Permit

Environmental Protection Act 1994

Environmental Authority

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994*.*

Environmental authority number: EPML00433013

Environmental authority takes effect on 1 September 2026.

Environmental authority holder(s)

Name(s)	Registered address
Heritage Minerals Pty Ltd	Level 2 267 St Georges Tce PERTH WA 6000 Australia

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Schedule 3 16: Mining gold ore	ML5615, ML5623, ML5635, ML5589, ML5616, ML5624, ML5648, ML5602, ML5617, ML5625, ML5649, ML5608, ML5618, ML5626, ML5658, ML5609, ML5619, ML5627, ML5659, ML5612, ML5620, ML5628, ML5660, ML5613, ML5621, ML5633, ML6692, ML5614, ML5622 and ML5634.
Schedule 3 17: Mining copper ore	ML5615, ML5623, ML5635, ML5589, ML5616, ML5624, ML5648, ML5602, ML5617, ML5625, ML5649, ML5608, ML5618, ML5626, ML5658, ML5609, ML5619, ML5627, ML5659, ML5612, ML5620, ML5628, ML5660, ML5613, ML5621, ML5633, ML6692, ML5614, ML5622 and ML5634.
Schedule 2 08 - Chemical Storage 3: Storing more than 500 cubic metres of chemicals of class C1 or C2 combustible liquids under AS 1940 or dangerous goods class 3 under subsection (1)(c)	ML5615, ML5623, ML5635, ML5589, ML5616, ML5624, ML5648, ML5602, ML5617, ML5625, ML5649, ML5608, ML5618, ML5626, ML5658, ML5609, ML5619, ML5627, ML5659, ML5612, ML5620, ML5628, ML5660, ML5613, ML5621, ML5633, ML6692, ML5614, ML5622 and ML5634.
Schedule 2 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke 2(b) more than 100,000t	ML5615, ML5623, ML5635, ML5589, ML5616, ML5624, ML5648, ML5602, ML5617, ML5625, ML5649, ML5608, ML5618, ML5626, ML5658, ML5609, ML5619, ML5627, ML5659, ML5612, ML5620, ML5628, ML5660, ML5613,

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Environmentally relevant activity/activities	Location(s)
	ML5621, ML5633, ML6692, ML5614, ML5622 and ML5634.

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Agreement between the State of Queensland and Heritage Minerals Pty Ltd

In addition to the requirements found in the conditions of this environmental authority, it should be noted that there is also an agreement between the State of Queensland and Heritage Minerals Pty Ltd for various aspects of site management, known as the *Mt Morgan Phase 3 Agreement.*

Contaminated land

It is a requirement of the EP Act that an owner or occupier of land give written notice to the administering authority if they become aware of the following:

- the presence of, or happening of an event involving, a hazardous contaminant on the land that is causing, or is reasonably likely to cause, serious or material environmental harm (notice must be given within 24 hours); or
- if the land is contaminated land – a change in the condition of the land that is causing, or is reasonably likely to cause, serious or material environmental harm (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the land (notice must be given within 20 business days).

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200(1) of the EP Act, an EA has effect:

(a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority—on the nominated day; or

(b) if the authority states a day or an event for it to take effect—on the stated day or when the stated event happens; or

(c) otherwise—on the day the authority is issued.

However, in accordance with section 200(2) of the EP Act, the day that the EA takes effect may not be before:

(a) if the authority is for a resource activity—the day the relevant tenure is granted to the applicant; or

(b) if a development permit for a material change of use of premises under the *Planning Act 2016* is necessary for carrying out an activity that related to the authority—the day the development permit takes effect; or

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(c) if an SDA Approval under the *State Development and Public Works Organisation Act 1971* is necessary for carrying out an activity that relates to the authority—the day the approval takes effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid EA.

Sarah de Vries	1 September 2026
Signature	Date

Sarah De Vries

Department of the Environment, Tourism, Science and Innovation
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:

Minerals Business Centre
PO Box 7230, Cairns QLD 4870
Phone: 07 4222 5352
Email: ESCairns@detsi.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this EA, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to restore the environment (section 319C)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443).

Other permits required

This permit only provides an approval under the EP Act. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department, and other State and Federal Government agencies prior to commencing any activity at the site. For example, this may include permits or approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access State controlled roads), the Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development (to clear vegetation), and the Department of Primary Industries (to clear marine plants or to obtain a quarry material allocation).

Obligations under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

Matters of national environmental significance (MNES) are regulated under the Commonwealth EPBC Act rather than under state legislation. You may need to submit a referral if your project potentially impacts any matters protected under the EPBC Act. For more information on self-assessments, and referral and assessment processes, please visit the Australian Government Department of Climate Change, Energy, the Environment and Water's website at www.dcceew.gov.au/environment/epbc/advice.

Obligations under the *Mining and Quarrying Safety and Health Act 1999*

If you are operating a quarry, other than a sand and gravel quarry where there is no crushing capability, you will be required to comply with the *Mining and Quarrying Safety and Health Act 1999*. For more information on your obligations under this legislation, visit Resources Safety and Health Queensland's website at www.rshq.qld.gov.au, or call 13 QGOV (13 74 68) or your local Mines Inspectorate Office.

Development approval

This permit is not a development approval under the *Planning Act 2016*. The conditions of this EA are separate, and in addition to, any conditions that may be on the development approval. If a copy of this EA is attached to a development approval, it is for information only and may not be current. Please contact the Department of the Environment, Tourism, Science and Innovation to ensure that you have the most current version of the EA relating to this site.

Obligations under the *Aboriginal Cultural Heritage Act 2003* and *Torres Strait Islander Cultural Heritage Act 2003* (the Cultural Heritage Acts)

The Cultural Heritage Acts require anyone who carries out a land-use activity to exercise a duty of care. This 'duty of care' means land users must take all reasonable and practicable measures to ensure their activity does not harm Aboriginal or Torres Strait Islander cultural heritage, and applies to any activity where Aboriginal or Torres Strait Islander cultural heritage is located. For more information on your obligations under this legislation, please visit the Department of Women, Aboriginal and Torres Strait Islander Partnerships and Multiculturalism webpage at, www.dwatsipm.qld.gov.au.

Conditions of environmental authority

Schedule A – General

A1 This environmental authority authorises environmental harm referred to in the conditions. Where there is no condition or this environmental authority is silent on a matter, the lack of a condition or silence does not authorise environmental harm.

A2 Contaminants with the potential to cause environmental harm must not be released directly or indirectly to the receiving environment, except as permitted under the conditions of this environmental authority.

A3 The holder of this environmental authority must ensure that the mining activities are carried out at the locations identified in *Table A1 - Authorised mining activities and locations* and *Schedule I - Figure 1 – Mine Area Location.*

Table A1 - Authorised mining activities and locations

Mine domain	Mine feature	Mining lease	Location		Maximum disturbance area (ha)
			Latitude (GDA94)	Longitude (GDA94)	
Latent Tailings Resource	Part of No. 2 Mill Tailings Dam	ML5660	-23.63495	150.38008	16.91
	Mundic Sulphide Tails	ML5589 ML5612 ML5613 ML5621 ML5622 ML5623 ML5648 ML5649 ML5659 ML5660	-23.64279	150.37387	32
	Red Oxide Tails				
	Part of Shepherds Gully Tails	ML5589 ML5609 ML5628	-23.65099	150.36778	17.53
	Sandstone Gully Latent Tailings	ML5616 ML5621	-23.64211	150.36457	13.51
Tailings Storage Facility	Sandstone Gully Tailings Storage Facility (including embankment)	ML5616 ML5617 ML5621 ML5625 ML5608 ML5626 ML5627 ML5634 ML5658	-23.64211	150.36457	49.17
	Upper Mundic Gully Tailings Storage Facility	ML5608 ML5624	-23.63466	150.36331	43.4
	B Dump	ML5614	- 23.63585	150.37460	0.78

Mine domain	Mine feature	Mining lease	Location		Maximum disturbance area (ha)
			Latitude (GDA94)	Longitude (GDA94)	
Waste Rock Dumps	K Dump	ML5613	-23.63922	150.37597	0.73
	Q Dump	ML5660	-23.64028	150.37963	1.35
	Shepherds Outer Dump	ML5589	-23.65326	150.36925	16.62
	Horse Paddock Dump	ML5620 ML5660 ML5635	-23.63068	150.37663	12.47
	Airfield Dump	ML5609 ML5634 ML5658 ML5622	-23.64679	150.36673	16.98
Mine Infrastructure & Haul Roads	Process Plant & ROM Pad	ML5614 ML5660	-23.6362	150.37553	5.9
	Pipe Corridor	ML5660 ML5619 ML5615 ML5618 ML5625 ML5623	NA – Linear	NA – Linear	3
	Tim's Tube(1)	ML5660 ML5619 ML6692 ML5624	NA – Linear	NA – Linear	0.66
	Buildings/Yard	ML5660	-23.63274	150.38356	0.86
	Lachlan's Laydown(1)	ML5613	-23.6409	150.3778	1.28
	Paterson's Patch(1)	ML5618 ML5624	-23.6358	150.3666	0.20
	Access Tracks & Haul Roads	ML5589 ML5612 ML5613 ML5621 ML5622 ML5623 ML5648 ML5649 ML5659 ML5660	NA – Linear	NA – Linear	14.48
	Powerlines	ML5589 ML5612 ML5613 ML5621 ML5622	NA – Linear	NA – Linear	16

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Mine domain	Mine feature	Mining lease	Location		Maximum disturbance area (ha)
			Latitude (GDA94)	Longitude (GDA94)	
		ML5623 ML5648 ML5649 ML5659 ML5660			
Stockpiles	Non-Potentially Acid Generating (NPAG) Stockpile	ML5589 ML5648	-23.64401	150.36947	1.1
	Slag Stockpiles	ML5659	-23.64460 -23.64522	150.37638 150.37407	3.78
	Craig's Clod(1)	ML5624 ML5625	-23.6364	150.3650	4.50

Note (1) Refer to condition F2.

Maintenance of measures, plant and equipment

A4 The holder of this environmental authority must:
a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; and
b) maintain such measures, plant and equipment in a proper and efficient condition; and
c) operate such measures, plant and equipment in a proper and efficient manner; and
d) ensure all instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority are properly calibrated.

Monitoring

A5 Any monitoring data, records and reports required by this environmental authority must be:
a) kept for a period of at least five (5) years; and
b) provided to a new holder of the environmental authority on transfer of the environmental authority; and
c) provided to the administering authority within a timeframe nominated by the administering authority; and
d) provided to the administering authority in the format requested.

A6 The following information must be recorded in relation to all monitoring required under the conditions of this environmental authority:
a) The date and time at which the sample or in-situ record was taken; and
b) The location co-ordinates or monitoring point at which the sample was taken; and
c) The results of all monitoring and details of any exceedances of the conditions of this environmental authority; and
d) Any other pertinent details of relevance to interpreting the sampling results (i.e. stream flow, wind conditions or any unusual observations such as odour or colouration).

A7 Where monitoring is a requirement of this environmental authority, ensure that a suitably qualified and experienced person(s) conducts all monitoring.

Storage and handling of flammable and combustible liquids

A8 Storage of all flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm and maintained in accordance with *AS 1940 - Storage and Handling of Flammable and Combustible Liquids of 2017 (or more recent editions)*.

Risk management

A9 The holder of this environmental authority must develop and implement a risk management system for activities which conforms to the Standard for Risk Management (ISO31000:2009), or the latest edition of an Australian standard for risk management, to the extent relevant to environmental management, by 22 February 2027.

Emergency response and contingency

A10 The holder of this environmental authority must develop and implement an emergency response and contingency plan to respond to emergency events and incidents by 30 July 2027. The emergency response and contingency plan for the carrying out of the activities must include the following matters at a minimum:

a) response procedures and contingency plans to be implemented to prevent or minimise the risk of environmental harm arising from emergency events:
b) response procedures to minimise the extent and duration of environmental harm caused by emergency events; and
c) contingency plans including the practices and procedures to be employed to restore the environment or to mitigate any environmental harm caused; and
d) the physical resources to be used in response to emergencies; and
e) procedures to investigate the cause of any emergencies, and where necessary, the implementation of remedial actions to prevent the recurrence of similar event: and
f) the provision and availability of documented procedures to staff attending any emergency to enable them to effectively respond; and
g) training and qualifications required by staff that will be called upon to respond to emergencies to enable them to effectively respond; and
h) timely and accurate reporting of the circumstance and nature of the emergency to the administering authority in accordance with conditions **A11-A14**; and
i) procedures for accessing monitoring points required by this environmental authority and other relevant monitoring points during emergencies to determine environmental harm caused; and
j) procedures to notify any person who may be affected by the emergency.

Notification of Emergencies and Incidents

A11 The holder of this environmental authority must notify the administering authority by written notification within **twenty-four (24) hours** after becoming aware of any emergency, incident or exceedance relating to the release of contaminants not in accordance, or reasonably expected to be not in accordance with, the conditions of this environmental authority.

A12 The notification of emergencies or incidents as required by **Condition A11** must include but not be limited to the following:

a) the holder of the environmental authority;
b) the location of the emergency or incident;
c) the number of the environmental authority;
d) the name and telephone number of the designated contact person;
e) the time of the release;
f) the time the holder of the environmental authority became aware of the release;
g) the suspected cause of the release;
h) the environmental harm caused, threatened, or suspected to be caused by the release; and
i) actions taken to prevent any further release and mitigate any environmental harm caused by the release.

A13 Not more than **fourteen (14) days** following the initial notification of an emergency or incident, written advice must be provided of the information supplied in accordance with **Condition A12** in relation to:

a) proposed actions to prevent a recurrence of the emergency or incident; and
b) outcomes of actions taken at the time to prevent or minimise environmental harm.

A14 As soon as practicable, but not more than **six (6) weeks** following the conduct of environmental monitoring performed in relation to the emergency or incident, which results in the release of contaminants not in

accordance, or reasonably expected to be not in accordance with the conditions of this environmental authority, written advice must be provided of the monitoring results of to the administering authority.

Definitions

A15 Words and phrases used throughout this environmental authority are defined in the Definitions section of this environmental authority. Where a definition for a term used in this environmental authority is sought and the term is not defined within this environmental authority, the definitions in the *Environmental Protection Act 1994*, its Regulations and Environmental Protection Policies must be used.

Schedule B – Air

B1 Unless authorised by this environmental authority, the release of contaminants to air must not cause environmental harm, beyond the boundaries of the licensed place.

B2 The holder of this environmental authority must develop, document and implement an air quality monitoring program that can ensure compliance with the conditions of this environmental authority, by 1 August 2022, or prior to commencement of the mining activity.

B3 When requested by the administering authority, air quality monitoring must be undertaken to investigate any air quality complaint, and results must be provided to the administering authority within fourteen (14) days following completion of monitoring. Monitoring must be carried out as required by the administering authority.

B4 If the administering authority requires air quality monitoring to be undertaken, all monitoring must be performed by a suitably qualified and experienced person to perform.

General Dust Control

B5 The holder of this environmental authority shall ensure that all appropriate mitigation measures are employed to prevent environmental harm occurring as a result of dust and particulate matter emissions generated by the mining activities.

B6 If air quality monitoring indicates that environmental harm is caused by the activities, then the holder of the environmental authority must:

a) advise the administering authority of planned mitigation measures; and

b) implement the mitigation measures to prevent further environmental harm.

Schedule W – Water

W1 Contaminants must not be released directly or indirectly to any waters unless otherwise permitted by a condition of this environmental authority.

W2 Water monitoring and sampling must address and comply with the latest version of the Queensland Government's 'Monitoring and Sampling Manual 2018 – Environmental Protection (Water) Policy 2009'.

W3 Unless otherwise permitted under the conditions of this environmental authority, contaminants must only be released from the processing plant to the Sandstone Gully Tailings Storage Facility and the Upper Mundic Gully Tailings Storage Facility.

Table W1 – Surface water monitoring locations

Monitoring Site	Monitoring Type	Monitoring site description	Location[1]		Monitoring Frequency
			Latitude (GDA 94)	Longitude (GDA 94)	
Dam 8	Waters	Freshwater dam located adjacent to the Upper Mundic Gully Tailings Storage Facility	23.63151	150.36816	Monthly
Open Cut Pit	Waters	Open cut pit located downstream of the Upper Mundic Gully Tailings Storage Facility	-23.63690	150.37414	

Note [1] Monitoring location(s) will be shown in Schedule I - Figure 2 of the Environmental Authority.

W4 Surface waters must be monitored:
a) for the quality characteristics in *Table W3 - Groundwater quality characteristics and contaminant limits*; and
b) at the monitoring frequency specified in *Table W1 – Surface waters monitoring locations;* and
c) at the monitoring points identified in *Table W1 – Surface waters monitoring locations,* as illustrated in *Schedule I - Figure 2 – Surface water and Groundwater monitoring locations*.

W5 From 30 October 2027, and thereafter reported annually, the holder of this environmental authority must:
a) present the results of all monitoring undertaken in accordance with condition **W4**; and
b) ensure that surface water quality measured in accordance with condition **W4** at Dam 8 does not show a deterioration in quality due to the activities authorised under this environmental authority; and
c) where monitoring indicates a deterioration in surface water quality due to the activities authorised under this environmental authority:
   (i) investigate the cause of the impact and implement appropriate management, monitoring and mitigation measures to prevent further deterioration in quality; and
d) provide this information to the administering authority.

Water Management Plan

W6 On or before 30 October 2026 a Water Management Plan that considers all mine features specified in *Table A1 - Authorised mining activities and locations* must be developed by an appropriately qualified person and implemented for all stages of the activity.

W7 The Water Management Plan must
a) provide for effective water management of actual and potential environmental impacts resulting from the activity; and
b) include:
   (i) a study of the source of contaminants; and
   (ii) a water balance model; and
   (iii) a water management system; and
   (iv) measures to manage and prevent acidic, saline and neutral mine drainage; and
   (v) contingency procedures for incidents and emergencies; and
   (vi) a program for monitoring and review of the effectiveness of the water management plan.

W8 The Water Management Plan must be reviewed by 30 October each calendar year to assess the adequacy of the plan, ensure actual and potential environmental impacts are managed, and identify and undertake any necessary amendments to the plan. The review must be documented and:

a) include a statement that the Water Management Plan has been reviewed by an appropriately qualified person; and
b) assess the plan against the requirements under condition **W7**; and
c) include recommended actions to ensure actual and potential environmental impacts are effectively managed; and
d) provide details and timelines of the actions to be taken; and
e) identify any amendments made to the Water Management Plan.

W9 A copy of the Water Management Plan must be kept up to date following each annual review and must be provided to the administering authority on request.

Erosion and Sediment Control

W10 An Erosion and Sediment Control Plan must be developed by a suitably qualified and experienced person and implemented to minimise erosion and the release of sediment to receiving waters and contamination of stormwater.

Groundwater

W11 The construction, maintenance, operation and decommissioning of each groundwater monitoring bore must be undertaken in a manner that:

a) prevents contaminants from entering the groundwater; and
b) ensures representative groundwater samples from the target hydrogeological unit; and
c) maintains the hydrogeological environment within the hydrogeological unit.

W12 A bore report must be kept for each monitoring bore which includes:

a) a unique identification reference number and geographic coordinate location; and
b) construction information including but not limited to the depth of bore, depth and length of casing, depth and length of screening and bore sealing details; and
c) stratigraphy and target hydrogeological unit of the bore; and
d) depth at which groundwater was intercepted and the final Standing Water Level (SWL) after bore development.

W13 Groundwater quality and SWL must be monitored:

a) at the locations specified in *Table W2 – Groundwater monitoring locations and frequency*, as illustrated in *Schedule I - Figure 2 – Surface water and Groundwater monitoring locations*; and
b) at the frequencies specified in *Table W2 – Groundwater monitoring locations and frequency*; and
c) for quality characteristics listed in *Table W3 – Groundwater quality characteristics and contaminant limits*.

Table W2 - Groundwater monitoring locations and frequency

Monitoring point(s)	Hydrogeological Unit	Location[1]		Surface RL (m)	Monitoring frequency
		Latitude (GDA 94)	Longitude (GDA 94)		
MB2	Saprolite	-23.636	150.376	278.48	Monthly
MB3	Waste rock S	-23.642	150.369	278.48	
MB4	Bedrock (volcanics)	TBA[2]	TBA[2]	TBA[2]	
MB5D	Tailings / Saprolite	-23.645	150.378	223.17	
MB5S	Bedrock (volcanics)	TBA[2]	TBA[2]	TBA[2]	
MB7D	Bedrock (tonalite)	-23.656	150.372	211.87	
MB8D	Fresh volcanics	-23.636	150.381	225.89	

MB9	Bedrock (tonalite)	-23.631	150.3837	238.06	
MB12	TBA(2)	TBA(2)	TBA(2)	TBA(2)	
MB13S	TBA(2)	TBA(2)	TBA(2)	TBA(2)	
MD13D	TBA(2)	TBA(2)	TBA(2)	TBA(2)	
MB14	Bedrock (volcanics)	-23.640	150.374	276.13	
WGMB01	TBA(2)	TBA(2)	TBA(2)	TBA(2)	
WGMB02	TBA(2)	TBA(2)	TBA(2)	TBA(2)	
WGMB03	TBA(2)	TBA(2)	TBA(2)	TBA(2)	
MB24S	Diorite	TBA(2)	TBA(2)	TBA(2)	
MB24D	Diorite	TBA(2)	TBA(2)	TBA(2)	
MB25S	Diorite	TBA(2)	TBA(2)	TBA(2)	
MB25D	Diorite	TBA(2)	TBA(2)	TBA(2)	
MB26S	Diorite	TBA(2)	TBA(2)	TBA(2)	
MB26D	Diorite	TBA(2)	TBA(2)	TBA(2)	
MB27S	Sandstone	TBA(2)	TBA(2)	TBA(2)	
MB27D	Sandstone	TBA(2)	TBA(2)	TBA(2)	
MB28	Diorite	TBA(2)	TBA(2)	TBA(2)	
MB29S	Sandstone	TBA(2)	TBA(2)	TBA(2)	
MB29D	Sandstone	TBA(2)	TBA(2)	TBA(2)	
MB30S	Sandstone	TBA(2)	TBA(2)	TBA(2)	
MB30D	Sandstone	TBA(2)	TBA(2)	TBA(2)	
MB31	Diorite	TBA(2)	TBA(2)	TBA(2)	
MB32	Diorite	TBA(2)	TBA(2)	TBA(2)	

Note (1) Monitoring location(s) will be shown in Schedule I - Figure 2 of the Environmental Authority.
Note (2) TBA value – refer to condition W14.

W14 Either by 30 June 2027 or prior to the operation of the Upper Mundic Gully Tailings Storage Facility, whichever occurs first, the holder of this environmental authority must submit an amendment application to the administering authority in accordance with section 226 and 226A of the *Environmental Protection Act 1994*, nominating:

a) the 'TBA hydrogeological unit details, location and surface RL' values of the groundwater monitoring locations of *Table W2 – Groundwater quality monitoring locations and frequency.*

W15 All groundwater monitoring must be carried out by an appropriately qualified person.

W16 The following information must be recorded in relation to all groundwater monitoring:

a) the date on which the sample was taken; and
b) the time at which the sample was taken; and
c) the monitoring bore at which the sample was taken; and
d) the results of all monitoring.

W17 By 1 June 2024, and thereafter reported annually, the holder of this environmental authority must ensure that groundwater quality measured in groundwater monitoring bores identified in *Table W2 - Groundwater monitoring locations and frequency* does not show a deterioration in all quality characteristics.

Table W3 - Groundwater quality characteristics and contaminant limits

Quality characteristics	Units	Contaminant Limit (1)	Limit type
pH	pH units	TBA(1)	Range
Electrical conductivity	µS/cm	TBA(1)	Maximum
Sulfate	mg/L	For interpretation purposes	
Cyanide (HCN as CN)	µg/L	TBA(1)	Maximum
Aluminium	µg/L	TBA(1)	Maximum
Arsenic	µg/L	TBA(1)	Maximum
Cadmium	µg/L	TBA(1)	Maximum
Chromium	µg/L	TBA(1)	Maximum
Cobalt	µg/L	TBA(1)	Maximum
Copper	µg/L	TBA(1)	Maximum
Iron	µg/L	TBA(1)	Maximum
Lead	µg/L	TBA(1)	Maximum
Manganese	µg/L	TBA(1)	Maximum
Nickel	µg/L	TBA(1)	Maximum
Selenium	µg/L	TBA(1)	Maximum
Zinc	µg/L	TBA(1)	Maximum
Major ions Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate	mg/L	For interpretation purposes	
Hardness	mg/L		
Standing Water level	mAHD		

All metals and metalloids must be measured as 'dissolved' (from analysis of a field filtered sample) and total (unfiltered).
Limits for metals and metalloids apply to dissolved results.
Note (1) TBA value – refer to condition W18.
Note (2) Contaminant limits don't apply to groundwater monitoring bores identified as MB2, MB3, MB4, MB5D, MB5S, MB7D, MB8D, MB9, MB12, MB13S, MB13D, MB14 and WGMB01.
Note (3) Contaminant limits don't apply to groundwater monitoring bores identified as MB27S, MB27D, MB28, MB29S, MB29D, MB30S, MB30D, MB32, MB31, WGMB02, WGMB03, MB26S, MB26D, MB24S, MD24D, MB25S and MB25D until the earlier of 30 July 2029 or prior to the operation of the Upper Mundic Gully Tailings Storage Facility.

W18 Either by 30 January 2029 or prior to the operation of the Upper Mundic Gully Tailings Storage Facility, whichever occurs first, the holder of this environmental authority must submit an amendment application to the administering authority in accordance with section 226 and 226A of the *Environmental Protection Act 1994*, nominating:

a) the 'TBA contaminant limit' values with sufficient site-specific groundwater data within *Table W3 - Groundwater quality characteristics and contaminant limits.*

Groundwater Monitoring and Management Program

W19 On or before 30 June 2027 a Groundwater Monitoring and Management Program (GMMP) must be developed, implemented and maintained.

W20 The GMMP required by condition **W19** must:

a) provide a hydrogeological conceptual groundwater model; and

b) identify all environmental values that may be impacted; and
c) detail groundwater levels in all identified hydrogeological units present across and adjacent to the site to confirm existing groundwater flow paths; and
d) ensure all potential groundwater impacts due to the activities authorised under this environmental authority are identified, monitored and managed; and
e) ensure adequate groundwater monitoring and data analysis is undertaken to achieve the following objectives:
   (i) detect any impacts to groundwater quality due to the activities authorised under this environmental authority; and
   (ii) detect any changes to groundwater level due to the activities authorised under this environmental authority; and
   (iii) determine compliance with condition **W17;** and
   (iv) determine trends in groundwater quality; and
   (v) determine any interaction or impact from groundwater on surface water; and
f) document groundwater management and monitoring methodologies undertaken for the duration of all the activities authorised under this environmental authority; and
g) provide an appropriate quality assurance and quality control program; and
h) include a review process to identify improvements to the program that includes addressing any comments provided by the administering authority.

W21 The GMMP must be reviewed on an annual basis by an appropriately qualified person to determine if it continues to meet the requirements stated in condition **W20.**

Groundwater Model

W22 On or before 30 June 2028 a numerical groundwater model must be developed by an appropriately qualified person.

W23 The numerical groundwater model must be reviewed and updated by an appropriately qualified person every 5 years.

W24 The numerical groundwater model review in **W23** must:
a) include all hydrogeological units potentially impacted by the activities authorised under this environmental authority; and
b) be undertaken in accordance with the most recent version of the 'Australian Groundwater Modelling Guidelines' (2012); and
c) be validated and recalibrated with all recent monitoring data; and
d) be documented and recorded.

Annual Groundwater Monitoring Report

W25 From 30 October 2027 an Annual Groundwater Monitoring Report (AGMR) must be completed each year.

W26 The AGMR required by condition **W25** must include:
a) a review of all the groundwater quality and SWL data of all groundwater bores listed within *Table W2 – Groundwater monitoring locations and frequency*; and
b) an assessment of groundwater quality and SWL trends for all data from all groundwater bores listed in *Table W2 – Groundwater monitoring locations and frequency*; and
c) details of any review undertaken of the numerical groundwater model.

Mount Morgan Open Cut Pit

W27 The holder of this environmental authority must only undertake mining activities that result in no change to, or a reduction of the effective catchment reporting to the Mount Morgan Open Cut Pit.

W28 The holder of this environmental authority must only undertake mining activities that result in no change to or an improvement in water quality reporting to the Mount Morgan Open Cut Pit.

W29 The holder of this environmental authority may use water from the open cut pit as the principal supply of water for mining operations.

W30 The holder of this environmental authority may release up to six (6) million dry weight tonnes of contaminants from the release point specified in *Table W4 – Authorised contaminant release point.*

Table W4 – Authorised contaminant release point

Release Point	Locations (GDA 94)		Contaminant Source	Release Source	Monitoring Point	Receiving description
	Latitude	Longitude				
Pete's Pipe	-23.63891	150.36842	Latent Tailings Resource areas specified in Table A1	Process Plant	Process Plant	Mount Morgan Open Cut Pit

W31 The release of contaminants from the location specified in *Table W4 – Authorised contaminant release point* must not exceed any release limit specified in *Table W5 – Contaminant release limits.*

Table W5 – Contaminant release limits

Quality Characteristic	Unit	Limit Type	Release Limit	Monitoring frequency
pH	NA	Range	7-10	Daily during release event
Electrical Conductivity	µS/cm	Maximum	4,000	
Sulfate	mg/L	Maximum	2,000	

W32 During a contaminant release event in accordance with condition **W30** and **W31**, the holder of this environmental authority must:

a) carry out monitoring at the monitoring point specified in *Table W4 – Authorised contaminant release point* in accordance with the contaminant release limits and monitoring frequency specified in *Table W5 – Contaminant release limits*; and
b) commence continuous monitoring of pH and Electrical Conductivity if any monitoring event identifies an exceedance; and
c) cease release into the Mount Morgan Open Cut Pit if the contaminant release limits identified in *Table W5 – Contaminant release limits* are not achieved within 12 hours of an exceedance; and
d) monitor and record quantity of contaminant release into the Mount Morgan Open Cut Pit; and
e) make all monitoring results available to the administering authority upon request.

W33 Prior to the release of contaminants in accordance with condition **W30** and **W31**, the holder of this environmental authority must obtain written agreement with the underlying landholder of the Mount Morgan Open Cut Pit and provide this to the administering authority.

Schedule D - Noise and vibration

D1 The holder of this environmental authority must comply with the noise limits specified in *Table D1 – Noise limits.*

D2 When requested by the administering authority, noise monitoring must be undertaken to investigate any noise complaint, and results must be provided to the administering authority within **fourteen (14) days** following completion of monitoring. Monitoring must be carried out as required by the administering authority.

D3 If the administering authority requires noise monitoring to be undertaken, all monitoring must be performed by a suitably qualified and experienced person.

D4 The holder of this environmental authority must complete monitoring and reporting must include the following descriptor characteristics and matters:

a) $L_{A\ max\ adj,\ T}$; and
b) the level and frequency of occurrence of impulsive or tonal noise; and
c) atmospheric conditions including wind speed and direction; and
d) Location, date and time of recording.

D5 If monitoring indicates exceedance of the noise limits specified in *Table D1 – Noise limits*, then the holder of this environmental authority must:

a) address the complaint including the use of appropriate dispute resolution if required; or
b) immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance.

Table D1 - Noise limits

Noise level measured as dB(A)	Monday to Saturday			Sundays and public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
	Noise limit measured at a 'Noise sensitive place'					
L_{A10}, adj, 10 mins	b/g+5	b/g+5	b/g+3	b/g+5	b/g+5	b/g+0
L_{A1}, adj, 10 mins	b/g+10	b/g+10	b/g+5	b/g+10	b/g+10	b/g+5
	Noise limit measured at a 'Commercial place'					
L_{A10}, adj, 10 mins	46b/g+10	b/g+10	b/g+5	b/g+10	b/g+10	b/g+5
b/g+10	b/g+15	b/g+15	b/g+10	b/g+15	b/g+15	b/g+10

D6 The holder of this environmental authority must comply with the blasting limits specified in *Table D2 - Airblast Overpressure Level.*

D7 If monitoring indicates exceedance of the blasting limits specified in *Table D2 - Airblast Overpressure Level*, then the holder of this environmental authority must:

a) address the complaint including the use of appropriate dispute resolution if required; or
b) immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance.

Table D2 - Airblast Overpressure Level

Location	Blasting limits		
	Monday to Friday 8:00am – 5:00pm	Saturday 9.00am –1.00 pm	Sundays and public holidays
Sensitive or commercial place	115 dB (Linear) Peak for 9 out of 10 consecutive blasts initiated and not greater than 120 dB (Linear) Peak at any time		**No Blasting**

D8 The holder of this environmental authority must comply with the vibration limits specified in *Table D3 – Vibration limits*.

D9 When requested by the administering authority, vibration monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority, to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.

D10 The holder of this environmental authority must monitor the:
a) location of the blast(s) within the mining area (including which bench level); and
b) atmospheric conditions including temperature, relative humidity and wind speed and direction; and
c) Location dates and time of recording.

D11 If monitoring completed in accordance with **condition D10** indicates an exceedance of the vibration limits in *Table D3 – Vibration limits*, then the holder of this environmental authority must:
a) address the complaint including the use of appropriate dispute resolution if required; or
b) immediately implement vibration abatement measures so that vibration from the activity does not result in further environmental nuisance.

Table D3 - Vibration limits

Location	Vibration limit		
	Monday to Friday 8.00 am – 5.00 pm	**Saturday 9.00 am – 1.00 pm**	**Sundays and public holidays**
Sensitive or commercial place	5mm/s peak particle velocity for nine (9) out of ten (10) consecutive blasts and not greater than 10 mm/s peak particle velocity at any time		**No blasting**

D12 The method of measurement and reporting of noise and vibration must comply with the latest edition of the administering authority's Noise Measurement Manual and Guideline - Noise and vibration from blasting.

Schedule E – Waste

Storage of Tyres

E1 Tyres stored awaiting disposal or transport for take-back, recycling, or waste-to-energy options must be stockpiled in volumes less than 600m^3 in volume and 200m^2 in area and at least 10m from any other tyre storage area.

E2 All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a 10m radius of the scrap tyre storage area.

Waste Management

E3 The holder of this environmental authority must develop, document and implement a waste management program for all mine features, by 1 December 2022.

E4 The waste management program required under condition **E3** must be regularly reviewed and updated at intervals of no greater than five (5) years. The program must include:

a) a description of the mining activity that may generate waste; and
b) waste management control strategies including:
   (i) recording of the types and amounts of wastes generated by the mining activity;
   (ii) segregation of the wastes;
   (iii) storage of the wastes;
   (iv) transport of the wastes; and
   (v) monitoring and reporting matters concerning the waste; and
c) the hazard characteristics of the wastes generated including disposal procedures for regulated wastes; and
d) a program for reusing, recycling or disposing of all wastes; and
e) how the waste will be dealt with in accordance with the waste and resource management hierarchy, including a description of the types and amounts of waste that will be dealt with under each of the waste management practices in the waste management hierarchy (i.e. avoidance, reuse, recycling, energy recovery, disposal); and
f) how the waste will be stored, handled and transferred in a proper and effective manner; and
g) procedures for identifying and implementing opportunities to minimise the amount of waste generated, promote efficiency in the use of resources and improve the waste management practices employed; and
h) procedures for dealing with accidents, spills, and other incidents that may impact on waste management; and
i) details of any accredited management system employed, or planned to be employed, to deal with the waste; and
j) how often the performance of the waste management practices will be assessed; and
k) the indicators or other criteria on which the performance of the waste management practices will be assessed; and
l) staff training and induction to the waste management program.

Regulated Waste

E5 All regulated waste generated at the licensed place must only be stored prior to removal within those areas designated for those purposes.

E6 The holder of the environmental authority must not:

a) allow waste to be burned at or on the licensed placed; or
b) remove waste from the licensed place and burn such waste elsewhere.

Laboratory Waste

E7 All mineral waste from the laboratory must be disposed of in the Sandstone Gully Tailings Storage Facility and/or the Mount Morgan Open Cut Pit in accordance with condition **W30** and **W31**.

Schedule F – Land

General land

F1 The holder of the environmental authority must comply with the operational activities specified in *Table F1 - Operational Activities on Land* for each of the Mine features specified in *Table A1- Authorised mining activities and locations.*

Table F1 - Operational Activities on Land

Mine Feature	Operational Activities
Process Plant & ROM Pad	Mineral processing
Pipe Corridor	Transport of process water and tailings.
Part of No. 2 Mill Tailings Dam	Shape surface to minimise runoff of contaminated water. Install diversions to minimise clean waters entering location Remove overlying waste. Recover tailings for processing. Remove and relocate any waste in the remnant walls that directly impacts the mining of the tailings. Leave stable batters on any remaining waste dumps or remnant walls.
Mundic Sulphide Tails	Remove overlying waste. Recover tailings for processing. Remove and relocate any waste in the remanent walls that directly impacts the mining of the tailings. Leave stable batters on any remaining waste dumps or remnant walls.
Red Oxide Tails	Remove overlying waste. Recover tailings for processing. Remove and relocate any waste in the remanent walls that directly impacts the mining of the tailings. Leave stable batters on any remaining waste dumps or remnant walls.
Part of Shepherds Gully Tails	Shape surface to minimise runoff of contaminated water. Install diversions to minimise clean waters entering location. Remove overlying waste. Recover tailings for processing. Remove and relocate any waste in the remanent walls that directly impacts the mining of the tailings. Leave stable batters on any remaining waste dumps or remnant walls.
B Dump K Dump Q Dump	Establish bund/sump. Recover waste rock crush at site and truck material to plant. Expose former natural land surface. Leave stable batters on any remaining waste dumps or remnant walls.
Shepherds Outer Dump	Placement of waste rock Shape and compact placed waste to reduce rainfall infiltration and clean water runoff
Horse Paddock Dump	Placement of waste rock Shape and compact placed waste to reduce rainfall infiltration and clean water runoff
Airfield Dump	Placement of waste rock Shape and compact placed waste to reduce rainfall infiltration and clean water runoff
Sandstone Gully Latent Tailings	Remove overlying waste. Recover tailings for reprocessing. Remove and relocate any waste in the remnant walls that directly impacts the mining of the tailings.
Sandstone Gully	Permanent storage of tailings. Collection and monitoring of seepage within new embankment.

Mine Feature	Operational Activities
Tailings Storage Facility	Construction of tailings dam wall.
Upper Mundic Gully Tailings Storage Facility	Permanent storage of tailings Construction of tailings embankment Monitoring of seepage within embankment through installation of piezometers
Mining Contractor (Services) Yard	Previously disturbed areas to be used for workshops, administration areas and support services.
Haul Roads	Mining Support Infrastructure
Powerlines	Mining Support Infrastructure
Non-Potentially Acid Generating (NPAG) Stockpile	Source of TSF embankment and rehabilitation materials.
Slag Stockpiles	Source of TSF embankment and rehabilitation materials.
Tim's Tube	Transport of process water and tailings
Lachlan's Laydown	Laydown yard
Paterson's Patch	Onsite nursery
Craig's Clod	Topsoil stockpile and rehabilitation materials.

F2 The holder of this environmental authority must obtain written agreement with the underlying landholder and provide this to the administering authority prior to the construction of Tim's Tube, Lachlan's Laydown, Paterson's Patch and Craig's Clod as specified *Table A1 - Authorised mining activities and locations* and *Table F1 - Operational Activities on Land.*

Rehabilitation landform criteria

F3 Subject to conditions **F6** to **F8**, all disturbed land must be rehabilitated in accordance with the final land use identified in *Table F2 - Current and Expected Land Suitability and Final Land Use.*

Table F2 - Current and Expected Land Suitability and Final Land Use

Mine Feature	Rehabilitation	Final Land Use	Land Suitability Objective
Process Plant & ROM Pad	Remove all plant	Land management monitoring and maintenance of rehabilitated areas	Class 4
Pipe Corridor	Remove all pipes and support infrastructure		Class 4
Tim's Tube	Remove all pipes and support infrastructure		Class 4
Part of No. 2 Mill Tailings Dam	Remove remnant sulphidic dam wall that directly impacts the mining of the tailings. Batter and stabilise remaining waste dump faces. Expose and reinstate original drainage in rehabilitated areas.		Class 4
Mundic Sulphide Tails	Remove remnant sulphidic dam wall that directly impacts the mining of the tailings. Batter and stabilise remaining waste dump faces.		Land rehabilitated to approximately original contour to class 4; All

Mine Feature	Rehabilitation	Final Land Use	Land Suitability Objective
	Expose and reinstate original drainage in rehabilitated areas.		other land will be Class 5.
Red Oxide Tails	Remove remnant sulphidic dam wall that directly impacts the mining of the tailings. Batter and stabilise remaining waste dump faces.		
Part of Shepherds Gully Tails	Remove remnant sulphidic dam wall that directly impacts the mining of the tailings. Batter and stabilise remaining waste dump faces. Expose and reinstate original drainage in rehabilitated areas.		
Mining Contractor (Services) Yard	Stabilise former land surface. If required treat surface soils to ensure runoff water quality. Establish suitable vegetation.		
NPAG Stockpile	Stabilise former land surface. If required treat surface soils to ensure runoff water quality. Establish suitable vegetation.		
Slag Stockpiles	Stabilise former land surface. If required treat surface soils to ensure runoff water quality. Establish suitable vegetation.		
B Dump	Stabilise former land surface. If required treat surface soils to ensure runoff water quality. Establish suitable vegetation.		
K Dump			
Q Dump			
Shepherds Outer Dump			
Horse Paddock Dump			
Airfield Dump			
Sandstone Gully Tailings Storage Facility	Completely backfilled. PAF waste rock and tailings transferred from stockpiles to void. Water removed. Dry cover – store and release. Drainage system constructed.		Class 4
Upper Mundic Gully Tailings Storage Facility	Completely backfilled with tailings. Water removed from surface. Dry cover – store and release installed. Drainage system constructed	Native Ecosystem	-
Powerline	Reshape and rehabilitate	Land management monitoring and maintenance of rehabilitated areas	Class 4
Roads	Reshape & rehabilitate		Class 4
Lachlan's Laydown	Removal of any infrastructure and footings Reshape and rehabilitate		Class 4
Paterson's Patch			Class 4
Craig's Clod			Class 4

Infrastructure

F4 All infrastructure, constructed by or for the holder of this environmental authority during the mining activities including water storage structures, must be removed from the site prior to mining lease surrender, except where agreed to in writing by the post mining land owner.

Preventing contaminant release to land

F5 Contaminants must not be released to land.

Rehabilitation liability

F6 Subject to condition **A3**, the holder of this environmental authority is authorised to conduct mining activities at the locations specified in *Table A1 - Authorised mining activities and Schedule I Figure 1 – Mine Area Location.* However, where the holder of this environmental authority does not cause disturbance by undertaking mining activities in these areas, the holder of this environmental authority is not required to rehabilitate those areas in accordance with the requirements of *Table F2 - Current and Expected Land Suitability and Final Land Use.*

F7 The holder of this environmental authority must undertake rehabilitation activities in accordance with the requirements of condition **F6** on areas where mining activities have been undertaken as detailed in condition **A3**.

F8 The holder of this environmental authority must undertake rehabilitation as soon as practicable after the completion of mining activities.

Topsoil

F9 Topsoil stockpiles must be managed to ensure stability and minimise the release of contaminants. Measures must include:
a) stockpiles will not exceed 2 metres in height; and
b) measures are implemented to ensure that erosion of topsoil stockpile is prevented; and
c) stockpiles will be re-used as soon as possible.

Vegetation Clearing

F10 A pre-clearance survey must be undertaken by an appropriately qualified person to minimise impacts to flora and fauna species and fauna habitat prior to commencement of any vegetation clearing.

F11 During any vegetation clearing an appropriately qualified spotter-catcher must be present to identify and relocate significant flora and fauna species and minimise impacts to fauna habitat.

Impacts to Prescribed Environmental Matters

F12 Significant residual impacts to prescribed environmental matters, are not authorised under this environmental authority or the *Environmental Offsets Act 2014* unless the impact(s) is specified in **Table F3 - Significant residual impacts to prescribed environmental matters.**

Table F3 - Significant residual impacts to prescribed environmental matters.

Prescribed environmental matter	Location		Maximum extent
	Latitude (GDA94)	Longitude (GDA94)	
Of Concern Regional Ecosystem - 11.10.2	TBA[1]		TBA[1]

Note [1]: TBA value – refer to condition F13.

F13 Either by 30 November 2027 and prior to the operation of the Upper Mundic Gully Tailings Storage Facility, whichever occurs first, the holder of this environmental authority must submit an amendment application to the administering authority in accordance with section 226 and 226A of the *Environmental Protection Act 1994,* nominating the 'TBA prescribed environmental matter details, location and maximum extent' values of *Table F3 - Significant residual impacts to prescribed environmental matters.*

F14 Records demonstrating that each impact to a prescribed environmental matter not listed in *Table F3 - Significant residual impacts to prescribed environmental matters* will not result in a significant residual impact to that matter must be:

a) completed by an appropriately qualified person; and

b) kept until this environmental authority is surrendered.

F15 An environmental offset made in accordance with the *Environmental Offsets Act 2014* and Queensland Environmental Offsets Policy, must be undertaken for the maximum extent of impact to each prescribed environmental matter authorised in *Table F3 - Significant residual impacts to prescribed environmental matters.*

F16 By 30 June 2028 or prior to the operation of the Upper Mundic Gully Tailings Storage Facility, whichever occurs first, the holder of the environmental authority must develop, implement and maintain a Management Plan for Cycas megacarpa and Grevillea hockingsii.

F17 The Management Plan for Cycas megacarpa and Grevillea hockingsii required by condition F16 must:

a) be prepared by an appropriately qualified person: and
b) demonstrate how impacts to Cycas megacarpa and Grevillea hockingsii will be avoided, minimised, managed and monitored such that a significant residual impact does not occur; and
c) be submitted to the relevant administering authority for approval prior to its implementation; and
d) be implemented and maintained following approval by the administering authority.

Schedule G – Community

Complaint response

G1 The holder of this environmental authority must record all environmental complaints received about the mining activities including:

a) name, address and contact number for of the complainant; and
b) time and date of complaint; and
c) reasons for the complaint; and
d) investigations undertaken; and
e) conclusions formed; and
f) actions taken to resolve the complaint; and
g) any abatement measures implemented; and
h) person responsible for resolving the complaint.

G2 Information collected in accordance with condition **G1** must be made available for inspection by the administering authority upon request.

Schedule H – Regulated Structures

Assessment of consequence category

H1 The consequence category of any structure must be assessed by a suitably qualified and experienced person in accordance with the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)* at the following times:
a) prior to the design and construction of the structure, if it is not an existing structure; or
b) if it is an existing structure, prior to any change or modification.

H2 A consequence assessment report and certification must be prepared for each structure assessed in Condition **H1** and the report may include a consequence assessment for more than one structure.

H3 Certification must be provided by the suitably qualified and experienced person who undertook the assessment, in the form set out in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)*.

Design and construction of a regulated structure

H4 All regulated structures must be designed by, and constructed under the supervision of, a suitably qualified and experienced person in accordance with the requirements of the Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1993).

H5 Construction of a regulated structure is prohibited unless:
a) The holder of this environmental authority has prepared a consequence category assessment report; and
b) Certification to the administering authority has been certified by a suitably qualified and experienced person for the design and design plan and the associated operating procedures in compliance with the relevant condition(s) of this environmental authority, and
c) The structure is compliant in all respects with the:
   (i) *Environmental Protection Regulation 2019,* and
   (ii) the Manual for Assessing Hazard Categories and Hydraulic Performance of Dams, and
   (iii) this environmental authority, and;
d) at least 20 business days has passed since the receipt of those documents, or the administering authority notifies the licensee that a design plan and certification has been submitted for that dam.

H6 Consequence category assessment certification must be provided by the suitably qualified and experienced person who oversees the preparation of the design plan in the form set out in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)* and must be recorded in the Regulated Structures register.

H7 Regulated structures must:
a) be designed, constructed and operated in accordance with the requirements of the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933);* and
b) be designed and constructed to minimise the risk of flooding and erosion; and
c) have the floor and sides of the dam designed and constructed to prevent or minimise the passage of the wetting front and any entrained contaminants through either the floor or sides of the dam during the operational life of the dam and for any period of decommissioning and rehabilitation of the dam.

H8 Regulated structures must be constructed in accordance with a certified design plan that has been submitted to the administering authority, and such that the resulting structure will deliver the performance stated in that submitted design plan and that dam is compliant in all respects with this environmental authority.

H9 Certification by the suitably qualified and experienced person who supervises the construction must be submitted to the administering authority on the completion of construction of the regulated structure, and state that the 'as constructed' drawings and specifications of the regulated structure is in accordance with the design plan.

Notification of affected persons

H10 All affected persons must be provided with a copy of the emergency action plan in place for each regulated structure:

a) or existing structures that are regulated structures, within 10 business days of this condition taking effect; and
b) prior to the operation of the new regulated structure; and
c) if the emergency action plan is amended, within 5 business days of it being amended.

Regulated Structures – Operation

H11 Operation of a regulated structure, except for an existing structure, is prohibited unless the holder of this environmental authority has submitted to the administering authority in respect of regulated structure, all of the following:
a) one electronic copy of the design plan and certification of the 'design plan', and
b) a set of 'as constructed' drawings and specifications; and
c) certification of the 'as constructed drawings and specifications'; and
d) where the regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the DSA volume across the system, a copy of the certified system design plan; and
e) the requirements of this authority relating to the construction of the regulated structure have been met; and
f) the holder of this environmental authority has entered the details required under this authority, into a Register of Regulated Structures; and
g) there is a current operational plan for the regulated structure.

H12 An operational plan, developed by a suitably qualified and experienced person must be kept current for each regulated dam.

Regulated Structures – Location

H13 The regulated structures authorised by this environmental authority are those specified in *Table H1 - Location of Regulated Structures.*

H14 The regulated structures authorised by this environmental authority must be operated in accordance with the criteria listed in *Table H2 - Details of Regulated Structures.*

H15 The regulated structures specified in *Table H1 - Location of Regulated dams* must comply with the criteria in *Table H3 - Hydraulic Performance of Regulated Dams.*

H16 By 1 November of each year, all regulated structures specified in *Table H1 - Location of Regulated Structures* must comply with the criteria listed in *Table H3 - Hydraulic Performance of Regulated Structures.*

Mandatory reporting level

H17 The Mandatory Reporting Level (the MRL) must be marked on all regulated structures listed in *Table H1 - Location of Regulated Structures* in such a way that it is clearly observable.

H18 The holder of this environmental authority must, as soon as practical and within **twenty-four (24) hours** of becoming aware, notify the administering authority when the contents of a regulated structure reaches the Mandatory Reporting Level.

H19 The holder of this environmental authority must, immediately on becoming aware that the Mandatory Reporting Level has been reached, act to prevent any unauthorised discharge from the regulated structure.

H20 The holder of this environmental authority must record any changes to the Mandatory Reporting Level in the Register of Regulated Structures.

Design storage allowance

H21 The holder of this environmental authority must assess the performance of each regulated structure over the preceding November to May period based on actual observations of the available storage in each regulated structure taken prior to 1 July of each year.

H22 By 1 November of each year, storage capacity must be available in each regulated structure, to meet the Design Storage Allowance (DSA) volume for the dam as listed in *Table H3 - Hydraulic Performance of Regulated Structures.*

H23 The holder of this environmental authority must notify the administering authority, within **forty-eight (48) hours** of becoming aware that a dam will not meet the Design Storage Allowance by 1 November of any year.

H24 If the holder of this environmental authority becomes aware that insufficient Design Storage Allowance is available in accordance with condition **H22** you must take action to prevent any unauthorised discharge from the dam.

Decommissioning

H25 The holder of this environmental authority must submit a decommissioning plan that has been certified by a suitably qualified and experienced person, to the administering authority **at least one (1) year prior**, to decommissioning any regulated structure specified in *Table H1 - Location of Regulated Structures.*

H26 Regulated structures must not be abandoned but be either:
a) decommissioned and rehabilitated to achieve compliance with condition **H25**; or
b) the holder of the environmental authority and the landholder agree in writing that the;
   (i) dam will be used by the landholder following the cessation of the environmentally relevant activity(ies); and
   (ii) landholder is responsible for the dam, from an agreed date.

Table H1 - Location of Regulated structures

Regulated Structure	Central Points	
	Latitude (GDA 94)	Longitude (GDA 94)
Sandstone Gully Tailings Storage Facility	-23.64196	150.36510
Upper Mundic Gully Tailings Storage Facility	-23.63466	150.36331

Table H2 - Details of Regulated Structures

Name of Regulated Structure	Consequence Category	Maximum surface area (ha)	Maximum volume (m^3)	Purpose of Regulated Structure
Sandstone Gully Tailings Storage Facility	High	49.2	11,523,416	Storage of Tailings
Upper Mundic Gully Tailings Storage Facility	TBA(1)	43.4	9,240,000	Storage of Tailings

Note (1) TBA value – refer to condition H27.

Table H3 - Hydraulic Performance of Regulated Structures

Name of Regulated Structure	Spillway	Design Storage Allowance	Mandatory Reporting Level
Sandstone Gully Tailings Storage Facility	1:100,000 AEP + Wave runup allowance for 1:10 AEP wind	1:5 AEP Wet Season Water Storage DSA	1:100 AEP 72-hour duration ESS
Upper Mundic Gully Tailings Storage Facility	TBA(1)	TBA(1)	TBA(1)

Note (1) TBA value – refer to condition H27.

H27 By 30 June 2028 and prior to the operation of the Upper Mundic Gully Tailings Storage Facility, whichever occurs first, the holder of this environmental authority must submit an amendment application to the

administering authority in accordance with section 226 and 226A of the *Environmental Protection Act 1994,* nominating:

a) the 'TBA consequence category' of *Table H2 - Details of Regulated Structures*; and
b) the 'TBA spillway, design storage allowance and mandatory reporting level values' in *Table H3 - Hydraulic Performance of Regulated Structures.*

Regulated Structures - Annual Inspection and Report

H28 Each regulated structure must be inspected annually by a suitably qualified and experienced person.

H29 At each annual inspection, required by condition **H28**, the condition and adequacy of all components of the regulated structure must be assessed and a suitably qualified and experienced person must prepare an annual inspection report containing details of the assessment and include recommended actions to ensure the integrity of the regulated structure.

H30 The suitably qualified and experienced person who prepared the annual inspection report must certify the report in accordance with the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933).*

H31 The holder of this environmental authority must:
a) Within twenty (20) business days of receipt of the annual inspection report, provide to the administering authority:
   (i) The recommendations section of the annual inspection report; and
   (ii) If applicable, any actions being taken in response to those recommendations; and
b) If, following receipt of the recommendations and (if applicable) actions, the administering authority requests a full copy of the annual inspection report from the holder of this environmental authority, provide this to the administering authority within 10 business days of receipt of the request.

H32 The holder of this environmental authority must, within one week of receipt of the annual inspection report, consider the report and its recommendations; and as soon as possible, but within one month of receipt of the annual inspection report, formulate and implement actions to implement the recommendations in the report and ensure that each regulated dam safely performs its intended functions.

Register of Regulated Structures

H33 A Register of Regulated Structures must be established and maintained by the holder of this environmental authority for each regulated structure:

H34 The holder of this environmental authority must provisionally enter the required information in the Register of Regulated Structures when a design plan for a regulated dam is submitted to the administering authority.

H35 The holder of this environmental authority must make a final entry of the required information in the Register of Regulated Structures once compliance with condition **H11** has been achieved.

H36 The holder of this environmental authority must ensure that the information contained in the Register of Regulated Structures is current and complete on any given day.

H37 All entries in the Register of Regulated Structures must be approved by the chief executive officer for the holder of this environmental authority, or their delegate, as being accurate and correct.

H38 The holder of this environmental authority must, at the same time as providing the annual return, supply to the administering authority a copy of the records contained in the Register of Regulated Structures, in the electronic format required by the administering authority.

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Schedule I – Figures

Figure 1 - Mine Area Location

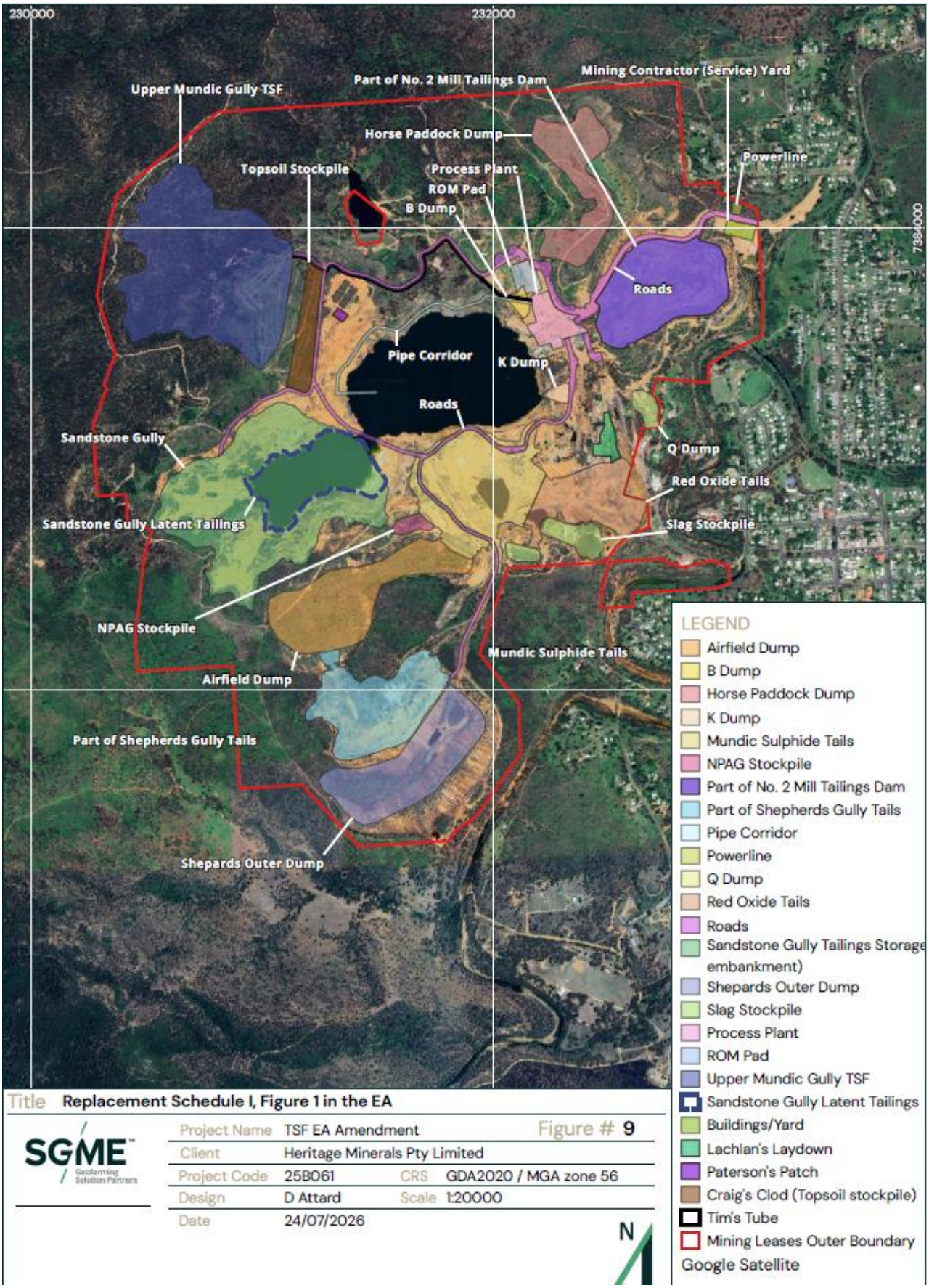

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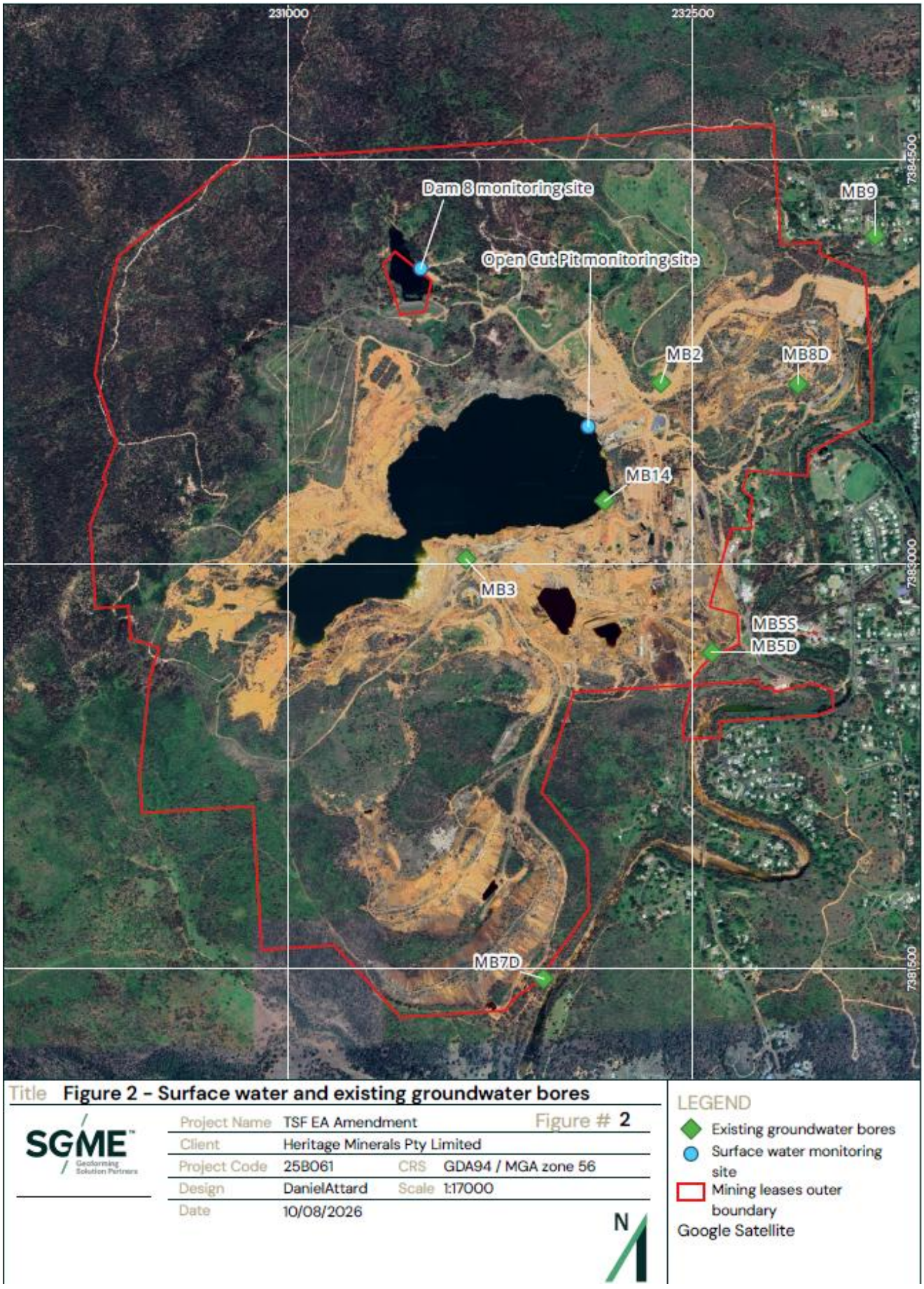
Figure 2 – Surface water and Groundwater monitoring locations



Definitions

Key terms and/or phrases used in this document are defined in this section. Where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

"acceptance criteria" means the measures by which actions implemented are deemed to be complete. The acceptance criteria indicate the success of the decommissioning and rehabilitation outcomes or remediation of areas which have been significantly disturbed by the environmentally relevant activities. Acceptance criteria may include information regarding:

- stability of final land forms in terms of settlement, erosion, weathering, pondage and drainage;
- control of geochemical and contaminant transport processes;
- quality of runoff waters and potential impact on receiving environment;
- vegetation establishment, survival and succession;
- vegetation productivity, sustained growth and structure development;
- fauna colonisation and habitat development;
- ecosystem processes such as soil development and nutrient cycling, and the recolonisation of specific fauna groups such as collembola, mites and termites which are involved in these processes;
- microbiological studies including recolonisation by mycorrhizal fungi, microbial biomass and respiration;
- effects of various establishment treatments such as deep ripping, topsoil handling, seeding and fertiliser application on vegetation growth and development;
- resilience of vegetation to disease, insect attack, drought and fire;
- vegetation water use and effects on ground water levels and catchment yields.

"AEP" means the Annual Exceedance Probability, which is the probability that at least one event in excess of a particular magnitude will occur in any given year.

"airblast overpressure" means energy transmitted from the blast site within the atmosphere in the form of pressure waves. The maximum excess pressure in this wave, above ambient pressure is the peak airblast overpressure measured in decibels linear (dB).

"ambient (or total) noise" at a place, means the level of noise at the place from all sources (near and far), measured as the Leq for an appropriate time interval.

"appropriately qualified person" means a person who has professional qualifications, training, skills and experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relative to the subject matter using the relevant protocols, standards, methods or literature.

"assess" by a suitably qualified and experienced person in relation to a hazard assessment of a dam, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit at any time:

a) exactly what has been assessed and the precise nature of that assessment;
b) the relevant legislative, regulatory and technical criteria on which the assessment has been based;
c) the relevant data and facts on which the assessment has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
d) the reasoning on which the assessment has been based using the relevant data and facts, and the relevant criteria.

"associated works" in relation to a dam, means:

a) operations of any kind and all things constructed, erected or installed for that dam; and
b) any land used for those operations.

"blasting" means the use of explosive materials to fracture-

a) rock, coal and other minerals for later recovery; or
b) structural components or other items to facilitate removal from a site or for reuse.

'certification', "certifying" or **'certified'** by a suitably qualified and experienced person in relation to a design plan or an annual report regarding dams, means that a statutory declaration has been made by that person and, when taken

together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit at any time:

a) exactly what is being certified and the precise nature of that certification.
b) the relevant legislative, regulatory and technical criteria on which the certification has been based;
c) the relevant data and facts on which the certification has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
d) the reasoning on which the certification has been based using the relevant data and facts, and the relevant criteria.

“commercial place” means a place used as an office or for business or commercial purposes, other than a place within the boundaries of the operational land.

“construction” or **"constructed"** in relation to a dam includes building a new dam and modifying or lifting an existing dam, but does not include investigations and testing necessary for purposes of preparing a design plan.

“dam” means a land-based structure or a void that is designed to contain, divert or control flowable substances, and includes any substances that are thereby contained, diverted or controlled by that land-based structure or void and associated works. A dam does *not* mean a fabricated or manufactured tank or container, designed and constructed to an Australian Standard that deals with strength and structural integrity of that tank or container.

“design plan” is the documentation required to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, and the criteria to be used for operating the dam. The documents must include all investigation and design reports, plans and specifications sufficient to hand to a contractor for construction, and planned decommissioning and rehabilitation outcomes; so as to address all hazard scenarios that would be identified by a properly conducted hazard assessment for the structure. Documentation must be such that a ‘suitable qualified and experience person’ could conduct an independent review without seeking further information from the designer.

"design storage allowance" or **"DSA"** means an available volume, estimated in accordance with the Manual for Assessing Hazard Categories and Hydraulic Performance of Dams published by the Department of Environment and Resource Management, that must be provided in a dam as at the first of November each year in order to prevent a discharge from that dam to a probability (AEP) specified in table 5 of that manual. The DSA is estimated based on 100% runoff of wet season rainfall at the relevant AEP, taking account of process inputs during that wet season, with no allowance for evaporation.

“disturbed land” means land within an operational area which has been disturbed by the mining activities authorised by this environmental authority.

“environmental authority” means an environmental authority granted in relation to an environmentally relevant activity under the *Environmental Protection Act 1994*.

“environmental authority holder” means the holder of this environmental authority.

“flowable substance” means matter or a mixture of materials which can flow under any conditions potentially affecting that substance. Constituents of a flowable substance can include water, other liquids fluids or solids, or a mixture that includes water and any other liquids fluids or solids either in solution or suspension.

“foreseeable future” is the period used for assessing the total probability of an event occurring. Permanent structures and ecological sustainability should be expected to still exist at the end of a 150 year foreseeable future with an acceptable probability of failure before that time.

“hazard” in relation to a dam as defined, means the potential for environmental harm resulting from the collapse or failure of the dam to perform its primary purpose of containing, diverting or controlling flowable substances.

“hazard category” means a category, either low significant or high, into which a dam is assessed as a result of the application of tables and other criteria in the Manual for Assessing Hazard Categories and Hydraulic Performance of Dams published by the Department of Environment and Resource Management.

“hydraulic performance” means the capacity of a regulated dam to contain or safely pass flowable substances based on a probability (AEP) of performance failure specified for the relevant hazard category in the Manual for

Assessing Hazard Categories and Hydraulic Performance of Dams published by the Department of Environment and Resource Management.

"infrastructure" means water storage dams, roads and tracks, buildings and other structures built for the purpose and duration of the conduct of the environmentally relevant activities, but does not include other facilities required for the long term management of the impact of those activities or the protection of potential resources. Such other facilities include dams other than water storage dams, waste dumps, voids, or stockpiles and assets, that have been decommissioned, rehabilitated, and lawfully recognised as being subject to subsequent transfer with ownership of the land.

"$L_{A\ 10,\ adj,\ 10\ mins}$" means the A-weighted sound pressure level, *(adjusted for tonal character and impulsiveness of the sound)* exceeded for 10% of any 10-minute measurement period, using Fast response.

"$L_{A\ 1,\ adj,\ 10\ mins}$" means the A-weighted sound pressure level, *(adjusted for tonal character and impulsiveness of the sound)* exceeded for 1% of any 10-minute measurement period, using Fast response

"$L_{A,\ max\ adj,\ T}$" means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using Fast response.

"land" in the "land schedule" of this document means land excluding waters and the atmosphere.

"land capability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land suitability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land use" term to describe the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

"levee" or **"bund"** means a long embankment that is designed only to provide for the containment and diversion of stormwater or flood flows from a contributing catchment, or containment and diversion of flowable materials resulting from releases from other works, during the progress of those stormwater or flood flows or those releases; and does not store any significant volume of water or flowable substances at any other times.

"Licensed place" means the mine features specified in **Table A1 - Authorised mining activities at the locations** identified in **Schedule I - Figure 1 – Mine Area Location.**

"mandatory reporting level" or "MRL" means a warning and reporting level determined in accordance with the Manual for Assessing Hazard Categories and Hydraulic Performance of Dams published by the Department of Environment and Resource Management. An MRL is the lowest level required in a regulated dam to allow either of the following to be retained:

a) the runoff from a 72 hour duration storm at the AEP specified in the Schedule H – Table 3; or
b) a wave allowance at that AEP as estimated using a recognised engineering method.

"operation of the Upper Mundic Gully Tailings Storage Facility" means the commencement of any ground disturbing activities associated with the construction of the Upper Mundic Gully Tailings Storage Facility, excluding activities associated with technical investigations.

"operational area" means an area within the mining leases the subjects of this environmental authority on which mining activities, as described in the operational plan, are authorised.

"operational plan" means a document that amongst other things sets out procedures and criteria to be used for operating a dam during a particular time period. The operational plan as defined herein may form part of a plan of operations or plan otherwise required in legislation.

"peak particle velocity (ppv)" means a measure of ground vibration magnitude which is the maximum rate of change of ground displacement with time, usually measured in millimetres/second (mms^{-1}).

"reference site" (or analogue site) may reflect the original location, adjacent area or another area where rehabilitation success has been completed for a similar biodiversity. Details of the reference site may be as photographs, computer generated images and vegetation models etc.

"regulated dam" means any dam in the significant or high hazard category as assessed using the Manual for Assessing Hazard Categories and Hydraulic Performance of Dams published by the Department of Environment and Resource Management.

"regulated structure" includes land-based containment structures, levees, bunds and voids, but not a tank or container designed and constructed to an Australian Standard that deals with strength and structural integrity.

"rehabilitation" the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.

"self-sustaining" means an area of land which has been rehabilitated and has maintained the required acceptance criteria without human intervention for a period nominated by the administering authority.

"sensitive place" means;

a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
b) a motel, hotel or hostel; or
c) an educational institution; or
d) a medical centre or hospital; or
e) a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
f) a public park or gardens; or
g) a place used as a workplace, an office or for business or commercial purposes which is not part of the mining activity and does not include employees accommodation or public roads.

"spillway" means a weir, channel, conduit, tunnel, gate or other structure designed to permit discharges form the dam, normally under flood conditions or in anticipation of flood conditions.

"stable" in relation to land, means land form dimensions are and will remain within tolerable limits now and in the foreseeable future. Issues to be properly considered in regard to whether or not the landform is stable include geotechnical stability, settlement and consolidation allowances, bearing capacity (trafficability), erosion resistance and geochemical stability with respect to seepage, leachate and related contaminant generation.

"suitably qualified and experienced person" in relation to dams means a person who is a Registered Professional Engineer of Queensland (RPEQ) under the provisions of the Professional Engineers Act 1988, OR registered as a National Professional Engineer (NPER) with the Institution of Engineers Australia, OR holds equivalent professional qualifications to the satisfaction of the administering authority for the Act; AND the administering authority for the Act is satisfied that person has knowledge, suitable experience and demonstrated expertise in relevant fields, as set out below:

a) knowledge of engineering principles related to the structures, geomechanics, hydrology, hydraulics, chemistry and environmental impact of dams; and
b) a total of five years of suitable experience and demonstrated expertise in the geomechanics of dams with particular emphasis on stability, geology and geochemistry, and
c) a total of five years of suitable experience and demonstrated expertise each, in three of the following categories:
    - investigation and design of dams.
    - Construction, operation and maintenance of dams.
    - hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorology.
    - hydraulics with particular reference to sediment transport and deposition, erosion control, beach processes.
    - hydrogeology with particular reference to seepage, groundwater.
    - solute transport processes and monitoring thereof.
    - dam safety.

"TBA" means To Be Advised.

"tolerable limits" means a range of parameters regarded as being sufficient to meet the objective of protecting relevant environmental values. For example, a range of settlement for a tailings capping, rather than a single value, could still meet the objective of draining the cap quickly, preventing pondage and limiting infiltration and percolation.

"void" means any constructed, open excavation in the ground.

"waters" - includes all or any part of a river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water in natural or artificial watercourses, bed and banks of a watercourse, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater.

"water quality" means the chemical, physical and biological condition of water.

END OF ENVIRONMENTAL AUTHORITY