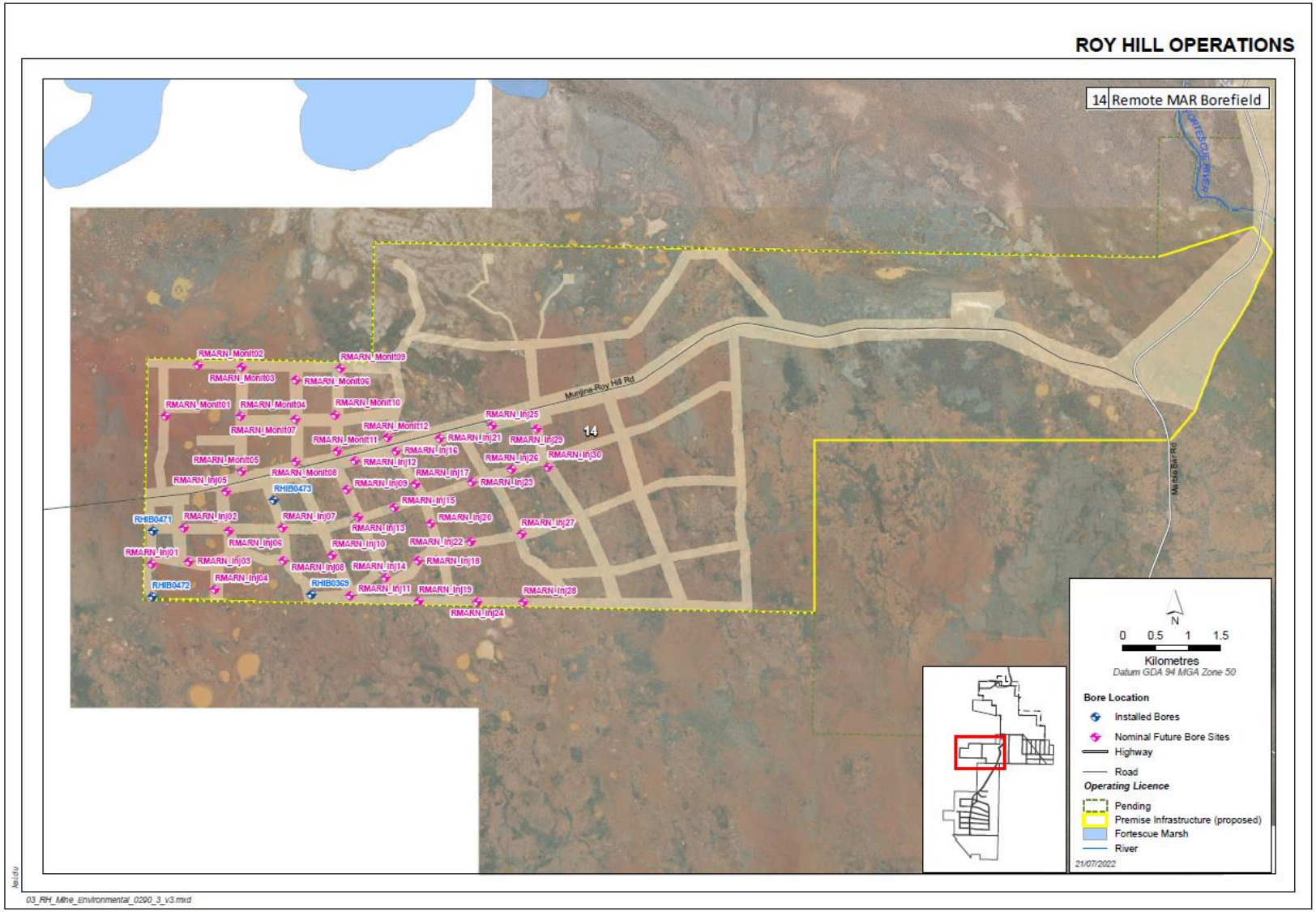


Figure 19: Remote MAR Indicative Bore Locations

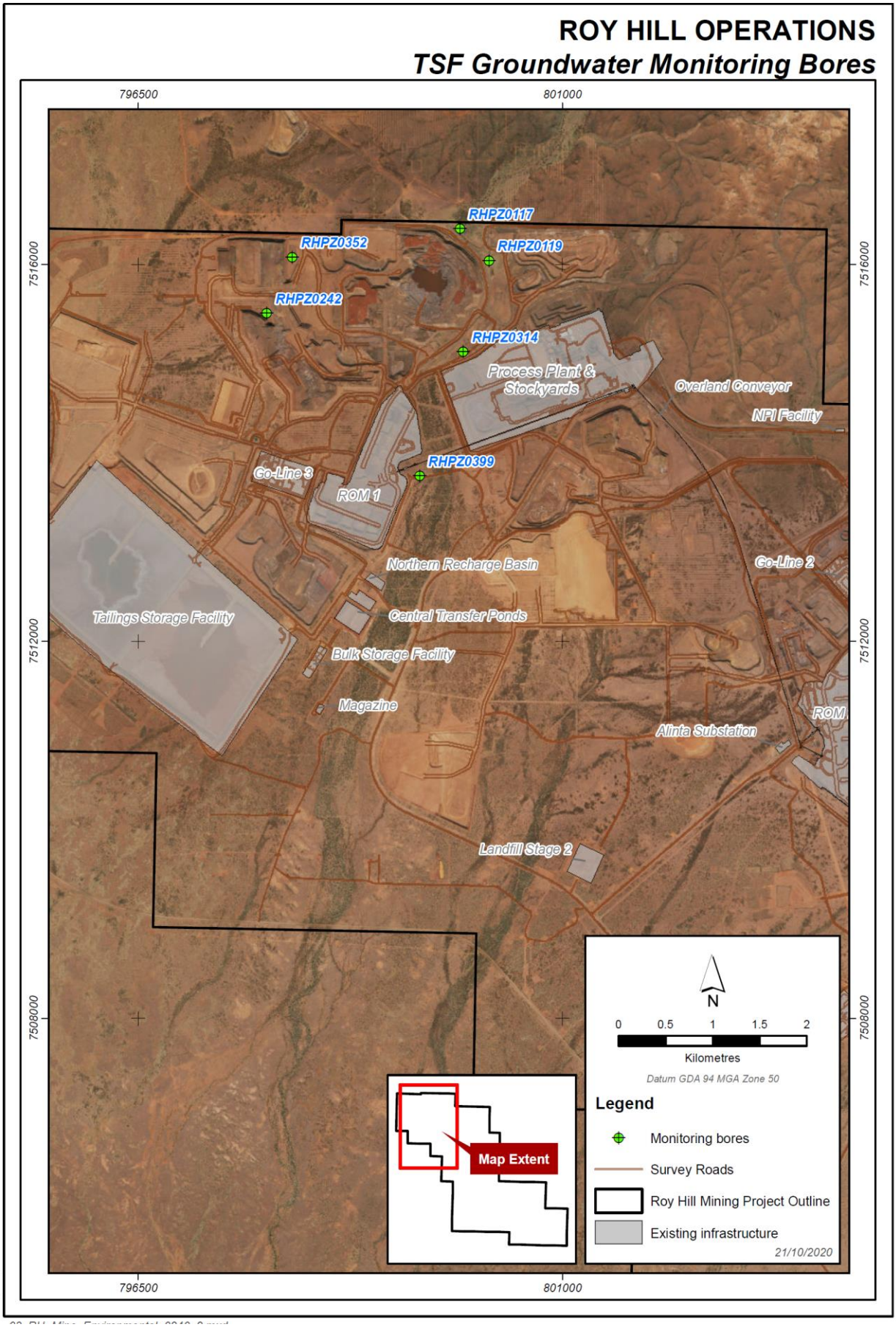


Figure 20: Z5 IPTSF Groundwater monitoring bores

Maps of emissions to land and monitoring points

The locations of the emission points defined in Table 8 are shown in the seven maps below.

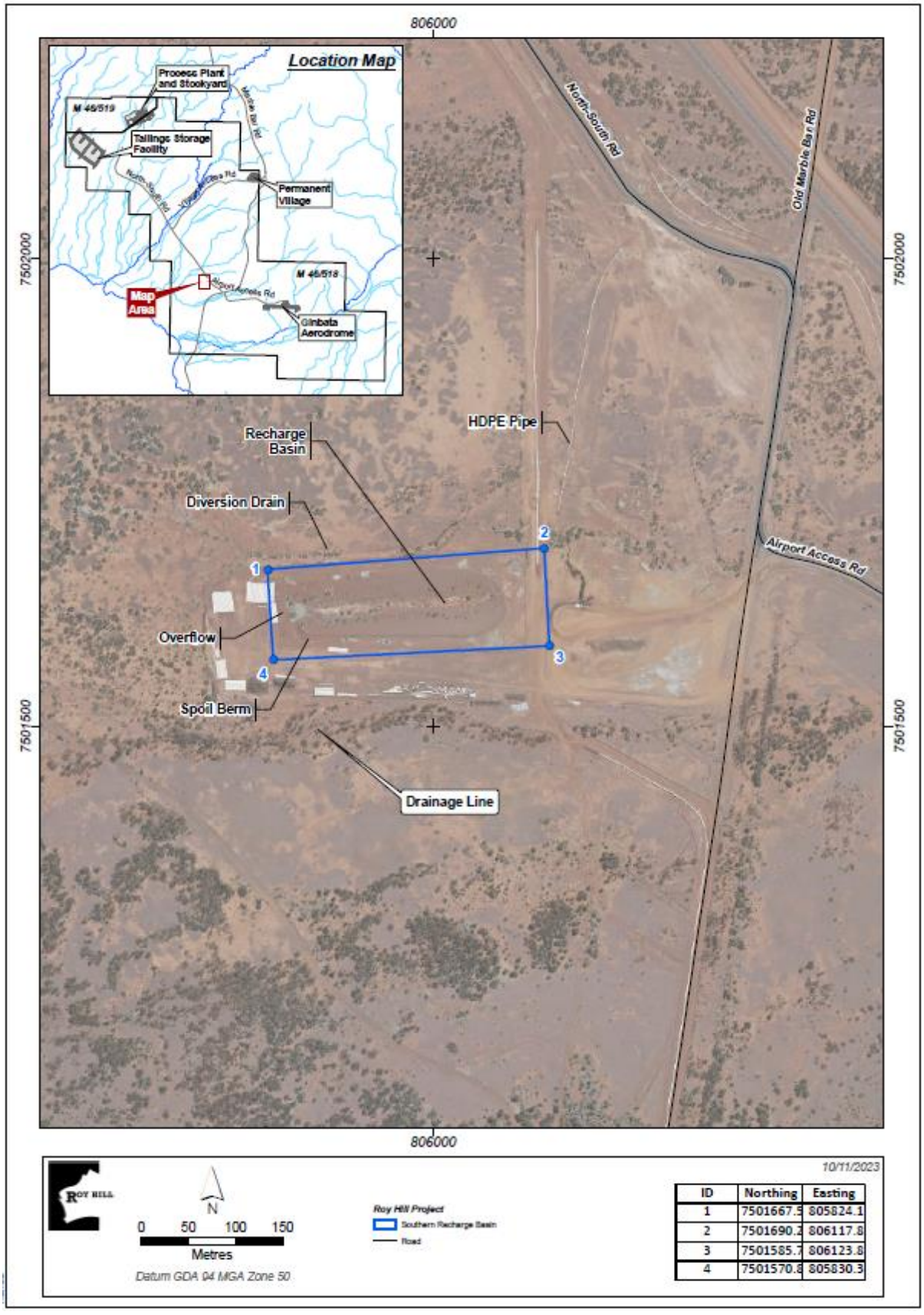
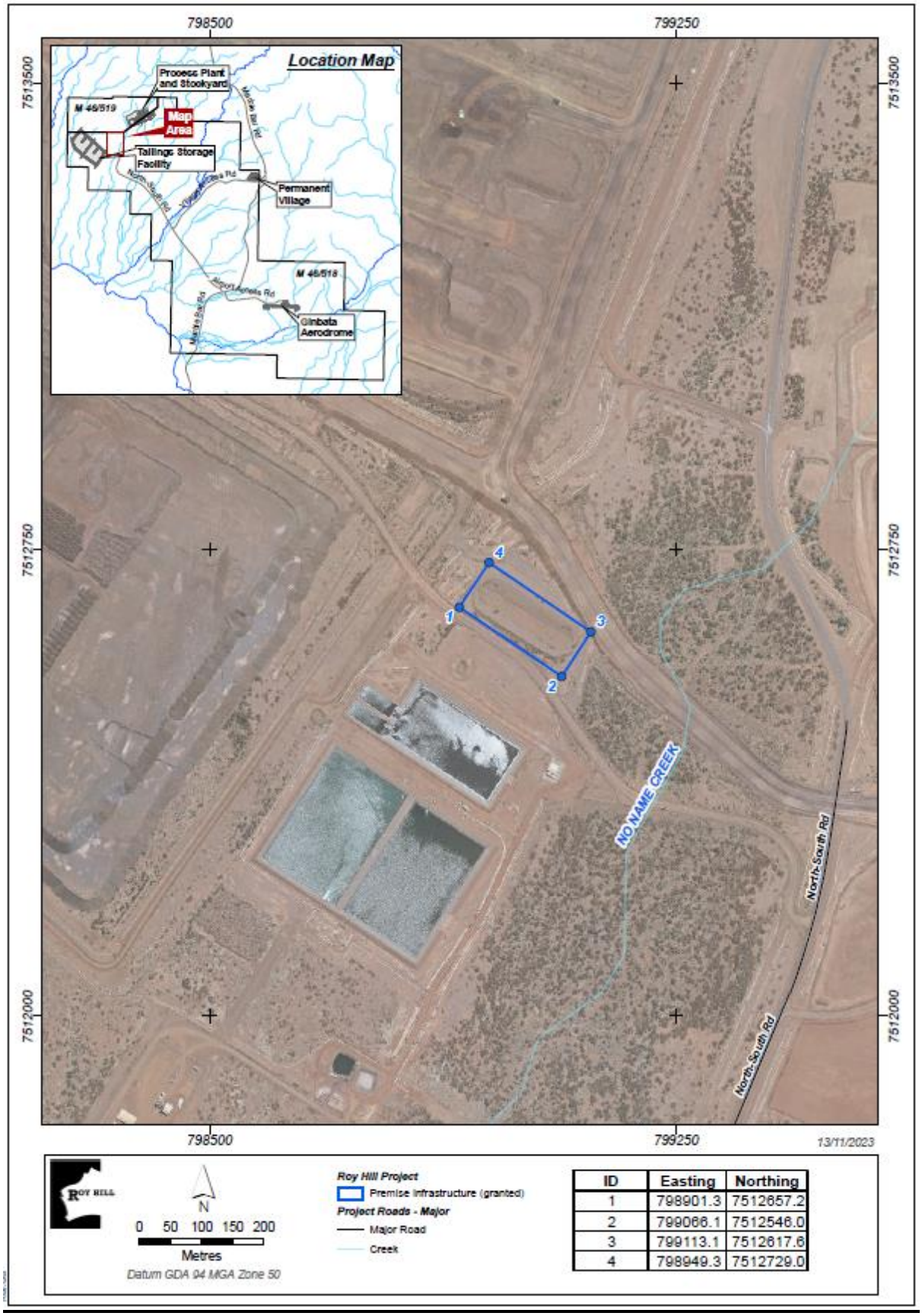


Figure 21: Southern Recharge Basin emission point



ID	Easting	Northing
1	798901.3	7512657.2
2	799066.1	7512546.0
3	799113.1	7512617.6
4	798949.3	7512729.0

Figure 22: Northern Recharge Basin emission point

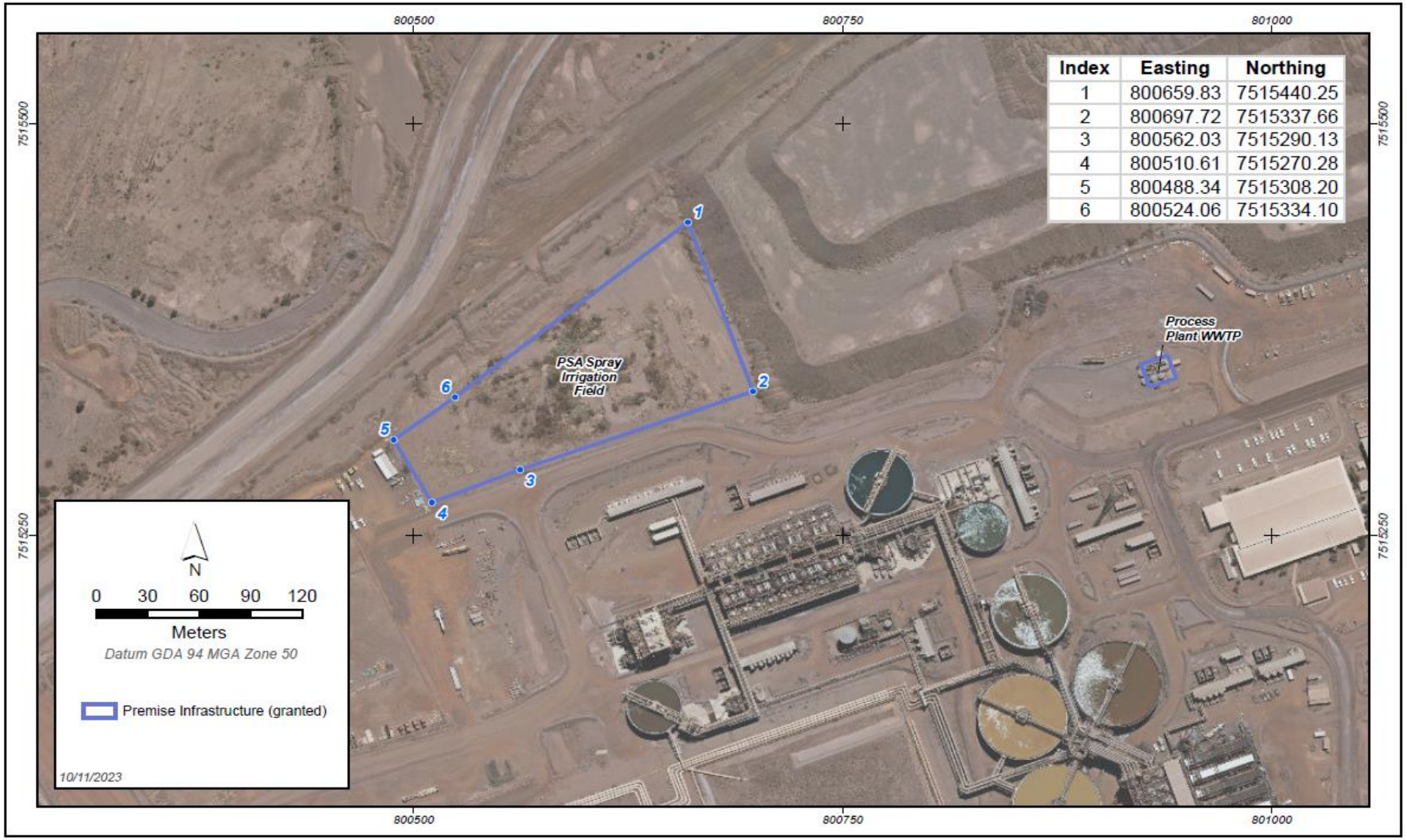


Figure 23: WWTP Irrigation Sprayfield area

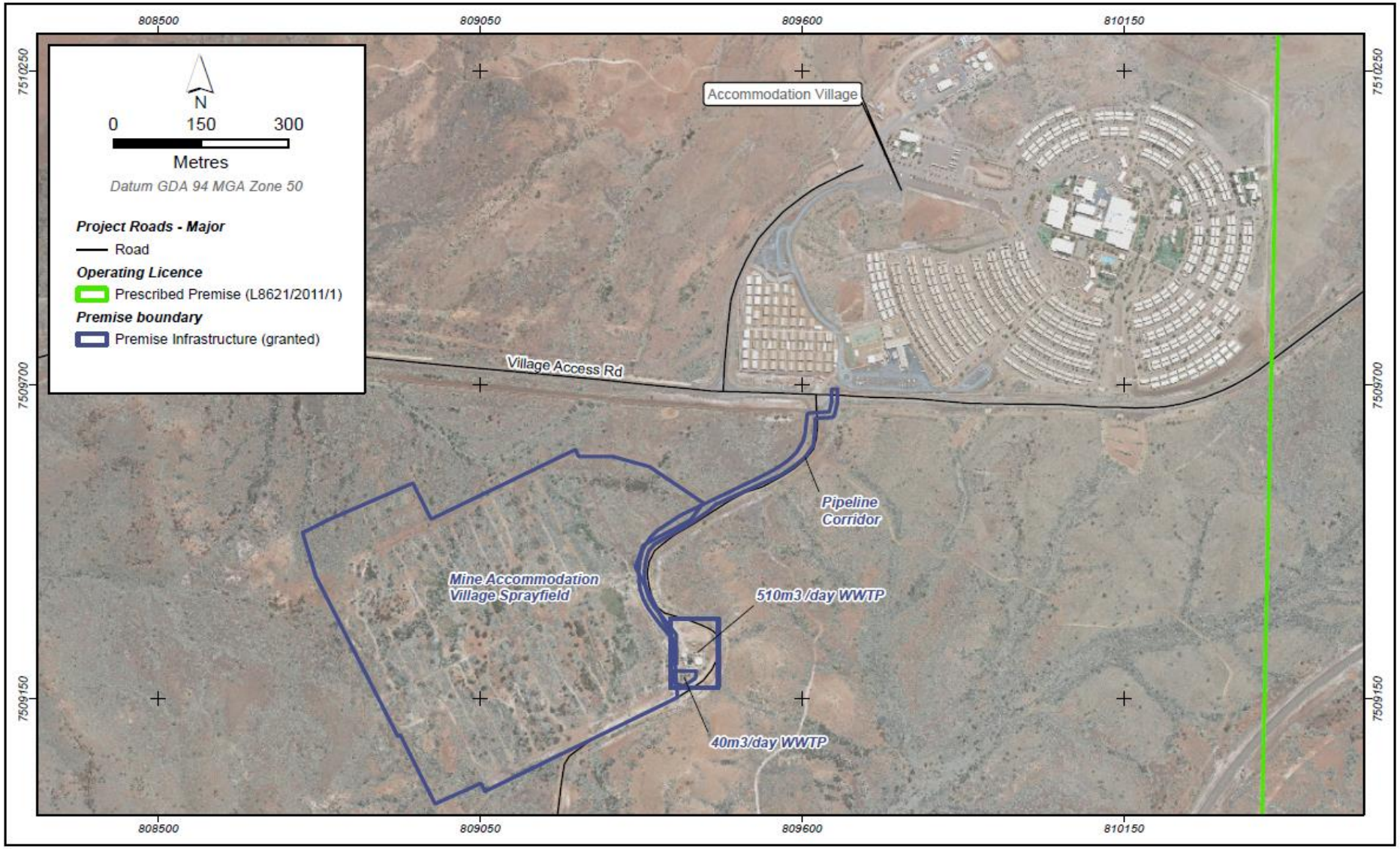


Figure 24: Accommodation Village Irrigation Sprayfield area

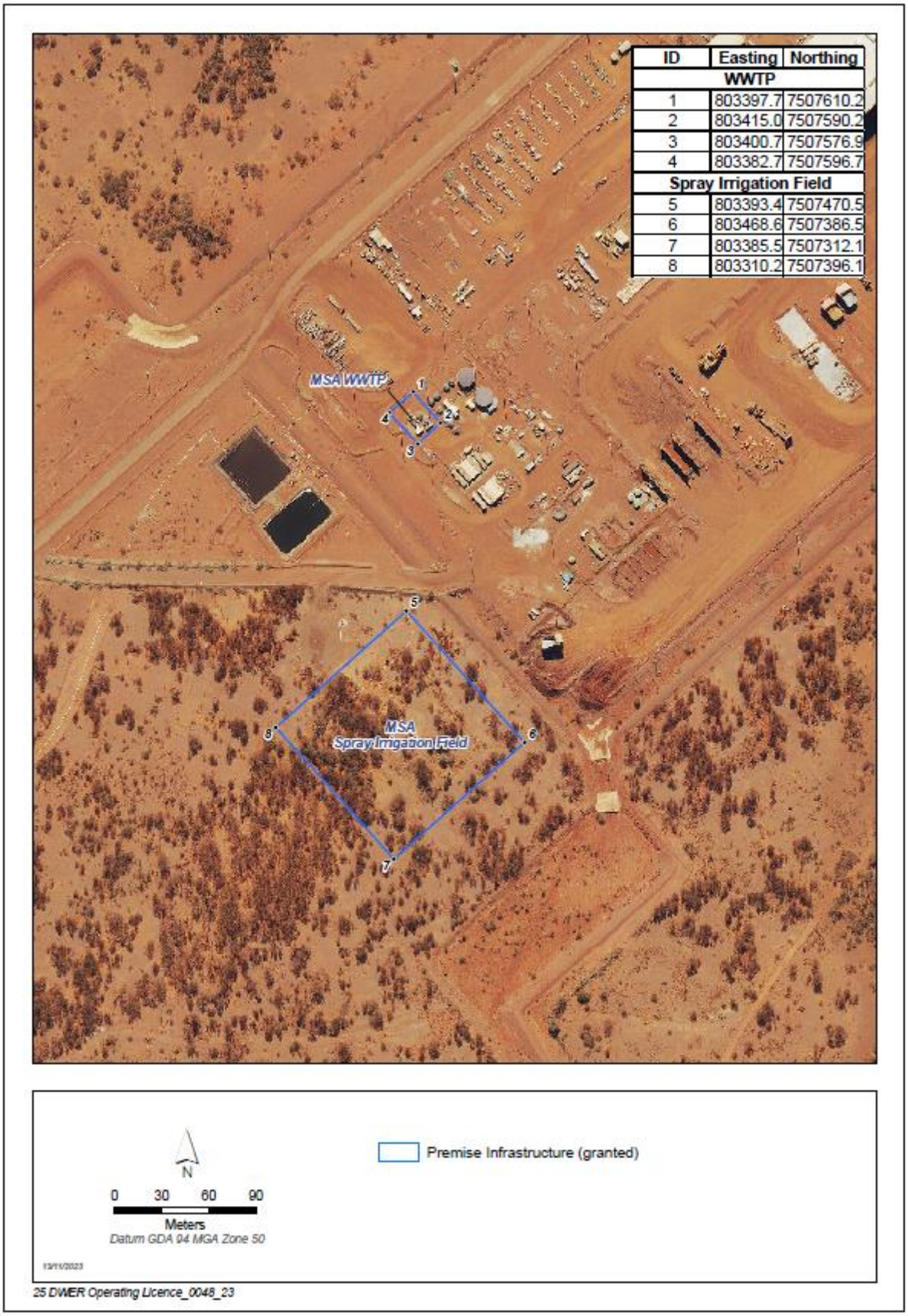
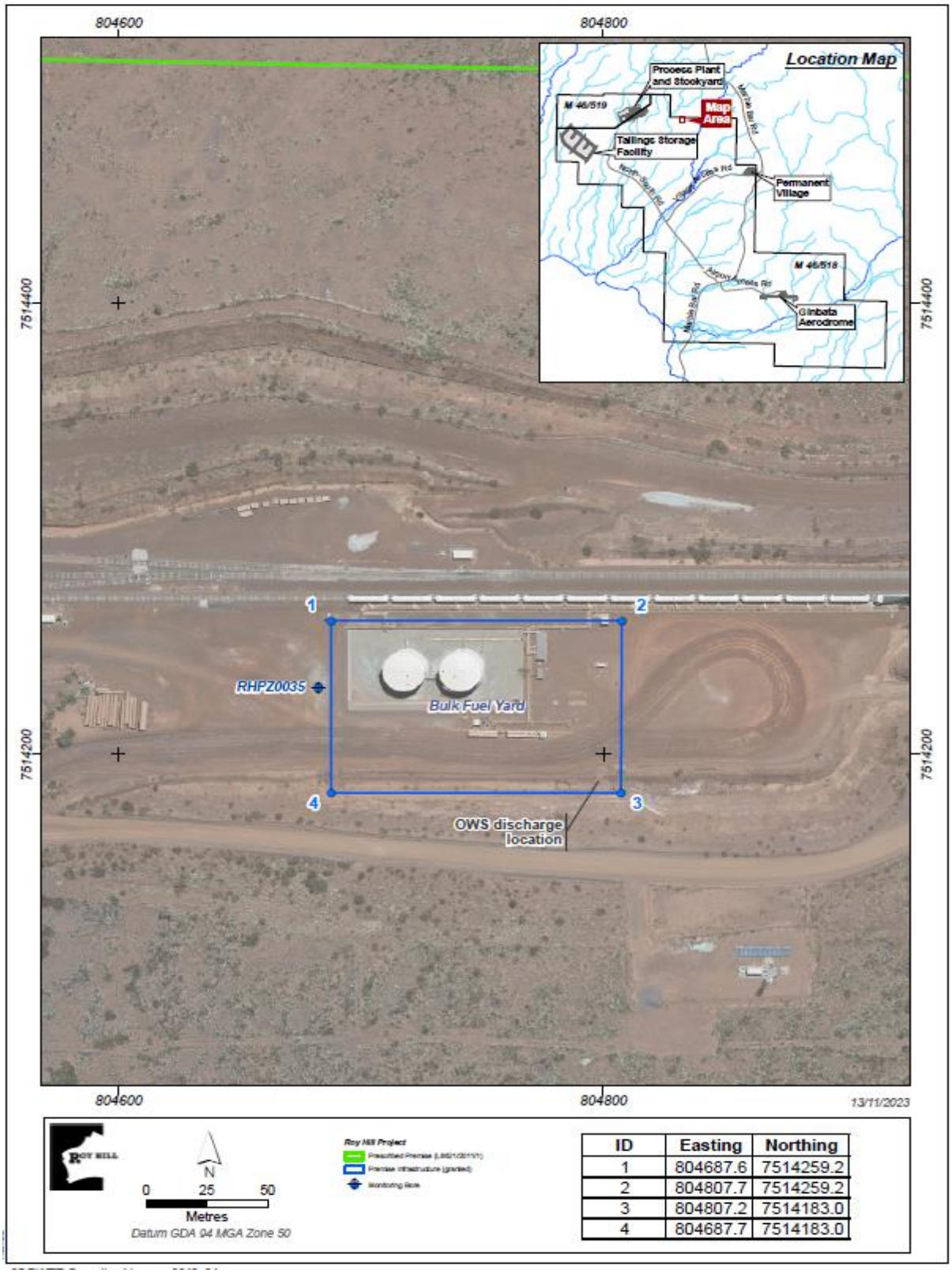


Figure 25: Mine Services Area Irrigation Sprayfield area

Map of emission and monitoring points for the OWS discharge locations at the Bulk Fuel Yard and Mine Power Station

The location of the OWS emission and monitoring points at the Bulk Fuel Yard and Mine Power Station as defined in Table 8 are shown in the two maps below**.**



ID	Easting	Northing
1	804687.6	7514259.2
2	804807.7	7514259.2
3	804807.2	7514183.0
4	804687.7	7514183.0

Figure 26: OWS Discharge Location and monitoring point

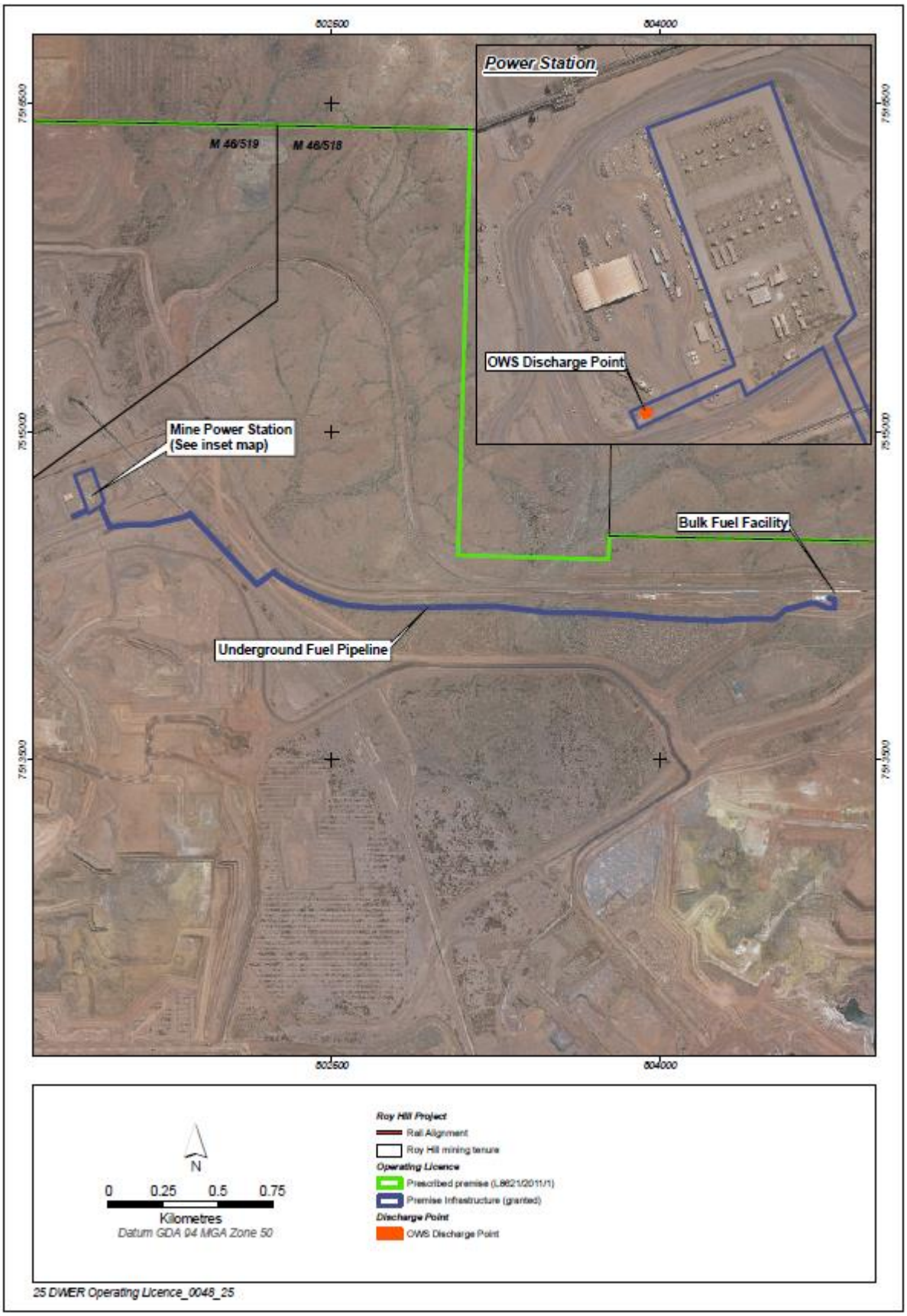


Figure 27: OWS Discharge Location

Maps of ambient groundwater quality monitoring locations

The locations of the groundwater monitoring points defined int are shown in the three maps below.

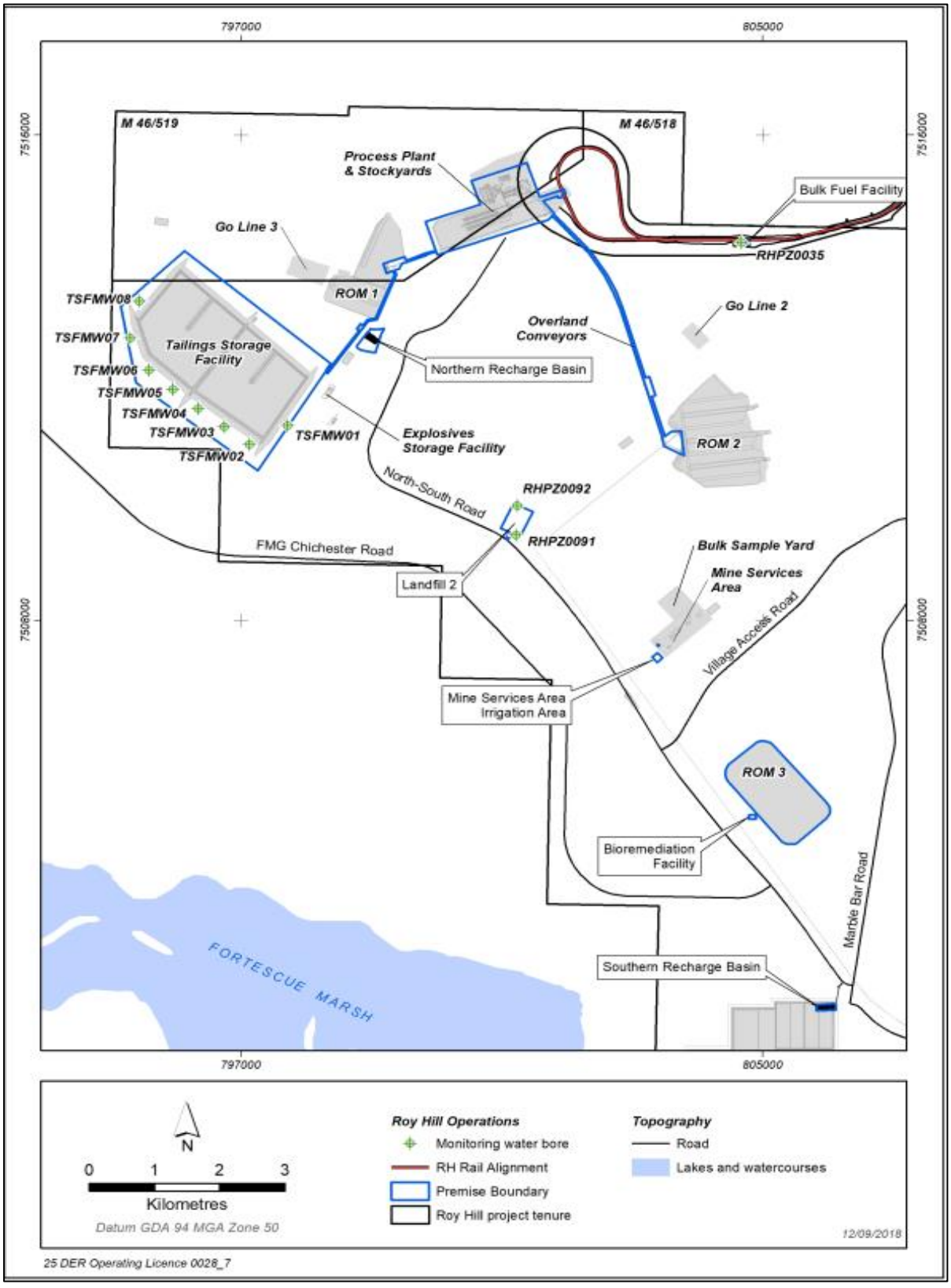


Figure 28 : Groundwater monitoring locations Map 1

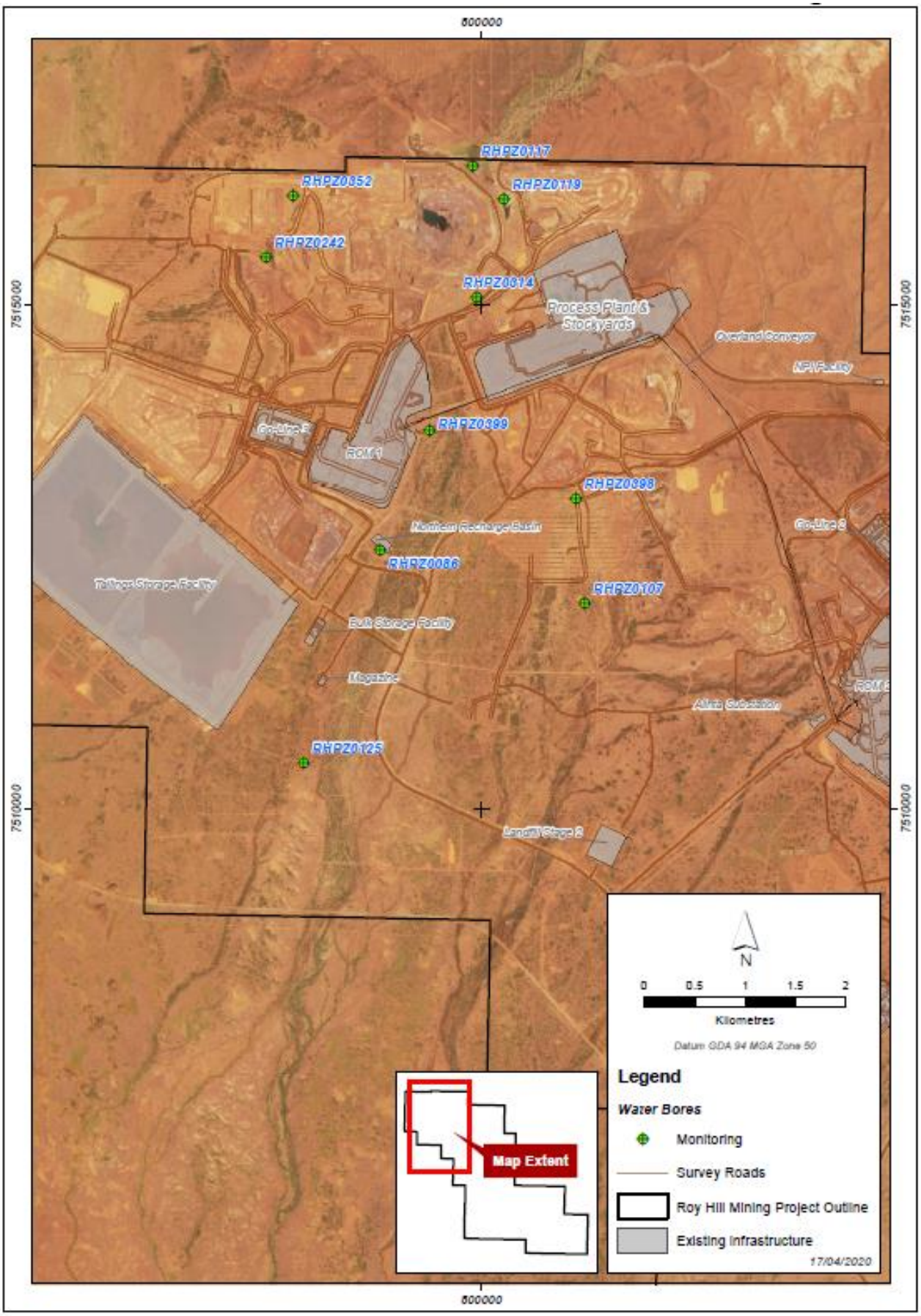


Figure 29: Groundwater monitoring locations Map 2

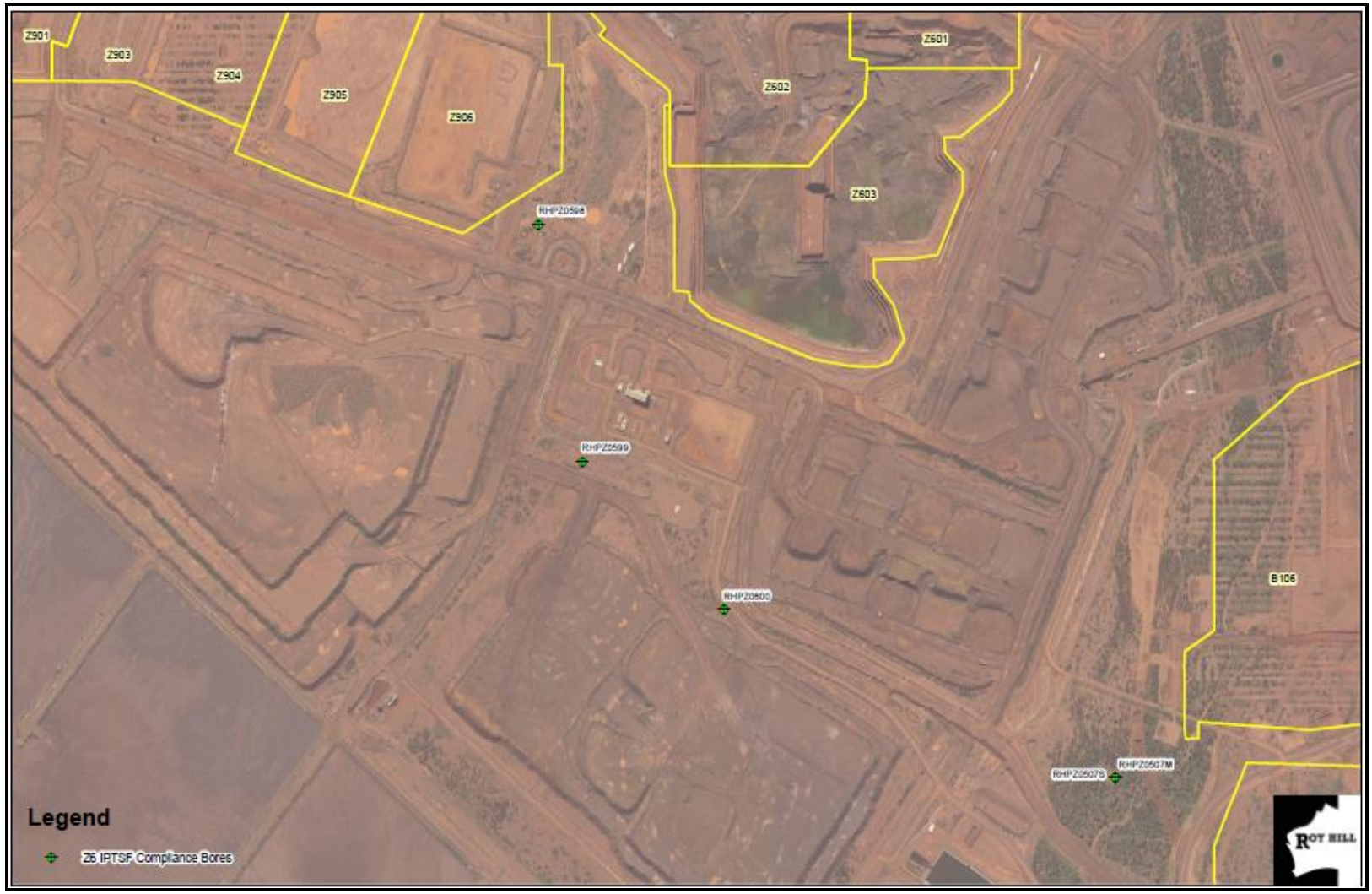


Figure 30: Z6 IPTSF Groundwater monitoring locations Map 3

Map of surface water emission point

The No Name Creek Discharge point defined in Tables 8, 9, 14 and 17 is shown in the map below.

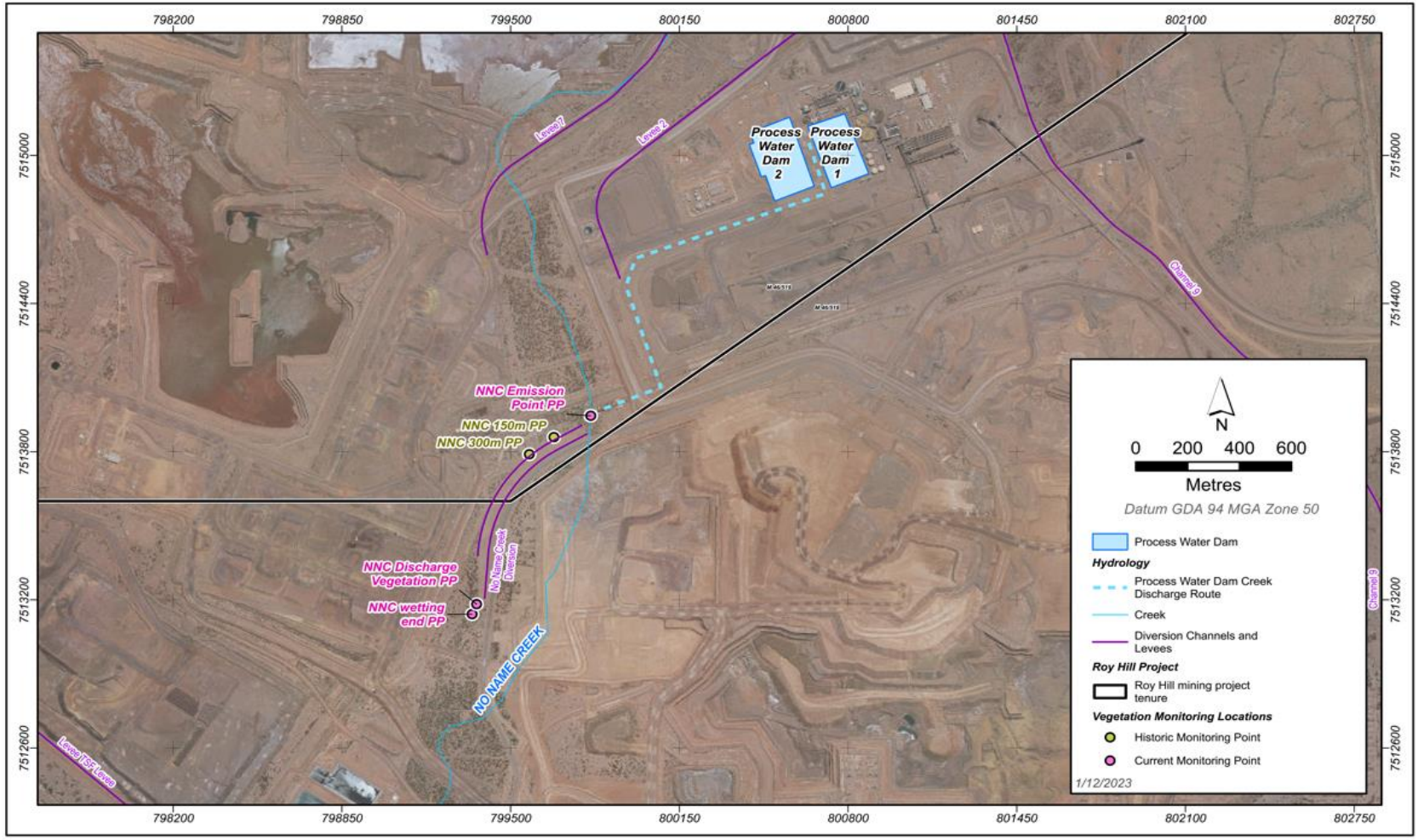


Figure 31: No Name Creek Discharge Point

Map of emmission points to land

The location of emission points defined in Tables 8, 9 and 10 is shown in the map below.

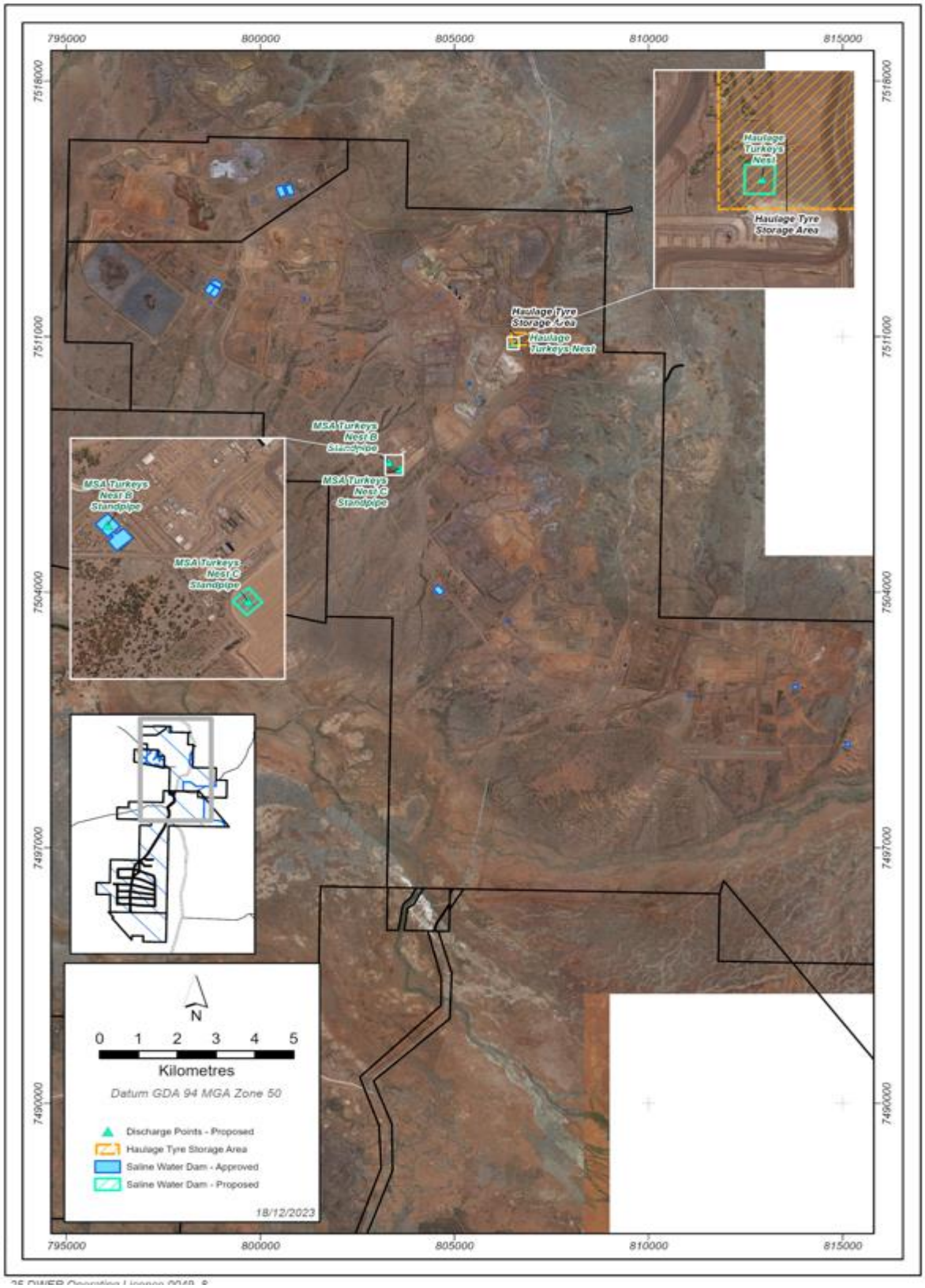


Figure 32: Location for emission points to land

Schedule 3: Reporting and Notification Forms

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.

Licence:	Licence holder:
Form: N1	Date of breach:

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence number	
Name of operator	
Location of premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of licence holder	
Date	

Appendix 1

MAR Injection Bore details

Completed injection bores located in the SWIB, Stage 1 Borefield and Remote MAR Injection Bores are presented in the following Table.

Injection Bore details

Injection Bore ID	Easting	Northing	Injection Bore ID	Easting	Northing
SWIB			**SWIB**		
RHIB0128	798380	7509733	RHIB0505	797813	7510543
RHIB0129	797680	7509734	RHIB0506	797626	7510440
RHIB0130	798195	7510439	RHIB0507	801259	7507793
RHIB0131	797189	7509724	RHIB0509	802758	7506275
RHIB0231A	798914	7509650	RHIB0510	802977	7504556
RHIB0232	799094	7509459	RHIB0511	803183	7504556
RHIB0233	799476	7509447	**S1iB**		
RHIB0236	800682	7509158	RHIB0189	811853	7500765
RHIB0238	800607	7508477	RHIB0190	811673	7501394
RHIB0239A	800665	7508292	RHIB0191	812301	7501389
RHIB0249	800825	7508064	RHIB0193	809422	7500767
RHIB0250A	801033	7507900	RHIB0194	811304	7500312
RHIB0251	801454	7507918	RHIB0275	808899	7500920
RHIB0252	801870	7507859	RHIB0276	809101	7501252
RHIB0254A	801756	7507557	RHIB0277	810086	7500951
RHIB0255	802067	7507592	RHIB0279	809709	7501260
RHIB0258	802377	7506622	**RMARN**		
RHIB0259	802360	7506324	RHIB0369	790233	7487067
RHIB0260	802345	7505980	RHIB0471	787804	7488042
RHIB0261	802348	7505730	RHIB0472	787795	7487034
RHIB0262	802603	7505828	RHIB0473	789655	7488515
RHIB0263	802978	7505689	RHIB0630	787813	7487550
RHIB0264	802377	7505516	RHIB0631	788247	7488056
RHIB0265	802356	7504935	RHIB0632	788304	7487584
RHIB0266	802778	7504567	RHIB0634	788927	7488069
RHIB0267	797410	7509549	RHIB0635	789744	7488119
RHIB0268	798336	7510131	RHIB0636	789804	7487589
RHIB0431	797863	7509944	RHIB0637	790850	7489105
RHIB0432	798143	7509947	RHIB0638	790811	7488666
RHIB0433	798946	7509932	RHIB0639	790962	7488279
RHIB0434	801032	7508228	RHIB0640A	791476	7488393
RHIB0435	801195	7508048	RHIB0641	790637	7487562
RHIB0436	802538	7506154	RHIB0642	790814	7487061
RHIB0502	797199	7510153	RHIB0643	791531	7489277
RHIB0503	796837	7509772	RHIB0648	791416	7487294
RHIB0504	797624	7510098	Coordinates in MGA94		

Appendix 2

Prescribed Premises Boundary Coordinates

ID	Lat	Long	Easting GDA2020 ZONE50	Northing GDA2020 ZONE50
1	-22.716653	119.90001	797903.99	7484932.97
2	-22.699986	119.90001	797940.10	7486779.57
3	-22.699986	119.80001	787660.46	7486977.06
4	-22.666653	119.80001	787730.11	7490670.02
5	-22.666653	119.833343	791157.42	7490605.04
6	-22.649986	119.833343	791192.63	7492451.55
7	-22.649986	119.933343	801476.23	7492252.08
8	-22.616653	119.933343	801549.06	7495945.34
9	-22.627192	119.950223	803262.29	7494743.34
10	-22.627189	119.953065	803554.55	7494737.83
11	-22.620855	119.954088	803673.77	7495437.60
12	-22.61988	119.954905	803759.97	7495543.91
13	-22.619166	119.955893	803863.16	7495620.98
14	-22.616666	119.957174	804000.45	7495895.38
15	-22.616666	119.95718	804001.02	7495895.37
16	-22.616659	119.95718	804001.02	7495896.20
17	-22.616656	119.957182	804001.25	7495896.46
18	-22.549986	119.949917	803400.12	7503298.19
19	-22.549884	119.933343	801694.63	7503343.12
20	-22.516978	119.933343	801766.23	7506988.98
21	-22.516653	119.916732	800057.01	7507058.48
22	-22.499986	119.916676	800087.32	7508905.17
23	-22.499986	119.883343	796655.68	7508971.70
24	-22.48332	119.883343	796691.26	7510818.24
25	-22.48332	119.866676	794975.27	7510851.20
26	-22.433321	119.866676	795081.18	7516390.66
27	-22.43332	119.901349	798652.42	7516322.09
28	-22.431966	119.901349	798655.31	7516472.03
29	-22.431968	119.944843	803135.25	7516384.60
30	-22.449545	119.944663	803078.52	7514437.46
31	-22.449603	119.951346	803766.63	7514417.44
32	-22.448629	119.951349	803769.03	7514525.41
33	-22.448633	120.001349	808918.67	7514422.68
34	-22.48332	120.00135	808841.73	7510579.41
35	-22.48332	120.016676	810419.88	7510547.69
36	-22.50481	120.016676	810371.82	7508166.49
37	-22.504866	120.013695	810064.80	7508166.49
38	-22.505824	120.013004	809991.55	7508061.82
39	-22.508036	120.013052	809991.55	7507816.64
40	-22.508062	120.011631	809845.22	7507816.64
41	-22.510206	120.010374	809710.98	7507581.67
42	-22.514646	120.009851	809647.24	7507090.83
43	-22.523664	120.009919	809634.13	7506091.53
44	-22.532268	120.007373	809352.83	7505143.39
45	-22.536765	120.008315	809439.82	7504643.15
46	-22.541005	120.010157	809619.95	7504169.52
47	-22.543186	120.010223	809621.80	7503927.79
48	-22.543064	120.016676	810286.28	7503927.90
49	-22.548634	120.016676	810273.83	7503310.73
50	-22.548633	120.084685	817273.44	7503167.80
51	-22.60122	120.085088	817194.43	7497339.86
52	-22.602206	120.027619	811279.52	7497351.97
53	-22.590338	120.011073	809603.83	7498701.49
54	-22.590732	119.989964	807431.09	7498701.49
55	-22.616653	119.990524	807431.09	7495828.28
56	-22.616665	120.033352	811836.67	7495737.83
57	-22.633333	120.033352	811799.01	7493890.97
58	-22.633333	120.05193	813709.92	7493851.85
59	-22.716615	120.051937	813521.01	7484623.63
60	-22.61666	119.965808	804888.58	7495878.41
61	-22.616657	119.959118	804200.39	7495892.41
62	-22.620596	119.956952	803968.89	7495460.43
63	-22.621722	119.955319	803798.42	7495338.98
64	-22.627188	119.954513	803703.51	7494735.01
65	-22.627183	119.960516	804321.00	7494723.32
66	-22.623935	119.961104	804388.67	7495081.94
67	-22.617957	119.96581	804885.87	7495734.67