Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L3014/2025/1
Licence holder	Image Resources NL
ACN	063 977 579
Registered business address	Level 2, 1 Walker Avenue WEST PERTH WA 6005
DWER file number	INS-0003014
Duration	6/11/2025 to 6/11/2035
Date of issue	6/11/2025
Premises details	Atlas Mineral Sands Project Munbinea Road NAMBUNG WA 6521 Legal description - Part of mining tenement M 70/1305 NAMBUNG WA 6521 As defined by the premises maps in Schedule 1

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production capacity**
Category 8: Mineral sands mining and processing: premises on which mineral sands ore is mined, screened, separated or otherwise processed.	3.1 million tonnes of ore per annual period.

This licence is granted to the licence holder, subject to the attached conditions, on 6 November 2025, by:

Christine Pustkuchen
Digitally signed by Christine Pustkuchen
Date: 2025.11.06 15:18:45 +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
06/11/2025	L3014/2025/1	Licence granted.

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 1 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 1.

Table 1: Infrastructure and equipment requirements

Site infrastructure and equipment	Operational requirement	Infrastructure location
Feed preparation plant (FPP)	a) Broadband start-up alarms to be utilised	As indicated in Schedule 1, Figure 1.
Wet Concentrator Plant (WCP)	a) Maximum throughput of 350 tonnes per hour (tph) b) Broadband start-up alarms to be utilised	As indicated in Schedule 1, Figure 1.
Process water ponds	a) A minimum freeboard of 1 meter must be maintained at all times	As indicated in Schedule 1, Figure 1.
Solar drying ponds	a) A minimum freeboard of 0.5 meters must be maintained at all times	As indicated in Schedule 1, Figure 1.
PASS treatment pad (for overburden and/or ore)	a) To be maintained with a minimum 300mm layer of compacted limestone b) Sides bunded to capture and contain stormwater runoff.	As indicated in Schedule 1, Figure 1.
Pipelines containing process water, tailings, ore or saline water.	a) To be maintained with: i. Secondary containment sufficient to contain any spill for a period equal to the time between routine inspections; or ii. Flow meters and pressure sensors to allow the detection of leaks and failures	Within the prescribed premises as shown in Schedule 1, Figure 1.
Earthen bund around mining area	a) Earthen bunding around the northern pit maintained at a height of 42.0 m AHD, with a perimeter drain along the eastern toe that falls to the north, as shown in Schedule 1, Figure 2. b) Must be constructed in accordance with Table 2 prior to mining or the construction of solar drying ponds north of the “initial disturbance boundary” depicted in Schedule 1, Figure 3.	To the immediate north of the mining area, as indicated in Schedule 1, Figure 2.

2. The licence holder must:

(a) construct the infrastructure and/or equipment;
(b) in accordance with the corresponding design and construction requirements;
(c) at the corresponding infrastructure location;
as set out in Table 2.

Table 2: Design and construction requirements

Item no.	Infrastructure or equipment	Design and construction requirements	Infrastructure location
1.	Off-path solar drying ponds	a) Constructed with compacted soil or overburden that has been screened for PASS in accordance with condition 11. b) Constructed to a depth of approximately 2.5 m c) Up to 3 cells may be constructed with a combined footprint of no more than 16 ha d) Minimum 2 m wide embankment crest	As indicated in Schedule 1, Figure 1.
2.	Earthen bund around mining area	a) Earthen bunding around the northern pit constructed to a height of 42.0 m AHD with a perimeter drain along the eastern toe that falls to the north, as shown in Schedule 1, Figure 2. b) Constructed from soil or overburden that has been screened for PASS in accordance with condition 11. c) Compacted to minimise erosion. d) Constructed prior to mining or the construction of solar drying ponds north of the “initial disturbance boundary” depicted in Schedule 1, Figure 3.	To the immediate north of the mining area, as indicated in Schedule 1, Figure 2.
3.	Air quality monitor	a) Establish a PM_{10} dust monitor in accordance with AS 3580.1.1 and AS 3580.9.6 b) To be installed prior to 1 October 2025	At a suitable location to measure dust impacts to receptors to the southwest of the operation, and away from mining and processing activities.
4.	Ambient noise monitor	a) Establish a non-directional noise monitor compliant with Schedule 4 of the Noise Regulations capable of recording overall and one-third octave band statistical noise levels based on the A-weighted sound pressure level with ‘Slow’ time weighting (L_{AS})	At a suitable location to measure noise impacts to receptors to the southwest of the operation, and in accordance with Part 3 of the Noise Regulations.

Item no.	Infrastructure or equipment	Design and construction requirements	Infrastructure location
		b) To be installed prior to 1 February 2026	

3. The licence holder must within 30 calendar days of an item of infrastructure or equipment required by condition 2 being constructed and/or installed:

(a) undertake an audit of their compliance with the requirements of condition 2; and

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

4. The Environmental Compliance Report required by condition 3, must include as a minimum the following:

(a) certification by an engineer that the items of infrastructure or component(s) thereof, as specified in condition 2, have been constructed in accordance with the relevant requirements specified in condition 2;

(b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 2 and/or photographic evidence of the installation of the infrastructure; and

(c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

5. The licence holder must ensure clean stormwater is diverted around operational areas and potentially contaminated stormwater is retained onsite using contour bunds and stormwater detention basins.

6. The licence holder must ensure that no visible dust generated from the operations crosses the boundary of the premises.

7. The licence holder must:

(a) undertake inspections as detailed in Table 3;

(b) 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

(c) maintain a record of all inspections undertaken.

Table 3: Infrastructure and equipment requirements during time limited operations

Infrastructure	Scope of inspection	Frequency
Pipelines containing environmentally hazardous substances	Visual integrity and leak assessment	Daily
Solar drying ponds	Visual integrity, leak assessment and to confirm 0.5 m freeboard is available	Daily
Process water ponds	Visual integrity, leak assessment and to confirm 1 m freeboard is available	Daily

8. The licence holder must ensure that dust controls are implemented in accordance with the requirements specified in Table 4.

Table 4: Dust controls

Activity	Requirement
Topsoil and overburden stripping	• Water cart must be available to wet down during earthwork activities. • Must suspend topsoil and overburden stripping activities during High Wind conditions when there is a risk of dust impacting sensitive receptors.
Stockpiling	• Must utilise covers, water sprays or chemical stabilisers to minimise dust liftoff. • Must utilise bunds or wind shields to minimise dust, as required.
Mobile vehicles	• Must utilise watercart for dust suppression to minimise dust generation from roads. • Heavy vehicles must operate with a speed limit of 50km/hr on the premises. • Concentrate trucks must operate with a speed limit of 25km/hr on the access road.
General	• Must wet down and compact open, operational areas to prevent dust liftoff. • Must suspend dust generating activities during High Wind conditions when there is a risk of dust impacting sensitive receptors. • Must conduct regular inspections to ensure dust controls are effectively being implemented.

9. The licence holder must ensure that all soils are managed to prevent potential acid sulfate soils (PASS) from deteriorating groundwater quality on or surrounding the premises.

10. At a minimum, potential acid sulfate soils must be managed in accordance with the requirements specified in Table 5.

Table 5: Potential acid sulfate soils controls

Activity	Requirement

PASS screening	• All overburden to be used for construction material to be tested for pH_F and pH_{FOX} prior to use in construction;
	• Testing for pH_F and pH_{FOX} must be conducted during all mine path excavation – at a minimum rate of 2 samples per hectare;
	• Soil material that shows indicators of PASS (such as a dark colour or clayey materials) must be tested in the field for pH_F and pH_{FOX};
	• Samples that return a
	  ○ pH_F less than 4.0;
	  ○ pH_{FOX} less than 3.0; or
	  ○ a difference between pH_F and pH_{FOX} of more than 3 pH units;
	must undergo a Suite 2 (CRS) analysis in accordance with the *Identification and investigation of acid sulfate soils and acidic landscapes, (DWER 2015)*

Suite 2 (CRS) analysis – to be completed in	• When a Suite 2 - Chromium Reducible Sulfur (S_{Cr}) analysis is

Activity	Requirement
accordance with the *Identification and investigation of acid sulfate soils and acidic landscapes, (DWER 2015)*	required to be undertaken due to positive PASS screening results (as outline above), a sufficient number of soil samples must be tested such that a qualified geologist can quantify the volume of PASS that has been encountered; • Tailings must undergo a Suite 2 - Chromium Reducible Sulfur (S_{Cr}) analysis on a monthly basis; • Dried out clay fines from the solar drying ponds must undergo a Suite 2 - Chromium Reducible Sulfur (S_{Cr}) analysis prior to disposal in the open pit voids; • Soil and tailings samples with a pH_{FOX} of less than 3 and have a Chromium Reducible Sulfur (S_{Cr}) content greater than 0.01% require selective handling and neutralisation in accordance with the PASS management actions (below).
PASS overburden and ore management actions	• All PASS overburden must be treated with a neutralisation agent at sufficient rates to fulfil the requirements of the PASS neutralisation validation requirements (below); • PASS overburden that has been neutralised and passed the validation requirements may be used for construction purposes; • PASS overburden that has been neutralised and will not be used for construction purposes must be back-filled to an open pit as soon as possible; • PASS overburden that has been neutralised and is not used in construction and cannot be immediately back-filled to an open pit must be stored on the limestone treatment pad; • PASS containing ore may be processed with a neutralisation agent; • PASS containing ore that is not immediately processed must be stored on the limestone treatment pad; • Ore that cannot be processed within 70 hours must be treated with a neutralisation agent at sufficient rates to fulfil the requirements of the PASS neutralisation validation requirements (below).
PASS tailings management actions	• PASS tailings must have additional neutralisation agent added during disposal to meet the PASS neutralisation validation requirements (below); • PASS dried out clay fines must have additional neutralisation agent added during disposal to the mine voids to meet the PASS neutralisation validation requirements (below).
PASS neutralisation validation	The following performance criteria must be met to confirm effective treatment of PASS: • the samples have a pH_{FOX} of at least 5, to indicate that there is neutralising capacity greater than existing plus potential acidity of the soil; • soil pH_F must be in the range 6.0 to 8.5; • the neutralising material must appear well blended with the soil; • excess neutralising agent must remain within the soil until all acid generation reactions are complete and the soil has no further capacity to generate acidity. • measurements of TPA should be less than the limits of reporting. • if soils fail the above validation, additional neutralisation needs to be applied until results comply with performance criteria.
Process water	• If the pH of the process water falls below 4, a neutralisation agent

Activity	Requirement
neutralisation	must be added to increase the pH.

Emissions and discharges

11. The licence holder must ensure that the emissions specified in Table 6, are discharged only from the corresponding discharge points and only at the corresponding discharge point locations.

Table 6: Authorised discharge points

Emission	Discharge point	Discharge point location
Sand tailings	Mine voids, via cyclone stackers.	Within the pit area as shown in Schedule 1, Figure 1.
Slimes tailings	Solar drying ponds or mine voids	As indicated in Schedule 1, Figure 1.
Process water (including decant water from the tailings or solar drying ponds)	Process water ponds	Within the prescribed premises as shown in Schedule 1, Figure 1.
Dried clay slimes	Mine voids	Within the pit area as shown in Schedule 1, Figure 1.

Monitoring

12. The licence holder must ensure that:

(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;

(b) all groundwater sampling is conducted in accordance with AS/NZS 5667.11;

(c) all ambient air monitoring is sited in accordance with AS 3580.1.1;

(d) all PM_{10} dust samples are collected and analysed in accordance with AS 3580.9.6;

(e) all noise measurements are to be conducted in accordance with *Environmental Protection (Noise) Regulations 1997* (WA); and

(f) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured, unless indicated otherwise in the relevant table.

13. The licence holder must undertake process monitoring in accordance with the specifications of Table 7.

Table 7: Process monitoring

Process description	Parameter	Units	Frequency
Mining activities	Volume of ore mined	m^3	Monthly
	Volume of overburden removed		
	Volume of PASS handled		
Processing of ore	Volume of ore processed	m^3	Monthly
	Volume of HMC produced		

Process description	Parameter	Units	Frequency
Sand tailings	Volume and location of tailings deposition	m^3	Monthly
	PASS sampling in accordance with Table 6	Various	
	Estimated volume of PASS tailings generated	m^3	
Slimes tailings	Volume of slimes tailings discharged to SDPs	m^3	Monthly
	Volume of slimes tailings discharged to mine voids	m^3	
	pH[1]	-	
Dried clay slimes	PASS sampling in accordance with Table 6	Various	Prior to disposal in the pit
	Estimated volume of PASS clay slimes	m^3	If detected
Process water	Volume of water discharged to the process water pond	m^3	Monthly
	pH[1]	-	Monthly, or weekly if pH is less than 4
	Electrical conductivity[1]	µS/cm	
	Total titratable acidity (TTA) [1]	mg/L	
	Total alkalinity (TAlk) [1]		

Note 1: In field, non-NATA accredited analysis permitted.

14. The licence holder must undertake monitoring of ambient groundwater quality in accordance with the specifications of Table 8.

Table 8: Ambient groundwater monitoring requirements

Monitoring point	Parameter	Unit	Frequency
Groundwater monitoring bores: I01B I03B I04B I06B I08B	Standing water level	mbgl	Monthly
	pH[1]	-	
	Electrical conductivity[1]	µS/cm	
	Total titratable acidity[1]	mg/L	
	Total alkalinity[1]		
	Major ions: bicarbonate, calcium, chloride, magnesium, potassium, sodium, sulfate, total dissolved solids	mg/L	Quarterly
	Metals and metalloids: aluminum, arsenic, cadmium, chromium, cobalt, iron, manganese, mercury, nickel, selenium, thorium, uranium, zinc		Quarterly
	Radium-226 Radium-228	Bq/L	Annually

Note 1: In field, non-NATA accredited analysis permitted.

15. The licence holder must monitor dust emissions between 1 October and 31 May in accordance with Table 9.

Table 9: Dust monitoring

Monitoring point	Parameter	Unit	Frequency	Sampling duration	Method
AQM 1 (high-volume sampler)	PM_{10}	$\mu g/m^3$	At least once every 6 days	24 hours	AS/NZS 3580.9.6

16. The licence holder must undertake monitoring of ambient noise emissions in accordance with Table 10, once the noise monitor specified in Condition 2 has been installed.

Table 10: Ambient noise monitoring

Monitoring point	Parameter	Unit	Frequency	Sampling equipment	Limit
Noise monitor (N1)	$L_{AS\ 90,\ 30min}$	dB(A)	Continuous[1]	Non-directional noise monitoring system	The assigned levels for a "*Noise sensitive premises: highly sensitive area*" specified in Table 1, Regulation 8 of the Noise Regulations.
	$L_{AS\ 10,\ 30min}$				
	$L_{Aeq(20Hz-500Hz),30min}$				
	Audio recording				

Note 1: Availability >90% of the measurement interval on a monthly basis

17. Where ambient noise levels measured in accordance with Condition 16, exceed the limit outlined in Condition 16, the licence holder must:

(a) take action to reduce noise emissions from the activities at the premises until the source of the exceedance is investigated and determined;

(b) when an investigation determines that the activities at the premises is not causing or contributing to the exceedance, remedial actions to reduce noise emissions can be discontinued;

(c) when an investigation determines that the activities at the premises may be causing or contributing to the exceedance, remedial actions must be continued to reduce noise emissions below the specified limit; and

(d) if remedial actions fail to reduce noise emissions below the specified limit, activities at the premises must be suspended.

Records and reporting

Records

18. 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.

19. 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 2 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 13, 14, 15 and 16 of this licence; and

(e) complaints received under condition 18 of this licence.

20. The books specified under condition 19 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.

Reporting

21. 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 an Annual Audit Compliance Report in the approved form by 1 September each year.

22. The licence holder must:

(a) prepare an Environmental Report that provides information in accordance with Table 11 for the preceding annual period, and

(b) submit that Environmental Report to the CEO by 1 September each year.

Table 11: **Environmental reporting requirements**

Condition	Requirement
13	a) Process monitoring data for the reporting period.
14	a) Groundwater monitoring results, including trend graphs of current and historical results b) A discussion of the results against previous monitoring results
15	a) Dust monitoring results compared against the the *National Environment Protection (Ambient Air Quality) Measure* (NEPM) PM_{10} air quality standard of 50 µg/m^3. b) A discussion of any exceedances of the NEPM standard.
16	a) Noise monitoring results including details of exceedances of the limit b) A discussion of investigations and actions taken in accordance with condition 17.
18	A summary of complaints received, and any action taken to investigate or respond to any complaint.
-	A summary of any failure or malfunction of any pollution control equipment and

Condition	Requirement
	any environmental incidents that have occurred during the annual period, including any actions taken.

23. The licence holder must, within 7 days of becoming aware of any exceedance of any limit specified in this licence, notify the CEO in writing of that exceedance, and include in that notification the following information:

(a) which limit was exceeded;

(b) the time and date when the exceedance occurred;

(c) the details and result of any investigation undertaken into the cause of the exceedance; and

(d) what action has been taken and the date on which it was taken to prevent the exceedance occurring again.

Definitions

In this licence, the terms in Table 12 have the meanings defined.

Table 12: Definitions

Term	Definition
ACN	Australian Company Number
activities at the premises	means the mining and processing activities including the loading / unloading and movement of trucks and other mobile equipment
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates are available on the Department's website).
annual period	a 12 month period commencing from 1 July until 30 June of the immediately following year.
AS 3580.1.1	means the Australian Standard AS 3580.1.1 *Methods for sampling and analysis of ambient air – Guide to siting air monitoring equipment*
AS 3580.9.6	means the most recent version and the relevant parts of the Australian Standard AS 3580.9.6 *Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM10 high volume sampler with size selective inlet – Gravimetric method*
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 5667.11	means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters*
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
CRS and S_{Cr}	Chromium reducible sulphur
department; DWER	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.

Term	Definition
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been constructed and/or installed in accordance with the works approval.
environmentally hazardous materials	means material (either solid or liquid) which, if discharged into the environment from or within the premises, may cause pollution or environmental harm.
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
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.
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.
Freeboard	the distance between the maximum water surface elevation and the top of the retaining banks or structures at their lowest point.
High Wind conditions	means wind conditions rating 7 or greater on the Beaufort Windforce Scale (i.e. wind speeds 50 km/h or greater).
HMC	Heavy Metal Concentrate.
monthly period	means a one-month period commencing from first day of a month until first day of the immediately following month.
Noise Regulations	means the *Environmental Protection (Noise) Regulations 1997* (WA).
non-directional noise monitoring system	means single microphone sound measuring equipment compliant with Schedule 4 of the Noise Regulations and capable of recording overall and one-third octave band statistical noise levels based on the A-weighted sound pressure level with 'Slow' time weighting (L_{AS}).
PASS	Potential Acid Sulfate Soils.
pH_F	soil pH measured in the field.
pH_{FOX}	measure of soil pH after rapid oxidation with hydrogen peroxide.
PM_{10}	total particulate matter with a diameter of less than or equal to 10 µm.
premises	refers to the premises to which this licence applies, as specified at the

Term	Definition
	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.
ROM	Run of Mine.
TPA	total potential acidity.
waste	has the same meaning given to that term under the EP Act.

END OF CONDITIONS

Schedule 1: Maps

Premises map

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

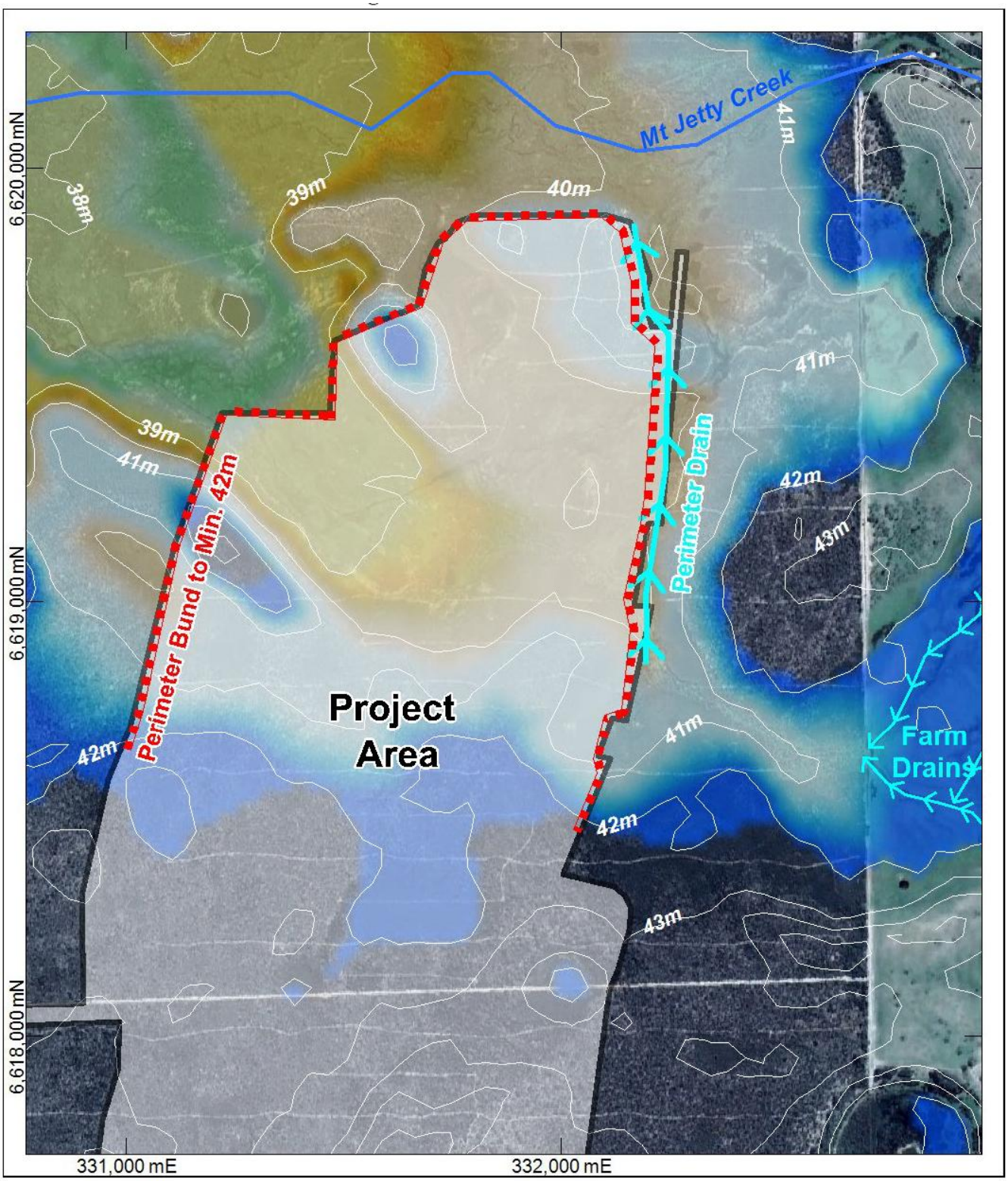

Figure 2: Map depicting the approximate lay out of the earthen bund around the mining area with a perimeter drain

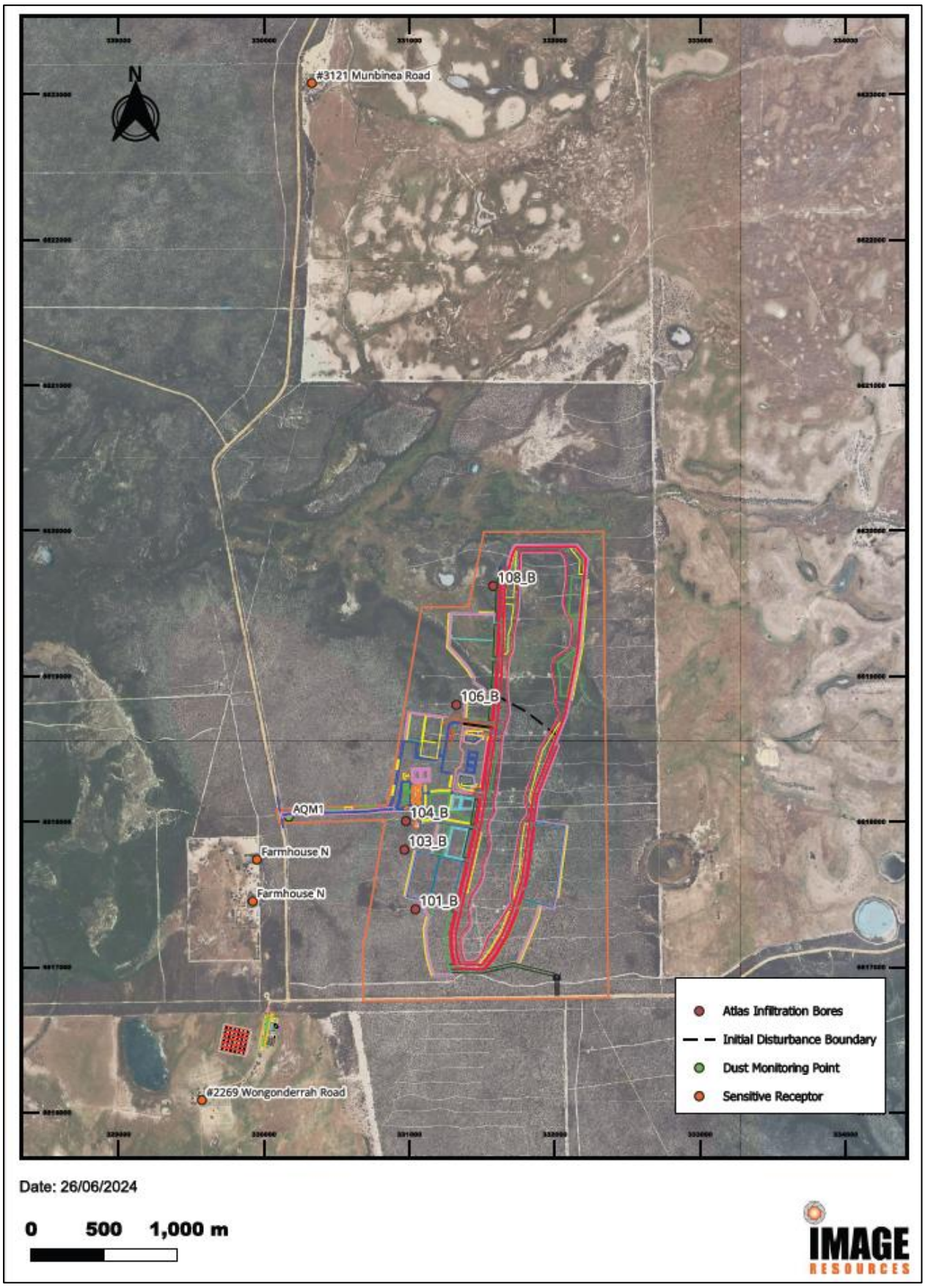

Figure 3: Map depicting groundwater monitoring bore locations and initial mine disturbance boundary