Application form

Environmental Protection Act 1994

Submission of a progressive rehabilitation and closure plan

This is the approved form for a progressive rehabilitation and closure plan (PRC plan) under section 126C of the Environmental Protection Act 1994 for a site-specific application for a mining activity relating to a mining lease.

Only use this application form if you are required to submit a PRC plan, where:

- You are applying for a new site-specific environmental authority for a mining activity relating to a mining lease.

  OR

- The administering authority has included the requirement to submit a proposed PRC plan in an information request for a new site-specific environmental authority for a mining activity relating to a mining lease.

  OR

- You completed a PRC plan as part of an EIS process and are submitting the PRC plan in the approved form as required under section 126C.

  OR

- You have an existing site-specific environmental authority for a mining activity relating to a mining lease and have received a transition notice from the administering authority[1] in accordance with section 754 of the *Environmental Protection Act 1994* (EP Act).

  OR

- Where none of the above apply: you have an existing site-specific environmental authority for a mining activity, you do not otherwise have a PRCP schedule approved yet one is required, and any of the following applies:
  - You have failed to comply with a transition notice;
  - You did not receive a transition notice as required under the legislation;
  - The administering authority has refused your proposed PRCP schedule.

Before completing this application form it is recommended that you:

- Read the Guideline – Progressive Rehabilitation and Closure Plans (ESR/2019/4964[2]), which explains the information you are required to provide with this application.
- Have a pre-lodgement meeting. To request a pre-lodgement meeting, please fill out and lodge the form Application for pre-lodgement services (ESR/2015/1664).

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[1] The Department of Environment and Science is the administering authority under the *Environmental Protection Act 1994*.

[2] This is the publication number. The publication number can be used as a search term to find the latest version of a publication at **www.qld.gov.au**.

ABN 46 640 294 485

If you require assistance in answering any part of this form, or have any questions about your application, please contact the relevant business centre. Contact details are at the end of this form (Section 10).

Privacy statement

The administering authority is collecting the information on this approved form to process your application for a PRC plan. The collection of information is authorised under Chapter 3 and Chapter 5 of the EP Act. Some of the information may be disclosed to the Department of Resources and Queensland Treasury for the purpose of processing this application or the Rehabilitation Commissioner in accordance with s444J of the EP Act the if accessing the information is necessary or convenient to be done in the performance of the Commissioner's functions.

Please note that the administering authority is required to keep this application on a register of documents open for inspection by members of the public under section 541 of the EP Act, and must permit a person to take extracts from the register pursuant to section 542 of the EP Act.

Your personal information will not be otherwise disclosed to any other parties unless authorised or required by law. For queries about privacy matters please email privacy@des.qld.gov.au or telephone 13 74 68.

Definitions of terms used in this form	
(Where there is inconsistency between the definition of terms used here and the terms used in the EP Act, the terms in the EP Act apply)	
Available for improvement	In relation to land in an improvement area for a non-use management area, means land in the improvement area that is not being mined, other than land to which any of the following applies– a) the land is being used for operating infrastructure or machinery for mining, including, for example, a dam or water storage facility; b) the land is identified in the PRCP schedule or the application for an environmental authority relating to the schedule as containing a probable or proved ore reserve that is to be mined within 10 years after the land would otherwise have become available for improvement; c) the land is required for the mining of a probable or proved reserve mentioned in paragraph (b).
Available for rehabilitation	For a rehabilitation area, means land in the area is not being mined, unless– a) the land is being used for operating infrastructure or machinery for mining, including, for example, a dam or water storage facility; or b) the land is identified in the PRCP schedule or the application for an environmental authority relating to the schedule as containing a probable or proved ore reserve, under section 126D(6) of the EP Act, that is to be mined within 10 years after the land would otherwise have become available for rehabilitation; or ba) the land is required for the mining of a probable or proved reserve mentioned in paragraph (b); or c) the land contains permanent infrastructure identified in the proposed PRCP schedule as remaining on the land for a post-mining land use.
Land outcome document	For land, means the following documents relating to the land– a) an environmental authority for a resource activity on the land; b) a document made under a condition of an environmental authority

	mentioned in paragraph (a), if– i. the document relates to the management of a void within the meaning of section 126D of the EP Act on the land, or the rehabilitation of the land; and ii. the document was received by the administering authority before the assent date; and iii. the administering authority has not, within 20 business days after the assent date, given notice to the environmental authority holder that the document is insufficient in a material particular relevant to a matter mentioned in subparagraph (i); and iv. before the assent date, the document has not been superseded; c) a document made under a condition of an environmental authority mentioned in paragraph (a), if– i. the document relates to the management of a void within the meaning of section 126D of the EP Act on the land, or the rehabilitation of the land; and ii. the environmental authority requires the document to be given to the administering authority on a stated day that is on or after the assent date, or does not state a day when the document must be given; and iii. the document is received by the administering authority within three years after the assent date; and iv. the administering authority does not, within 20 business days after receiving the document, give the environmental authority holder a notice that the document is insufficient in a material particular relevant to a matter in subparagraph (i); d) a report evaluating an EIS under the *State Development and Public Works Organisation Act 1971*, section 34D; e) an EIS assessment report; f) a written agreement between the holder of an environmental authority mentioned in paragraph (a) and the State that is in force on the assent date.
Improvement area	For a non-use management area, means an area of land in the non-use management area to which a management milestone relates.
Management milestone	For a non-use management area, means each significant event or step necessary to– a) achieve best practice management of the area; and b) minimise risks to the environment.
Non-use management area	Means an area of land the subject of a PRC plan that cannot be rehabilitated to a stable condition after all relevant activities for the PRC plan carried out on the land have ended.
Post-mining land use	For land the subject of a PRC plan, means the purpose for which the land will be used after all relevant activities for the PRC plan carried out on the land have ended.
PRC plan	For land the subject of a mining lease, means a progressive rehabilitation and closure plan for the land that consists of – a) the rehabilitation planning part of the PRC plan; and

	b) the PRCP schedule for the PRC plan, including any conditions imposed on the schedule.
PRCP schedule	For a PRC plan, means a schedule of the plan that – a) complies with section 126D of the EP Act; and b) is approved under chapter 5, part 5, division 2 of the EP Act, with or without conditions.
Proposed PRC plan	For an application, a proposed PRC plan means a PRC plan proposed for land the subject of a mining lease that: (a) complies with Chapter 5, part 2, division 3; and (b) either – accompanies the application; or is submitted for the application after the application is made
Rehabilitation area	For land the subject of a post-mining land use, means an area of the land to which a rehabilitation milestone for the post-mining land use relates.
Rehabilitation milestone	For the rehabilitation of land, means each significant event or step necessary to rehabilitate the land to a stable condition.

The fields marked with an asterisk * are mandatory. If they are not completed then your application may be considered not properly made under section 128 of the EP Act.

Section 1 – Environmental authority details		
Does this application relate to an existing environmental authority for a mining activity relating to a mining lease approved through a site-specific application?*	☐ No – Provide the reference number for your environmental authority application:	AR Insert.
	☒ Yes – Provide your environmental authority number:	EPML00956913

Section 2 – Applicant details	
Details of the applicant are to be provided in this section. If there is an agent acting on behalf of the applicant, details of the agent are to be provided. An agent could be a consultant or contractor for the environmental authority holder. The person nominated as the application contact will receive correspondence relating to this application.	
NAME / COMPANY NAME* MT CARBINE QUARRIES PTY LTD	TRADING NAME (*IF AN ORGANISATION) Insert.
REGISTERED BUSINESS ADDRESS / RESIDENTIAL ADDRESS (NOT A POST OFFICE BOX) * LEVEL 4, ALBERT ROAD SOUTH MELBOURNE VIC 3205	POSTAL ADDRESS (*WHERE DIFFERENT) PO BOX 1496, MAREEBA QLD 4880
ABN / ACN (*IF AN ORGANISATION) 065 645 650	NAME OF APPLICATION CONTACT* NATASHA TROUGHTON, FINANCE & COMMERCIAL MANAGER
EMAIL*	TELEPHONE*

NTROUGHTON@EQRESOURCES.COM.AU	07 4094 3072

☒ INDICATE IF YOU WANT TO RECEIVE CORRESPONDENCE VIA EMAIL
☐ INDICATE IF THIS FORM IS BEING COMPLETED BY AN AGENT FOR THE ENVIRONMENTAL AUTHORITY HOLDER*
NOTE: If an agent is nominated, please provide evidence of appointment by the authority holder/s.

Section 3 – Website address

If this application relates to an application for a new site-specific environmental authority for a mining activity, would you like to use the details on the environmental application form?	☐ No – Provide details below.	
	☐ Yes – Go to next section.	
Provide the website address for the application notice and application documents.	Insert.	
Provide details of the contact person if technical assistance is required.	NAME Insert.	TELEPHONE Insert.
	EMAIL Insert.	

Section 4 – Non-use management areas (new environmental authority applications only)

Does this application for a proposed PRC plan include a NUMA justified under section 126D(2)(b) of the EP Act? *	☒ No – Go to next section.
	☐ Yes
Has a public interest evaluation been carried out by a qualified entity for the NUMA(s)? *	☒ No – Go to next section.
	☐ Yes
Has the proposed NUMA(s) changed since the public interest evaluation was carried out in the EIS? *	☒ No – Go to next section.
	☐ Yes – Provide details below.
How has the proposed NUMA(s) changed since the public interest evaluation was carried out?	Please provide details below. Insert.

Section 5 – PRC plan structure

The PRC plan must be prepared in accordance with the structure/format shown in Appendix 1 of this application form.

Requirement	Requirement met?
Include a cover page that complies with Appendix 1 of this application form.	☒ Yes
Include a table of contents that complies with Appendix 1 of this application form.	☒ Yes

Section 6 – PRC plan Checklist *			
The PRC plan must meet the information requirements stated in section 3 of the Guideline – Progressive Rehabilitation and Closure Plans (ESR/2019/4964), and sections 126C and 126D of the EP Act (note there is a limited exception for transitional PRC plans). All PRC plan requirements are mandatory. For each requirement, insert a reference to the section of the PRC plan which satisfies the requirement. Justification must be provided for any requirement for which the response is Not Applicable (NA). If more space is required, please attach a separate sheet.			
PRC plan Requirement	**Requirement met? (Yes / NA)**	**PRC Plan Section No.**	**Justification**
Rehabilitation planning part of the PRC plan The rehabilitation planning part of the PRC plan must include the information required under section 126C the EP Act, including information requirements described in the Guideline – Progressive Rehabilitation and Closure Plans (ESR/2019/4964) in accordance with section 126C(1)(j) of the EP Act.			
Project description *Note: For existing mines transitioning to the PRC plan framework, pre-disturbance information collected as part of an EIS process or original environmental authority application should be included. If this information is unable to be provided, or cannot be developed because of the mine's life stage, this should be clearly explained in this section of the rehabilitation planning part of the PRC plan.*			
Describe the following:			
• each resource tenure, including the area of each tenure, to which the application relates;	Yes	1.1.1	Insert.
• the relevant activities to which the application relates;	Yes	1.1.3	Insert.
• the likely duration of the relevant activities	Yes	1.1.3 2	Insert.

Include a detailed description, including maps, of how and where the relevant activities are to be carried out.	Yes	1.1.1 1.1.3	Insert.
Consultation			
Include details of the consultation undertaken by the applicant in developing the proposed PRC plan.	Yes	1.2	Insert.
Include details of how the applicant will undertake ongoing consultation in relation to the rehabilitation to be carried out under the plan.	Yes	1.2	Insert.
Post-mining land use			
State the extent to which each proposed post-mining land use identified in the proposed PRCP schedule for the plan is consistent with the outcome of consultation with the community in developing the PRC plan.	Yes	1.2 1.3	Insert.
State the extent to which each proposed post-mining land use identified in the proposed PRCP schedule for the plan is consistent with any strategies or plans for the land of a local government, the State or the Commonwealth.	Yes	1.2 1.3	Insert.
Non-use management area *Note for Transitional PRC plans: The holder is not required to comply with a requirements under section 126C(1)(g) or (h) or 126D(2) or (3) for the proposed PRCP schedule for the plan in relation to land if a land outcome document identifies the outcome for the land as the same, or substantially similar to, the outcome for the land if it were a non-use management area.*			
State the extent to which each proposed non-use management area identified in the PRCP schedule for the plan is consistent with the outcome of consultation with the community in developing the PRC plan.	NA	1.4	No non-use management areas (NUMAs) will be present at closure.

State the extent to which each non-use management area identified in the PRCP schedule for the plan is consistent with any strategies or plans for the land of a local government, the State or the Commonwealth.	NA	1.4	No non-use management areas (NUMAs) will be present at closure.
For each proposed non-use management area, state the reasons the applicant considers the area cannot be rehabilitated to a stable condition because of a matter mentioned in section 126D(2).	NA	1.4	No non-use management areas (NUMAs) will be present at closure.
For each matter mentioned in the requirement above, include copies of reports or other evidence relied on by the proponent for each proposed non-use management area.	NA	1.4	No non-use management areas (NUMAs) will be present at closure.
Rehabilitation and management methodology *Note: Section 3.5 of the Guideline – Progressive Rehabilitation and Closure Plans (ESR/2019/4964) outlines the range of information that must be included as appendices to the rehabilitation planning part of the PRC plan.*			
For each post-mining land use, state the applicant's proposed methods or techniques for rehabilitating the land to a stable condition in a way that supports the rehabilitation milestones under the proposed PRCP schedule.	Yes	1.5	Insert.
For each non-use management area, state the applicant's proposed methodology for achieving best practice management of the area to support the management milestones under the proposed PRCP schedule for the area.	NA	1.4	No non-use management areas (NUMAs) will be present at closure.
Risk assessment			
Identify the risks of a stable condition for land described as a post-mining land use not being achieved, and how the applicant intends to manage or minimise the risks.	Yes	1.6	Insert.

PRCP Guideline			
Include any other information prescribed by the administering authority in the Guideline – Progressive Rehabilitation and Closure Plans (ESR/2019/4964).	Yes	1.1.2 1.4.1 1.7	Insert.
Include the spatial information required in the Guideline – Progressive Rehabilitation and Closure Plans (ESR/2019/4964). See Attachment 1 of this form for details on how spatial information must be submitted.	Yes	2	Insert.
Other information			
Include the other information the administering authority reasonably considers necessary to decide whether to approve the PRCP schedule.	Yes	1 2	Insert.
PRCP Schedule The proposed PRCP schedule must comply with section 126D of the EP Act, and be written in accordance with the Guideline – Progressive Rehabilitation and Closure Plans (ESR/2019/4964). The administering authority will assess the proposed PRCP schedule in conjunction with the rehabilitation planning part of the PRC plan and other application documents, and decide whether to approve the proposed PRCP schedule, with or without conditions, or refuse the proposed PRCP schedule.			
Include a PRCP schedule prepared using the PRCP schedule template (ESR/2019/5103[3]).	Yes	2	Insert.
Include maps showing all of the land mentioned in the PRCP schedule, as it relates to being progressively rehabilitated.	Yes	2	Insert.

[3] This is the publication number. The publication number can be used as a search term to find the latest version of a publication at **www.qld.gov.au**.

Section 7 – Non-use management areas (transitional applications only)	
Does this application for a proposed PRC plan include a NUMA? *	☒ No – Go to next section. ☐ Yes
Does the relevant environmental authority or any other land outcome document identify an outcome for the land that is the same, or substantially similar, to the outcome for the land if it were a NUMA under a PRCP schedule?	☐ No – Go to next section. ☐ Yes
Does the environmental authority or any other land outcome document state sufficient detail to identify either the location or the area of the land to which the outcome relates?	☐ No – Provide details below. ☐ Yes – Provide the document name(s) in Section 8.
If the area is not identified – how will the total area of the land to which the outcome relates be minimised? *	Insert.
If the location is not identified – how will the environmental authority holder ensure the location of the land to which the outcome relates minimises risks to the environment? *	Insert.

Section 8 – Transitional PRC plan requirements (transitional applications only)

In accordance with transitional provisions in the EP Act, an applicant with an existing environmental authority is able to transition aspects of the PRCP schedule from existing land outcome documents. Indicate below any information that is being transitioned from a land outcome document.

PMLU/NUMA	Rehabilitation /Improvement area	Milestone Reference	Identify which of the below is being transitioned from a land outcome document		Land outcome document	Page No.
			Land outcome	Milestone criteria		
Residual void	RA1	RM1,2,9	☒	☒	EPML00956913	8,9,10,11

Safety bund surrounding residual void	RA2	RM2,9	☒	☒	EPML00956913	8,9,10,11
Low Intensity grazing	RA3,4,5,6,7	RM4,5,6,7,8,9,10	☒	☒	EPML00956913	8,9,10,11
Industrial	RA8	RM9,12	☒	☒	EPML00956913	8,9,10,11
Insert.	Insert.	Insert.	☐	☐	EPML00956913	8,9,10,11
Each land outcome document must be submitted with this approved form						
☒ All land outcome documents identified above have been attached to this approved form.						

Section 9 – Declaration*
Note: If you have not told the truth in this application you may be prosecuted.

I declare that:

- I am the holder of the environmental authority, or authorised signatory for the holder of the environmental authority.
- The information I have provided is true and correct to the best of my knowledge.
- I understand that it is an offence under section 480 of the *Environmental Protection Act 1994* to give to the administering authority or an authorised person a document containing information that I know, or ought reasonably to know, is false or misleading in a material particular.
- I understand that under section 480A of the *Environmental Protection Act 1994* that, if I am required to give a document to the administrating authority or an authorised person, it is an offence to give a document that I know or ought reasonably to know, contains incomplete information in a material particular.
- I understand that failure to provide sufficient information may result in the application being refused. I understand that an incomplete application may be invalid. Invalid applications will be returned without processing and will only be processed if resubmitted with all invalidating issues addressed.
- I understand that all information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977.*
- I will comply with all conditions and milestones of my approved PRCP schedule as well as any relevant provisions in the *Environmental Protection Act 1994*.
- I understand that I am responsible for managing the environmental impacts of these activities, and that approval of this application is not an endorsement by the administering authority of the effectiveness of management practices proposed or implemented.

Where an agreement is in place between all holders of the environmental authority, one holder can sign on behalf of the other joint holders. Please tick the checkbox below.

☐ I HAVE AUTHORITY TO SIGN THIS FORM ON BEHALF OF ALL THE JOINT HOLDERS OF THE ENVIRONMENTAL AUTHORITY.

Applicant's signature

APPLICANT'S NAME	POSITION	COMPANY / ORGANISATION
Kevin MacNeill	CEO	EQ Resources Ltd

APPLICANT'S SIGNATURE	DATE
	26/10/2023

Joint holder(s) signature if applicable

NAME, POSITION AND COMPANY NAME	SIGNATURE	DATE
Insert.		Select.
Insert.		Select.

OR ☐ I HAVE ATTACHED A DOCUMENT THAT PROVIDES THE REQUIRED INFORMATION FOR ALL JOINT HOLDERS.	
Where the environmental authority holder is a company, this form must be signed by an authorised person for that company. Where there is more than one holder of the environmental authority, this declaration is to be signed by all holders, unless there is an agreement between all holders that one can sign on behalf of the other(s). If you are signing on behalf of the environmental authority holder(s) you must provide a letter of authorisation.	

Section 10 - Submission

Please submit your completed application form and supporting material to the Department of Environment and Science office that services the industry applicable to your environmental authority.

A list of business centres can be found at www.des.qld.gov.au using the words 'business centres' as a search term.

Enquiries:

Minerals Business Centre
PO Box 7230
Cairns QLD 4870
Phone: 07 4222 5352
Fax: 07 4222 5070
Email: ESCairns@des.qld.gov.au

Coal Business Centre
PO Box 3028
Emerald QLD 4720
Phone: 07 4987 9320
Email: CRMining@des.qld.gov.au

The latest version of this publication and other publications referenced in this document can be found at **www.qld.gov.au** using the relevant publication number (ESR/2019/4957 for this form) or title as a search term.

Appendix 1–PRC plan structure

Appendix 1 describes the formatting/structural requirements for a completed PRC plan. This includes the information required in a PRC plan cover page and table of contents, and the structure of a PRC plan.

A PRC plan must include the following sections in the order listed:

1. **Cover page:** This section must include the following information:
   - Title of the project
   - Document title
   - Version number
   - Document ID number
   - Date of submission
   - Tenure number(s)
   - Environmental authority holder name
   - Environmental authority holder contact details.
2. **Table of contents:** This section must include the following information:
   - Sections of PRC plan
   - Sub-sections of PRC plan
   - Figures, tables and maps (as applicable).
3. **Rehabilitation planning part**
   - **3.1. Project planning**: This section will include baseline information, site location details, a description of the project and information on rehabilitation/improvement planning.
   - **3.2. Community consultation**: This section will include information on stakeholder consultation including a community consultation register and community consultation plan. The community consultation register must include consultation dates, identification of each community member, description of consultation type (workshop, quarterly meetings, etc.), information provided to the community, issues raised/discussed by the community, how issues have been considered, decisions/outcomes of engagement, and commitments made by the applicant. The community consultation plan must include the objectives for community consultation, how the community will be engaged, proposed consultation frequency, what information will be released for community consultation, and how feedback/comments will be considered.
   - **3.3. Post-mining land use**: This section will include the assessment of PMLU options, methodology for determining PMLU options, and details of each nominated PMLU. It must be consistent with the outcome of consultation with the community in developing the plan, and any strategies or plans for the land of a local government, the State or the Commonwealth.
   - **3.4. Non-use management areas (if applicable)**: This section will include the justification for the NUMA and details of each nominated NUMA. In providing justification for the NUMA, it must:
     - state the reasons the applicant considers the area cannot be rehabilitated to a stable condition
     - include copies of reports or other evidence relied on by the applicant for each proposed non-use management area
     - state the extent to which the proposed non-use management area is consistent with the outcome of consultation with the community in developing the plan, and
     - state the extent to which the non-use management area is consistent with any strategies or plans for the land of a local government, the State or the Commonwealth.
     - The detail of each nominated NUMA must include information demonstrating that the proposed footprint of each NUMA is as small as practicable, an assessment of the NUMA location options, a description of the proposed location of each NUMA and the environmental values of the

surrounding environment, and evidence showing how the proposed location will prevent or minimise environmental harm.

3.5. Rehabilitation management methodology: This section will include information describing how the proposed rehabilitation and management methodology have been developed and will be implemented. For each proposed post-mining land use for land, state the proposed methods or techniques for rehabilitating the land to a stable condition in a way that supports the rehabilitation milestones under the proposed PRCP schedule. This should include details of the general rehabilitation practices, tailings storage facilities, voids, underground mining and built infrastructure. For each proposed NUMA, state the proposed methodology for achieving best practice management of the area to support the management milestones under the proposed PRCP schedule for the area.

3.6. Risk assessment: This section will include a risk assessment that identifies the risk of a stable condition for land not being achieved and a risk treatment plan outlining how the applicant will manage or minimise the risk. All proposed NUMAs should also have a completed risk assessment. If rehabilitation trials are planned, this is also where relevant details must be given.

3.7. Monitoring and maintenance: This section will include a monitoring and maintenance program that identifies and describes the monitoring systems that will be undertaken to demonstrate a milestone and milestone criteria have been achieved. It must include timing of when each rehabilitation or management milestone is to be achieved and be accompanied by maps outlining the relevant land.

4. **Appendices and attachments**: The completed PRCP schedule and any relevant required reports/plans are to be included in this section. The Progressive Rehabilitation and Closure Plan Schedule template (ESR/2019/5103) should be included.

Attachment 1—Spatial data requirements for PRC plan

Attachment 1 provides guidance on the required content of spatial information (shapefiles) for the submission of a PRC plan. This attachment should be read in conjunction with the department's guideline: Spatial Information Submission (ESR/2018/4337). To obtain a copy of the guideline, the spreadsheet containing the schema (in Table 2) and a shapefile template for PCR plans are available on the Queensland Government's website at www.qld.gov.au, using the search term "submission of spatial information'. The following sections provide information about the required fields and attributes for datasets.

Required files—Table 1

The applicant must submit shapefiles detailing the following:

- the location and maximum extent of disturbance footprint for the mine life
- the PMLU and NUMAs for the area within the resource tenure(s)
- the rehabilitation and improvement areas within the resource tenure(s)
- any sensitive receptors
- extent of a floodplain
- existing rehabilitation (if the PRC plan is for an existing environmental authority).

A minimum of one (1) shapefile must be submitted for a PRC plan, detailing the above-listed information, as outlined within Table 1. Each file must be named in accordance with the requirements outlined within the department's guideline: Spatial Information Submission (ESR/2018/4337).

Where the PRC plan relates to a site where a NUMA or floodplain are not present, this should be stated in the spatial information submission email to which the relevant spatial files are attached.

Table 1: Shapefile checklist

File	Spatial information requirement	Schema	Example file name (e.g. using submission date of 30 June 2020)
1	PRC plan – polygon	Table 2	EPPR00372556_PRCP_PY_30062020

Where:
- PRCP = PRC plan
- PY = polygon (geometry)

Table 2: Schema for PRC plan

Field Name	Type	Length	Definition	Domain Values[4]	Domain Value Description	Mandatory/ Optional
FID	Object ID	N/A	The unique identifier for the spatial feature.			Mandatory
SHAPE	Geometry	N/A	Allowed Geometry: Polygon			Mandatory
PERMIT_REF	TEXT	50	The alpha-numeric environmental authority number relevant to the spatial information (if this PRC plan does not relate to an existing environmental authority, please provide the relevant application number instead).			Mandatory
PROCESS	TEXT	4	The relevant process spatial data is being submitted for	PRCP	Progressive rehabilitation and closure plan	Mandatory
SITE_NAME	TEXT	254	Site name relating to the environmental authority.			Mandatory
SITE_ID	TEXT	20	This field contains a unique identifier for the spatial feature, which has been generated by the applicant.			Mandatory
FEATURE	TEXT	10	This field contains the land use feature on site which this polygon or point is describing. Select the relevant option of either post-mining land use, rehabilitation area, non-use management area, improvement area, maximum disturbance footprint, sensitive receptor, existing rehabilitation or floodplain using the codes specified.	PMLU	Post-mining land use	Mandatory
				REHAB_AREA	Rehabilitation area	Mandatory
				NUMA	Non-use management area	Mandatory if the PRCP schedule proposes or changes a non-use management area
				IMPRV_AREA	Improvement area	Mandatory if the PRCP schedule proposes or changes a non-use management area
				FOOTPRINT	Maximum disturbance footprint over mine life	Mandatory
				SR	Sensitive receptor	Mandatory

[4] If blank, populate based on Attribute type and definition.

Field Name	Type	Length	Definition	Domain Values[4]	Domain Value Description	Mandatory/ Optional
				EX_REH	Existing rehabilitation	Mandatory if the application is for an existing environmental authority and there is existing rehabilitation undertaken
				FLDP	Floodplain	Mandatory if there is a floodplain located within the environmental authority boundary
FEAT_DESC	TEXT	254	Feature description		This field provides a description of the feature identified in 'FEATURE'.	Mandatory
PMLU_TYPE	TEXT	10	This field provides a description of the post mining land use type.	GRAZ	Grazing	Mandatory for each PMLU.
				NAT_ECO	Native ecosystem	
				WTR_ST	Water storage	
				REC	Recreation	
				HB_ECS	Habitat and ecosystem services	
				AGRI	Agriculture	
				FOR	Forestry	
				CROP	Cropping	
				PERM_INFRA	Permanent infrastructure	
				IND	Industrial	
				LNDFL	Landfill	
				Oth	Other	
DATE_	DATE	dd/mm/ yyyyy	Date of submission. This field identifies the date the spatial information was submitted.			Mandatory
SOURCE	TEXT	5	This field identifies the source of the spatial information and the capture	DIG	Digitising (Tracing over Ortho Imagery)	Mandatory

Field Name	Type	Length	Definition	Domain Values[4]	Domain Value Description	Mandatory/ Optional
			methodology for the spatial information provided.	GPSD	GPS Differential Survey	
				GPSND	GPS Non Differential Survey	
				RTK	Real-Time Kinematic (RTK) Survey	
				UK	Un Known	
AREA_HA	DOUBLE	N/A	This field indicates the area in Hectares. (Polygon only)			Mandatory if GEOMETRY = polygon.
COMMENTS	TEXT	254	A free text field has been provided to include any additional information the proponent wishes to provide in relation to the data.			Mandatory if PMLU_TYPE = Oth

Permit

Environmental Protection Act 1994

Environmental authority EPML00956913

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

Environmental authority number: EPML00956913

Environmental authority takes effect on 19 September 2023

Environmental authority holder(s)

Name(s)	Registered address
MT. CARBINE QUARRIES PTY. LTD.	Level 4, 100 Albert Rd South Melbourne VIC 3205

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Schedule 3 19: Mining metal ore, other than a metal ore mentioned in items 11, 12, 14, 15, 16,17 or 18 Ancillary 14 - Electricity Generation 2: Generating electricity by using a fuel, other than gas, at a rated capacity of (a) 10MW electrical to 150MW electrical Ancillary 08 - Chemical Storage 4: storing 200t or more of chemicals that are solids or gases, other than chemicals mentioned in items 1 to 3, under subsection (1)(d) Ancillary 15 - Fuel burning Using fuel burning equipment that is capable of burning at least 500kg of fuel in an hour Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t Ancillary 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)	ML4867 ML4919

Environmentally relevant activity/activities	**Location(s)**
Ancillary 08 - Chemical Storage 5: storing 200 cubic metres or more of chemicals that are liquids, other than chemicals mentioned in items 1 to 3, under subsection (1)(d) Ancillary 08 - Chemical Storage 1: Storing a total of 50t or more of chemicals of dangerous goods class 1 or class 2, division 2.3 under subsection (1)(a)	

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).

Contaminated land

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

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (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 contaminated land (notice must be given within 20 business days);

that is causing, or is reasonably likely to cause, serious or material environmental harm.

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 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, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Sustainable Planning Act 2009* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken 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 environmental authority.

Tony Williams	19 September 2023
Signature	Date

Tony Williams
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Minerals Business Centre
Department of Environment and Science
Phone: 07 4222 5352
Email: ESCairns@des.qld.gov.au

Privacy statement
Pursuant to section 540 of the EP Act, the Department is required to maintain a register of certain documents and information authorised under the EP Act. A copy of this document will be kept on the public register. The register is available for inspection by members of the public who are able take extracts, or copies of the documents from the register. Documents that are required to be kept on the register are published in their entirety unless alteration is required by the EP Act. There is no general discretion allowing the Department to withhold documents or information required to be kept on the public register.

For more information on the Department's public register, search 'public register' at www.qld.gov.au. For queries about privacy matters please email privacy@des.qld.gov.au or telephone 13 74 68.

Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, 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 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)

Conditions of environmental authority

The environmentally relevant activity(ies) conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

This environmental authority incorporates the following schedules:

Schedule A – General

Activity

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 In carrying out the mining activity authorised by this environmental authority, the holder of this environmental authority must ensure that the activity complies with Schedule H – Figure H1 (Project Infrastructure Layout).

A3 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;

b) maintain such measures, plant and equipment in a proper and efficient condition;

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 calibrated.

Monitoring

A4 Except where specified otherwise in another condition of this authority, all monitoring records or reports required by this environmental authority must be kept for a period of not less than 5 years and provided to the administering authority upon request.

A5 An environmental monitoring program sufficient to demonstrate compliance with the conditions of this environmental authority must be developed by an appropriately qualified person and implemented by 1 November 2013.

A6 All analyses and tests required to be conducted under this environmental authority must be carried out by an appropriately qualified person and analysed by a laboratory that has NATA accreditation for such analyses and test, expect as otherwise authorised by the administering authority.

A7 Monitoring and analyses required by this environmental authority must be undertaken in accordance with the requirements of the administering authority's latest guidelines, unless otherwise agreed by the administering authority in writing.

Risk Management

A8 The holder of this environmental authority must develop and implement a risk management system for mining activities which mirrors the content requirement of 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 1 October 2013.

Notification of Emergencies, Incidents and Exceptions

A9 The holder of this environmental authority must notify the administering authority by written notification within 24 hours, after becoming aware of any 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.

A10 Within 10 business days following the initial notification of an emergency or incident, or receipt of monitoring results, whichever is the latter, further written advice must be provided to the administering authority, including the following:

a) results and interpretation of any samples taken and analysed;

b) outcomes of actions taken at the time to prevent or minimise unlawful environmental harm; and

c) proposed actions to prevent a recurrence of the emergency or incident.

Complaints

A11 The holder of this environmental authority must record all environmental complaints received about the mining activity including the following details:

a) Name, address and contact number for complainant;

b) Time and date of complaint;

c) Reasons for the complaint;

d) Investigations undertaken;

e) Conclusions formed;

f) Actions taken to resolve the complaint;

g) Any abatement measures implemented; and

h) Person responsible for resolving the complaint.

A12 The holder of this environmental authority must, when requested by the administering authority, undertake relevant specified monitoring within a reasonable timeframe nominated or agreed to by the administering authority to investigate any complaint of environmental harm. The results of the investigation (including an analysis and interpretation of the monitoring results) and abatement measures, where implemented, must be provided to the administering authority within 10 business days of completion of the investigation, or no later than 10 business days after the end of the timeframe nominated by the administering authority to undertake the investigation.

Third Party Reporting

A13 The holder of this environmental authority must:

a) within one (1) year of the commencement of this authority, obtain from a suitably qualified and experienced third party, a report on compliance with the conditions of this environmental authority;

b) obtain further such reports at regular intervals not exceeding three (3) years from the completion of the report referred to above; and

c) provide each report to the administering authority within 90 days of its completion

A14 Where a condition of this environmental authority requires compliance with a standard, policy or guideline published externally to this environmental authority and the standard is amended or changed subsequent to the issue of this environmental authority the holder of this environmental authority must:

a) comply with the amended or changed standard, policy or guideline within two (2) years of the amendment or change being made, unless a different period is specified in the amended standard or relevant legislation, or where the amendment or change relates specifically to regulated structures referred to in Schedule D the time specified in that condition; and

b) until compliance with the amended or changed standard, policy or guideline is achieved, continue to remain in compliance with the corresponding provision that was current immediately prior to the relevant amendment or change.

Investigation

A15 If monitoring results indicate an exceedance of any quality objectives specified in a condition of this environmental authority, the holder of this environmental authority must notify the administering authority in accordance with condition A9 and:

a) complete an investigation to identify the potential cause of the exceedance;

b) if the investigation demonstrates that the exceedance is not attributable to the mining activities, then no further action is required; or

c) if the cause of the exceedance is inconclusive or attributable to the mining activities, provide a written report to the administering authority within 3 months of the date of receiving the monitoring results showing an exceedance, outlining:

i) all pertinent details of the investigation carried out; and

ii) actions taken or planned to minimise environmental harm.

Exploration

A16 All exploration activities carried out at the licensed place must comply with each of the Standard Environmental Conditions contained in the most recent version of the *Eligibility Criteria and Standard Conditions for Exploration and Mineral Development Projects (ESR/2016/1985).*

A17 Where a condition of this Environmental Authority refers to a matter addressed in the *Eligibility Criteria and Standard Conditions for Exploration and Mineral Development Projects (ESR/2016/1985)* the condition of the Environmental Authority prevails.

END OF CONDITIONS FOR SCHEDULE A

Schedule B – Air

General

B1 Unless authorised by this environmental authority, the release of noxious or offensive odour, dust or any other airborne contaminant resulting from the mining activity must not cause environmental harm beyond the boundary of the licensed place.

Dust and Particulate Matter Monitoring

B2 Dust and particulate matter must not exceed the following levels at any sensitive or commercial place:

a) Dust deposition of 120 milligrams per square metre per day, averaged over 1 month, when monitored in accordance with the most recent version of Australian Standard AS3580.10.1 Methods for sampling and analysis of ambient air—Determination of particulate matter—Deposited matter – Gravimetric method.

b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometres (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24-hour averaging time, when monitored in accordance with the most recent version of either:

(i) Australian Standard AS3580.9.6 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM_{10} high volume sampler with size-selective inlet – Gravimetric method, or

(ii) Australian Standard AS3580.9.9 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM_{10} low volume sampler—Gravimetric method.

c) A concentration of particulate matter with an aerodynamic diameter of less than 2.5 micrometres (PM2.5) suspended in the atmosphere of 25 micrograms per cubic metre over a 24-hour averaging time, when monitored in accordance with the most recent version of AS/NZS3580.9.10 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM (sub) 2.5(/sub) low volume sampler—Gravimetric method.

d) A concentration of particulate matter suspended in the atmosphere of 90 micrograms per cubic metre over a 1 year averaging time, when monitored in accordance with the most recent version of AS/NZS3580.9.3:2003 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—Total suspended particulate matter (TSP)—High volume sampler gravimetric method.

END OF CONDITIONS FOR SCHEDULE B

Schedule C – Land and Rehabilitation

Land and Rehabilitation Objectives

C1 Unless authorised by this environmental authority, contaminants that will or may cause environmental harm must not be directly or indirectly released to land.

C2 Land outside the authorised disturbance area specified in condition A2 of this environmental authority must not be disturbed or contaminated.

C3 When carrying out the mining activity the holder of this environmental authority must:

a) avoid, minimise or mitigate (in order of preference) any impacts on areas of sensitive vegetation or other areas of ecological value;

b) minimise the risk of injury, harm; or entrapment of wildlife and stock;

c) minimise disturbance to land that may otherwise result in land degradation; and

d) if significant disturbance to land is unavoidable, the holder of this environmental authority must clear vegetation in a way that maintains connectivity.

C4 Land disturbed by mining must be rehabilitated in accordance with Schedule C - Table C1 (Rehabilitation objectives).

Schedule C - Table C1 (Rehabilitation objectives)

Mine Domain	Central peg coordinates (GDA2020 MGA ZONE 55)		Mine feature name	Rehabilitation objectives[B]	
	Easting	Northing		Post mine land description	Rehabilitation Goal
Residual void[A]	300532	8172231	Open pit	Residual Void	a) Does not cause environmental harm other than harm constituted by the existence of the void itself b) Geo-technically and geochemically stable with no subsidence or erosion gullies for at least 3 years and; c) Safe to humans and wildlife
	300695	8171878	Noise bund	Safety bund surrounding residual void	
Infrastructure[A]	N/A	N/A	Roads and pipe-lines	Low Intensity Grazing[C]	a) Non-polluting; b) Geo-technically and geochemically stable with no subsidence or erosion gullies for at least 3 years; c) Established groundcover to ensure erosion is minimised; d) Established vegetation of floristic species composition found in analogue sites and which are not weed species; e) Maintenance requirements for rehabilitated land is no greater than that required for the land prior to its disturbance caused by carrying out the mining activity(ies); and f) Is safe to humans and wildlife.
	N/A	N/A	Old mine workings, Old stockpile area, Sulfide disposal dump region (excluding Historical sulphide disposal dump), Core yard and laydown	Low Intensity Grazing	a) Non-polluting; b) Geo-technically and geochemically stable with no subsidence or erosion gullies for at least 3 years; c) Established groundcover to ensure erosion is minimised; d) Established vegetation of floristic species composition found in analogue sites and which are not weed species; e) Maintenance requirements for rehabilitated land is no greater than that required for the land prior to its disturbance caused by

			area, Office & laboratory, Laydown near processing plant, Processing plant and workshop, Previous mill and ROM		carrying out the mining activity(ies); and f) Is safe to humans and wildlife.
Overburden dump piles[A]	300429	8171854	Historical sulphide disposal dump	Low Intensity Grazing	a) Non-polluting; b) Geo-technically and geochemically stable with no subsidence or erosion gullies for at least 3 years; c) Established groundcover to ensure erosion is minimised; d) Established vegetation of floristic species composition found in analogue sites and which are not weed species; e) Maintenance requirements for rehabilitated land is no greater than that required for the land prior to its disturbance caused by carrying out the mining activity(ies); and f) Is safe to humans and wildlife.
Exploration[A]	N/A	N/A	Exploration bore holes	Low Intensity Grazing	a) Non-polluting; b) Geo-technically and geochemically stable with no subsidence or erosion gullies for at least 3 years; c) Established groundcover to ensure erosion is minimised; d) Established vegetation of floristic species composition found in analogue sites and which are not weed species; e) Maintenance requirements for rehabilitated land is no greater than that required for the land prior to its disturbance caused by carrying out the mining activity(ies); and f) Is safe to humans and wildlife.

Tailings storage facility (TSF)[A]	299613	8171723	TSF4	Low Intensity Grazing	a) Non-polluting; b) Geo-technically and geochemically stable with no subsidence or erosion gullies for at least 3 years; c) Established groundcover to ensure erosion is minimised; d) Established vegetation of floristic species composition found in analogue sites and which are not weed species; e) Maintenance requirements for rehabilitated land is no greater than that required for the land prior to its disturbance caused by carrying out the mining activity(ies); and f) Is safe to humans and wildlife.
	300106	8172050	TSF3	Industrial	
Ancillary mining disturbance[A]	N/A	N/A	Mulligan Highway intersecting ML4867 and ML4919	Highway and associated culverts to remain with the appropriate administering authority	N/A

A. Adapted from Table 17 Post-mining rehabilitation objectives of *Mount Carbine Tungsten Project Stage 1 - Environmental Management Plan March 2013.*

B. Land disturbed by mining, other than the residual void and associated noise bund, must be progressively rehabilitated.

C. May be retained for landholder use subject to landholder statement accepting responsibility.

Biodiversity

C5 Prior to commencement of vegetation clearing, the holder of this environmental authority must:

a) engage an appropriately qualified person to undertake a comprehensive flora survey in accordance with the latest version of the administering authority's *Guidelines for Flora Survey and Assessment in Northern Queensland*; and

b) provide a report, in accordance with the latest version of the administering authority's *Guidelines for Flora Survey and Assessment in Northern Queensland*, to the administering authority.

C6 If the report required by condition C5 indicates the presence of prescribed native wildlife and breeding places, an appropriately qualified spotter/catcher must be engaged to work ahead of vegetation clearing.

Note: This environmental authority does not authorise the taking of native wildlife or the tampering with a breeding place that is being used by prescribed native wildlife to incubate or rear the animal's offspring.

C7 In the event of identification of rare or threatened species on the licensed place, a diagrammatic representation of the species occurrence relative to the mining activity together with a management and monitoring strategy for species conservation must be prepared and implemented and submitted to the administering authority.

Impacts to Prescribed Environmental Matters

C8 Significant residual impacts to prescribed environmental matters, are not authorised under this environmental authority or the *Environmental Offsets Act 2014*.

Infrastructure

C9 All infrastructure erected and/or used for the mining activities must be removed from the site prior to surrender, except where agreed in writing by the administering authority and the landowner.

Waste Management

C10 All general and regulated waste, other than authorised under condition C11, must be removed from the licensed place to a facility that is lawfully able to accept the waste.

C11 The only waste that can be disposed of at the licenced place is waste generated at the licensed place and is limited to:

a) waste rock;

b) tailings;

c) concrete waste; and

d) any by-products of mineral processing.

C12 Unless otherwise permitted by the conditions of this environmental authority or with prior approval from the administering authority and in accordance with a relevant standard operating procedure, waste must not be burnt.

C13 The holder of this environmental authority may burn vegetation cleared in the course of carrying out extraction activities provided the activity does not cause environmental harm at any sensitive place or commercial place.

Waste Rock and Tailings Disposal

C14 By 1 November 2013 the holder of this environmental authority must develop, implement and submit to the administering authority a waste rock and tailings disposal management plan. The management plan must be reviewed and updated annually.

C15 The waste rock and tailings disposal management plan must be certified by an appropriately qualified person, to ensure the plan has addressed the requirements of this environmental authority in accordance with best practice environmental management.

C16 The waste rock and tailings disposal management plan must include:

a) a detailed design of the waste rock dump and tailings storage facility (TSF);

b) characterisation of the waste rock to predict the quality of runoff and seepage generated, including salinity, acidity, alkalinity, dissolved metals, metalloids and non-metallic inorganic substances;

c) a program of progressive sampling program to validate pre-mine waste rock characterisation metal concentrations of tailings. The sampling program must include validation of acid and alkali producing potential and metal concentration including arsenic, bismuth, boron, fluoride, manganese, selenium and tin;

d) where the acid rock drainage potential / neutral mine drainage potential of waste rock material has not been conclusively determined, geochemical kinetic testing must be conducted to indicate oxidation rates, potential reaction products and effectiveness of control strategies;

e) the management of seepage and leachates both during operation and the foreseeable future;

f) records must be maintained of all waste rock characterisation and disposal including contingency planning for the management of acid rock / neutral mine drainage;

g) maintaining records of the relative locations of any other waste stored within the tailings;

h) a materials balance and disposal plan demonstrating how potentially acid forming and acid forming waste rock will be selectively placed and/or encapsulated to minimise the generation of acid mine drainage;

i) a materials balance and disposal plan demonstrating how waste rock that has a potential to generate neutral and/or saline mine drainage will be selectively placed and managed to minimise the generation of neutral and/or saline mine drainage;

j) a sampling program to verify encapsulation and/or placement of potentially acid forming / acid forming waste rock / waste rock that has a potential to generate neutral mine drainage;

k) the control of fugitive emissions to air

l) a rehabilitation strategy which meets the rehabilitation objectives specified in the administering authority's guideline "*Rehabilitation Requirements for Mining Projects (ESR/2016/1875)"*; and

m) monitoring or rehabilitation, research and/or trials to verify the requirements and methods for decommissioning and final rehabilitation of the placed materials, including the prevention and management of acid mine drainage, erosion minimisation and establishment of vegetation cover.

C17 Tailings must be contained in the designated tailings storage areas (TSF) depicted in Schedule H – Figure H1 (Project Infrastructure Layout) and must not be released to the receiving environment.

Mineral Concentrate Storage and Handling

C18 Mineral concentrate storage, handling and loading facilities must be constructed, maintained and operated in a manner that prevents any unauthorised release of contaminants to the receiving environment.

Cover System and Rehabilitation Trials

C19 By 1 October 2014 the environmental authority holder must commence trials to establish a suitable cover system design and methodology and revegetation strategy on the licensed place including but not limited to the tailings storage facility and waste rock dump.

C20 By 1 October 2015 and once every two (2) years thereafter, the environmental authority holder must submit a report to the administering authority detailing the findings of the cover system design and methodology and revegetation trials.

C21 By 1 October 2019 the environmental authority holder must submit to the administering authority a report nominating the best performing cover system design and methodology and revegetation methodology based on the results from trials required in condition C19.

END OF CONDITIONS FOR SCHEDULE C

Schedule D – Water

D1 Contaminants must not be released to any waters unless otherwise permitted by a condition of this environmental authority.

Water storages

D2 All water storages and Tailings Storage Facilities identified in Schedule H – Figure H1 (Project Infrastructure Layout) must be monitored quarterly for all parameters as specified in Schedule D – Table D3 (Receiving Water Quality Objectives).

Release to Waters

D3 Contaminants must only be released to waters from the release point as specified in Schedule D –Table D1 (Release Point Location) and identified in Schedule H – Figure H2 (Monitoring and Release Points).

D4 The release of contaminants to waters must be monitored at the frequency and location specified in Schedule D - Table D1 (Release Point Location) for all parameters specified in Schedule D –Table D2 (Release Limits).

D5 At the release point specified in Schedule D – Table D1 (Release Point Location), release waters must not exceed the release limits specified in Schedule D – Table D2 (Release Limits).

D6 At the time of release from the authorised release point specified in Schedule D – Table D1 (Release Point Location) the water flow volume in the respective receiving water must be at least 20 times the volume at which respective contaminated waters are released.

D7 Flow rate must be monitored at the release point specified in Schedule D – Table D1 (Release Point Location) during release events.

Schedule D - Table D1 (Release Point Location)

Release Point	Description of Release	Receiving Water	Coordinates (GDA94 MGA ZONE 55)		Monitoring frequency
			Easting	Northing	
OW4	TSF 4 Spillway	Manganese Creek	299526	8170822	For all parameters as specified in Schedule D - Table D2 (Release Limits), one (1) sample must be taken within 12 hours of a release event commencing and for release events with duration of greater than 24 hours, samples must be taken daily for one (1) week and once a week thereafter until the release event ceases.

Schedule D – Table D2 (Release Limits)

Parameter	**Release Limits (mg/L unless otherwise specified)**
pH (pH units)	6.0 – 7.5[A]
EC (µS/cm)	2,500[B]
Sulfate	900[B]
Fluoride	For interpretation only
Total suspended solids	50[C]
Total petroleum hydrocarbons	No detectable film or odour

A. Default pH values are for slightly disturbed tropical Australian upland river ecosystems from Table 3.3.4 in ANZECC and ARMCANZ 2000.
B. Based upon site specific water data 2012-2022.
C. Guideline, Stormwater and environmentally relevant activities, 2014. Department of Environment and Science. Queensland Government.

D8 Surface waters must be monitored at the locations specified in Schedule D - Table D4 (Receiving Water Monitoring Locations) and shown in Schedule H – Figure H2 (Monitoring and Release Points) for each parameter and monitoring frequency as specified in Schedule D - Table D3 (Receiving Water Quality Objectives).

D9 The release of contaminants from the authorised activity must not cause or contribute to the exceedance of any of the water quality objectives stated in Schedule D – Table D3 (Receiving Water Quality Objectives).

D10 If a parameter measured at a downstream location specified in Schedule D – Table D4 (Receiving Waters Monitoring Locations) exceeds any of the water quality objectives specified in Schedule D – Table D3 (Receiving Water Quality Objectives), the environmental authority holder must compare this result to the applicable reference site:

(a) If the quality measured at a downstream location is equal to or less than the quality measured at the applicable reference site, no further action is required; or
(b) If the quality measured at a downstream location is greater than the quality measured at the applicable reference site, complete an investigation into the cause of the deterioration in water quality and the potential for environmental harm and submit a written report to the administering authority, within 28 days of receipt of laboratory results, outlining:
    (i) details of the investigation carried out
    (ii) findings of the investigation
    (iii) recommendations of the investigation; and
    (iv) actions taken to prevent environmental harm.

Schedule D - Table D3 (Receiving Water Quality Objectives)

Parameter[A] (mg/L unless otherwise specified)	Water Quality Objective	Monitoring frequency
pH (pH units)	6.0 – 7.5[B]	Monthly when there is no release; or First sample within 12 hours of a release occurring then, daily for (7) seven days, proceeding to weekly thereafter for the duration of the release event.
EC (µS/cm)	125[D]	
Dissolved oxygen	For interpretative purposes only	
Total Hardness (mg as $CaCO_3$/L)		
Major cations		
Major anions		
Turbidity (NTU)		
Sulfate	45[G]	
Total suspended solids	50[H]	
Fluoride	2.4[F]	
Filtered aluminium	0.98[G]	
Filtered arsenic[E]	0.013[C]	
Filtered cadmium	0.0002[C]	
Filtered cobalt	0.0014[C]	
Filtered copper	0.0014[C]	
Filtered manganese	1.9[C]	
Filtered molybdenum	0.034[C]	
Filtered tungsten	0.008[G]	
Filtered zinc	0.008[C]	
Total petroleum hydrocarbons	No detectable film or odour	

A. All metals and metalloids must be measured and reported as both total (unfiltered) and filtered concentrations. Only the filtered metals and metalloids are compared with the water quality objective.
B. Default pH values are for slightly disturbed tropical Australian upland river ecosystems from Tables 3.3.4 in ANZECC and ARMCANZ 2000.
C. ANZG (2018) guideline value for protection of slightly to moderately disturbed freshwater aquatic ecosystems.
D. Queensland water quality guideline value for the Wet Tropics Salinity Zone (EHP 2013) – Table G1.
E. Routine analysis of this parameter is based on combined/total species of the element, where the exceedance of the WQO is identified, an additional sample must be taken and analysed as soon as practicable to determine concentrations of the cation species with guideline values.
F. Based on the draft guideline value for fluoride from ANZGFMWQ (2015).
G. Based upon site specific water data 2012-2022.
H. Stormwater Guideline: Environmentally Relevant Activities 2014. Department of Environment and Science. Queensland Government.

Schedule D - Table D4 (Receiving Waters Monitoring Locations)

Monitoring Point	Description	Coordinates (GDA94 MGA ZONE 55)	
		Easting	Northing
Receiving Water Points (Downstream locations)			
Manganese Creek			
SW7	Manganese Creek (approximately 300 metres downstream of confluence with TSF4 gully)	300644	8167879
SW15	TSF4 gully – site release monitoring point at the boundary of the licensed place (approximately 250 metres from OW4 release point). Reports to Manganese Creek.	299920	8170844
Holmes Creek			
SW17	Unnamed tributary of Holmes Creek (at ML4867 north-east boundary)	299381	8173168
SW4	Holmes Creek (immediately upstream of crossing with Mulligan Highway)	297426	8172386
Reference Points (Upstream locations)			
Manganese Creek			
SW1	Manganese Creek, upstream of site inputs	301816	8172340
Holmes Creek			
SW16	Holmes Creek upstream of site and historic disturbance	299715	8174372

Receiving Environment Monitoring Program (REMP)

D11 The environmental authority holder must develop and implement a Receiving Environment Monitoring Program (REMP) sufficient to monitor, identify and describe any adverse impacts to surface water environmental values, quality and flows due to the authorised mining activity. For the purposes of the REMP, the receiving environment is the waters of Holmes Creek, Manganese Creek and connected or surrounding waterways within 15 kilometres downstream of the licensed place. At minimum, the REMP must include:

a) monitoring of water quality for all parameters specified in Schedule D - Table D3 (Receiving Water Quality Objectives) at all locations specified in Schedule D - Table D4 (Receiving Waters Monitoring Locations) and at the following minimum frequency:

   (i) monthly; and

   (ii) for water quality of receiving waters during a release event, one sample must be taken within 12 hours of the event commencing. Where release or flow events have duration of greater than 24 hours, samples must be taken daily for 7 days and once a week thereafter until the release or flow event ceases.

   (iii) for sediment at all locations specified in Schedule D – Table D4 (Receiving Waters Monitoring Locations), biannually (once at the end of the wet season and once at the end of the dry season) for sulfate, fluoride, arsenic, cadmium, cobalt, copper, manganese, molybdenum, tungsten, zinc, and particle size distribution.

b) monitoring of suitable biological indicators of aquatic ecosystem health.

D12 A REMP design document that addresses the requirements of the REMP must be prepared and submitted to the administrating authority on or before 31 August 2014.

D13 A report outlining the findings of the REMP, including all monitoring results and interpretations must be prepared annually and made available on request to the administrating authority. This must include an assessment of background reference water quality, the condition of downstream water quality compared against water quality objectives, and the suitability of current discharge limits to protect downstream environmental values.

D14 The report required by condition D13 must provide an assessment and analysis of long-term water quality trends.

Groundwater

D15 The holder of this environmental authority must not release contaminants to groundwater.

D16 The construction, maintenance and management of groundwater bores (including groundwater monitoring bores) must be undertaken in a manner that prevents or minimises impacts to the environment and ensures the integrity of the bores to obtain accurate monitoring.

D17 Groundwater quality and level must be monitored at the bores and frequency specified in Schedule D - Table D5 (Groundwater Monitoring Locations and Frequency) and identified in Schedule H – Figure H2 (Monitoring and Release Points) for all parameters listed in Schedule D - Table D6 (Groundwater Quality Objectives).

D18 Groundwater quality in the compliance bores specified in Schedule D – Table D5 (Groundwater Monitoring Locations and Frequency) must not exceed the corresponding groundwater quality objectives specified in Schedule D – Table D6 (Groundwater Quality Objectives) on any three (3) consecutive quarterly sampling occasions.

Schedule D – Table D5 (Groundwater Monitoring Locations and Frequency)

Bore[A]	Description	Bore type and monitoring requirement	Easting (GDA94 MGA Zone 55)	Northing (GDA94 MGA Zone 55)	Surface RL[B]	Monitoring frequency
IB03	South of the open pit	Compliance – level and quality	300569	8171746	364.06	Quarterly
IB04	East of the open pit	Compliance – level and quality	301030	8172127	368.26	Quarterly
IB06	West of TSF4	Compliance – level and quality	298743	8171345	363.13	Quarterly
IB08	South-east of the open pit	Compliance – level and quality	300894	8171793	364.10	Quarterly
MB1A	North-west of TSF4	Compliance – level and quality	299177	8171929	364.54	Quarterly
MB1B[C]	North-west of TSF4	Compliance – level and quality[C]	299177	8171929	364.91	Quarterly
MB4A	South-east of TSF4	Compliance – level and quality	299994	8170776	353.49	Quarterly
MB4B[D]	South-east of TSF4	Compliance – level and quality[D]	299994	8170776	353.30	Quarterly
MB7	East of TSF4	Compliance – level and quality	300341	8171232	357.18	Quarterly
MB8	West of low-grade material stockpile	Compliance – level and quality	299153	8173267	365.77	Quarterly
SB03	South of TSF4	Observation – level	299579	8170806	356.71	Quarterly
MB3A	North-east of pit	Observation – level and quality	301004	8172643	376.50	Quarterly
MB3B	North-east of pit	Observation – level and quality	301004	8172643	376.89	Quarterly
SB04	South of TSF4	Observation – level	299849	8170898	353.98	Quarterly

Bore[A]	Description	Bore type and monitoring requirement	Easting (GDA94 MGA Zone 55)	Northing (GDA94 MGA Zone 55)	Surface RL[B]	Monitoring frequency
SB05	South-east of TSF4	Observation – level	300056	8171184	355.35	Quarterly
MB5A	Between site and Holmes Creek	Observation – level and quality	298226	8172597	357.30	Quarterly
MB5B	Between site and Holmes Creek	Observation – level and quality	298226	8172597	357.41	Quarterly

A. All bores must be constructed and operated in accordance with methods prescribed in the latest edition of Minimum Construction Requirements for Water Bores in Australia (NUDLC 2020 4th edition). Prepared by National Uniform Drillers Licensing Committee.

B. RL must be measured to the nearest 0.05 metres from the top of the bore casing in m AHD.

C. Bore MB1B may be determined to be an observation bore in Schedule D - Table D5 (Groundwater Monitoring Bores and Frequency) by agreed amendment under section 215(1)(b) of the *Environmental Protection Act 1994* after 1 March 2024. Until such time that agreement can be reached, the bore must remain as a compliance bore.

D. Bore MB4B may be determined to be an observation bore in Schedule D - Table D5 (Groundwater Monitoring Bores and Frequency) by agreed amendment under section 215(1)(b) of the *Environmental Protection Act 1994* after 1 March 2024. Until such time that agreement can be reached, the bore must remain as a compliance bore.

Schedule D - Table D6 (Groundwater Quality Objectives)

Parameter (mg/L)	IB03	IB04	IB06	IB08	MB1A	MB1B	MB4A	MB4B	MB7[D]	MB8[D]
pH[A]	6-7.5	6-7.5	6-7.5	6-7.5	6-7.5	6-7.5	6-7.5	6-7.5	TBA	TBA
EC (µS/cm)[E]	9,648	2,542	5,584	2,720	1,974	4,120	1,700	2,800	TBA	TBA
Sulfate	300[B]	300[B]	150[E]	137[E]	46[E]	52[E]	270[E]	300[B]	TBA	TBA
Fluoride	2.4[C]	2.4[C]	2.4[C]	3.9[E]	2.4[C]	2.4[C]	3.5[E]	3.6[E]	TBA	TBA
Filtered Aluminium[F]	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	TBA	TBA
Filtered Arsenic	0.013[F]	0.061[E]	0.13[F]	0.49[E]	0.013[F]	0.013[F]	0.013[F]	0.013[F]	TBA	TBA
Filtered Cadmium	0.0005[E]	0.0002[F]	0.0002[F]	0.0004[E]	0.0002[F]	0.0002[F]	0.0002[F]	0.0002[F]	TBA	TBA
Filtered Cobalt	0.003[E]	0.0060[E]	0.0014[F]	0.0014[F]	0.0014[F]	0.0014[F]	0.0014[F]	0.0014[F]	TBA	TBA

Parameter (mg/L)	IB03	IB04	IB06	IB08	MB1A	MB1B	MB4A	MB4B	MB7[D]	MB8[D]
Filtered Copper	0.007[E]	0.0014[F]	0.0014[F]	0.003[E]	0.0014[F]	0.003[E]	0.0014[F]	0.0014[F]	TBA	TBA
Filtered Manganese	1.3[E]	3[E]	0.2[E]	0.6[E]	0.2[E]	0.6[E]	0.6[E]	0.6[E]	TBA	TBA
Filtered Molybdenum	0.034[F]	0.034[F]	0.034[F]	0.012[E]	0.034[F]	0.034[F]	0.034[F]	0.034[F]	TBA	TBA
Filtered Tungsten	0.01[E]	0.01[E]	0.01[E]	0.01[E]	0.01[E]	0.01[E]	0.02[E]	0.02[E]	TBA	TBA
Filtered Zinc	0.008[F]	0.008[F]	0.008[F]	0.029[E]	0.022[E]	0.013[F]	0.008[F]	0.008[F]	TBA	TBA
Total petroleum hydrocarbons	No detectable film or odour									
Major cations and anions	Interpretation only									
Total hardness										

A. pH values are for slightly disturbed tropical Australian upland river ecosystems from Tables 3.3.4 in ANZECC and ARMCANZ 2000
B. Sulfate value is the conservative nominal value (i.e., 300mLg/L) derived from a literature review of guideline values for sulfate in Queensland, Northern Territory and British Columbia.
C. Based on the draft guideline value for fluoride from ANZGFMWQ (2015).
D. Value is to be advised (TBA). Upon receipt of the 8th valid sample, value will be based on the 95th percentile of site-specific dataset thereafter. Percentile to be calculated according to ANZG 2018.
E. Based upon site specific water data 2012-2022.
F. ANZG (2018) Guideline value for the protection of slightly-to-moderately disturbed freshwater aquatic ecosystems.
Note: TBA means to be advised.

Groundwater Management Program

D19 A Groundwater Management Program must be developed by an appropriately qualified person and implemented before 1 December 2023.The Groundwater Management Program must be reviewed annually to assess the adequacy of the plan, ensure actual and potential environmental impacts are managed, and identify any necessary amendments to the plan to ensure compliance with this environmental authority.

D20 The Groundwater Management Program required by Condition D19 must:

a. identify potential sources of contamination to groundwater from the activity; and
b. ensure that all potential groundwater impacts due to the activity are identified, monitored and mitigated; and
c. document sampling and monitoring methodology; and
d. ensure that adequate groundwater monitoring and data analysis is undertaken to achieve the following objectives:
    i. detect any impacts to groundwater levels due to the activity;
    ii. detect any impacts to groundwater quality due to the activity;
    iii. determine compliance with condition D15; and
    iv. determine trends in groundwater quality; and
e. include an appropriate quality assurance and quality control program; and
f. include a conceptual groundwater model; and
g. include a review process to identify improvements to the program that includes address of any comments provided by the administering authority.

D21 From 1 December 2023, the Groundwater Management Program must be reviewed on an annual basis by an appropriately qualified person to determine if it continues to meet the requirements stated in condition D20.

Erosion and Sediment Control

D22 An Erosion and Sediment Control Plan must be developed by an appropriately qualified person and implemented before 1 November 2013, to minimise erosion, contamination of stormwater and the release of sediment to receiving waters.

END OF CONDITIONS FOR SCHEDULE D

Schedule E –Structures

Assessment of Consequence Category

E1 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) prior to any change in its purpose or the nature of its stored contents.

E2 A consequence assessment report and certification must be prepared for each structure assessed and the report may include a consequence assessment for more than one structure.

E3 The holder must, on receipt of a consequence assessment report and certification, provide to the administering authority one paper copy and one electronic copy of the consequence assessment report and certification.

E4 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)*.

E5 The holder must take reasonable and practical measures so that each dam associated with the mining activity, regardless of whether it is classified as a regulated structure, is designed, constructed, operated and maintained in accordance with accepted engineering standards and is fit for the purpose for which it is intended.

Design and Construction of a Regulated Structure

E6 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/2016/1933)*.

E7 Construction of a regulated structure is prohibited unless:

a) the holder has submitted a consequence category assessment report and certification to the administering authority;

b) certification for the design, design plan and the associated operating procedures has been certified by a suitably qualified and experienced person in compliance with the relevant condition of this authority.

E8 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 Register of Regulated Structures.

E9 Regulated structures must:

a) be designed and constructed in accordance with and conform to the requirements of the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)*; and

b) be designed and constructed with due consideration given to ensuring that the design integrity will not be compromised on account of:

(i) floodwaters from entering the regulated dam from any watercourse or drainage line; and

(ii) wall failure due to erosion by floodwaters arising from any watercourse or drainage line.

E10 The design plan for a regulated structure must include, but is not limited to:

a) certification that the design plan;

(i) is in accordance with the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933),* including subsidiary certifications if necessary; and

(ii) addresses the requirements in condition E10 (b) to (h).

b) a design report which provides:

(i) a description of all the documents which constitute the design plan;

(ii) a statement of:

a) the applicable standards including engineering criteria, industry guidelines, relevant legislation and regulatory documents, relied upon in preparing the design plan;

b) all relevant facts and data used in preparing the design plan, including any efforts made to obtain necessary facts and data, and any limitations or assumptions to facts and data used in preparing the design plan;

c) the consequence category of the regulated structure; and

d) setting out the reasoning of the suitably qualified and experienced person who has certified the design plan, as to how the design plan provides the necessary required performance.

(iii) documentation of hydrological analyses and estimates required to determine all elements of the design including volumes and flow capacities;

(iv) detailed criteria for the design, operation, maintenance and decommissioning of the regulated structure, including any assumptions; and

(v) design, specification and operational rules for any related regulated structures and systems used to prevent failure scenarios;

c) drawings showing the lines and dimensions, and locations of built structures and land forms associated with the regulated structure;

d) consideration of the interaction of the pit design with the regulated dam design;

e) an operational plan that includes:

(i) normal operating procedures and rules (including clear documentation and definition of process inputs in the DSA allowance; and

(ii) contingency and emergency action plans including operating procedures designed to avoid and/or minimise environmental impacts including threats to human life resulting from any overtopping or loss of structural integrity of the regulated structure.

f) a plan for the decommissioning and rehabilitation of the regulated structure at the end of its operational life;

g) details of reports on investigations and studies done in support of the design plan; and

h) any other matter required by the suitably qualified and experienced person.

E11 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:

a) the 'as constructed' drawings and specifications meet the original intent of the design plan for that regulated structure; and

b) construction of the regulated structure is in accordance with the design plan.

E12 Where a regulated dam is to be managed as part of an integrated containment system and the DSA volume is to be shared across the integrated containment system, the design and operating rules for the system as a whole must be documented in a system design plan that is certified by a suitably qualified and experienced person.

E13 The system design plan must contain:

a) the design plans;

b) the ‘as constructed’ plans;

c) the operational rules for each individual regulated dam that forms part of the integrated system;

d) the standards of serviceability and accessibility of water transfer equipment or structures; and

e) the operational rules for the system as a whole.

Operation of a Regulated Structure

E14 Operation of a regulated structure is prohibited unless:

a) the holder has submitted to the administering authority in respect of the regulated structure, all of the following:

(i) one paper copy and one electronic copy of the design plan and certification of the design plan in accordance with condition E10;

(ii) a set of ‘as constructed’ drawings and specifications;

(iii) certification of those ‘as constructed drawings and specifications’ in accordance with condition E11; and

(iv) 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.

b) the requirements of this authority relating to the construction of the regulated structure have been met;

c) the holder has entered the details required under this authority, into a Register of Regulated Structures; and

d) there is a current operational plan for the regulated structure.

E15 Each regulated structure must be maintained and operated in a manner that is consistent with the current design plan, the current operational plan, and the associated certified ‘as constructed’ drawings for the duration of its operational life until decommissioned and rehabilitated.

E16 The holder must take reasonable and practicable control measures to prevent the causing of harm to persons, livestock or wildlife through the construction and operation of a regulated structure. Reasonable and practicable measures may include, but are not limited to:

a) the secure use of fencing, bunding or screening; and

b) escape arrangements for trapped livestock and fauna.

Mandatory Reporting Level

E17 The mandatory reporting level (the MRL) must be marked on a regulated dam in such a way that during routine inspections of that dam, it is clearly observable.

E18 The holder must, as soon as practical and within forty-eight (48) hours of becoming aware, notify the administering authority when the level of the contents of a regulated structure reaches the MRL.

E19 The holder of this environmental authority must, immediately on becoming aware that the MRL has been reached, act to prevent the occurrence of any unauthorised discharge from the regulated dam.

E20 The holder must record any changes to the MRL in the Register of Regulated Structures.

Annual Inspection Report

E21 Each regulated structure must be inspected each calendar year by a suitably qualified and experienced person.

E22 At each annual inspection, the condition and adequacy of all components of the regulated structure must be assessed:

a) against the most recent consequence assessment report and design plan (or system design plan);

b) against recommendations contained in previous annual inspection reports;

c) against recognised dam safety deficiency indicators;

d) for changes in circumstances potentially leading to a change in consequence category;

e) for conformance with the conditions of this authority;

f) for conformance with the ‘as constructed’ drawings;

g) for the adequacy of the available storage in each regulated dam, based on an actual observation or observations taken after 31 May each year but prior to 1 November of that year, of accumulated sediment, state of the containment barrier and the level of liquids in the dam (or network of linked containment systems); and

h) for evidence of conformance with the current operational plan.

E23 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.

E24 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).*

E25 The holder must:

a) upon receipt of the annual inspection report, consider the report and its recommendations and take action to ensure that the regulated structure will safely perform its intended function; and

b) within twenty (20) business days of receipt of the annual inspection report, notify the administering authority in writing, of the recommendations of the inspection report and the actions being taken to ensure the integrity of each regulated structure.

E26 A copy of the annual inspection report must be provided to the administering authority upon request within ten (10) business days.

Design Storage Allowance

E27 On 1 November of each year, storage capacity must be available in each regulated dam (or network of linked containment systems with a shared DSA volume), to meet the design storage allowance (DSA) volume for the dam (or network of linked containment systems).

E28 The holder must, as soon as possible and within forty-eight (48) hours of becoming aware that the regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on 1 November of any year, notify the administering authority.

E29 The holder must, immediately on becoming aware that a regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on 1 November of any year, act to prevent the occurrence of any unauthorised discharge from the regulated dam or linked containment systems.

Performance Review

E30 The holder must assess the performance of each regulated dam or linked containment system over the preceding November to May period based on actual observations of the available storage in each regulated dam or linked containment system taken prior to 1 July of each year.

E31 The holder must take action to modify its water management or linked containment system so as to ensure that the regulated dam or linked containment system will perform in accordance with the requirements of this environmental authority, for the subsequent November to May period.

Note: Action may include seeking the necessary approvals for physical modification of a regulated dam.

Transfer Arrangements

E32 The holder must provide a copy of any reports, documentation and certifications prepared under this authority, including but not limited to any Register of Regulated Structures, consequence assessment, design plan and other supporting documentation, to a new holder of this environmental authority and the administering authority on transfer of this authority.

Decommissioning and Rehabilitation

E33 Prior to the cessation of the environmentally relevant activity, each regulated structure must be decommissioned such that:

a) ongoing environmental harm is minimised by the regulated structure by:

   (i) becoming a safe site for humans and animals at the completion of rehabilitation; or

   (ii) becoming a stable landform, that no longer contains flowable substances and minimises erosion impacts; or

   (iii) not allowing for acid mine drainage; or

   (iv) being approved or authorised under relevant legislation for a beneficial use; or

   (v) being a void authorised by the administering authority to remain after decommissioning; and

b) the regulated structure is compliant with all other relevant rehabilitation requirements of this authority.

Register of Regulated Structures

E34 A Register of Regulated Structures must be established and maintained by the holder for each regulated structure.

E35 The holder 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.

E36 The holder must make a final entry of the required information in the Register of Regulated Structures once compliance with condition E12 and E14 has been achieved.

E37 The holder must ensure that the information contained in the Register of Regulated Structures is current and complete on any given day.

E38 All entries in the Register of Regulated Structures must be approved by the chief executive officer for the holder of this authority, or their delegate, as being accurate and correct.

E39 The holder 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.

END OF CONDITIONS FOR SCHEDULE E

Schedule F – Noise and Vibration

General

F1 The holder of this environmental authority must ensure that noise and vibration from the mining activity does not cause environmental harm beyond the boundary of the licensed place.

Monitoring

F2 The holder of the environmental authority must ensure that noise and vibration generated by mining activities does not cause the criteria in Schedule F – Table F1 (Acoustic Quality Objectives) to be exceeded beyond the boundary of the licensed place.

Schedule F – Table F1 (Acoustic Quality Objectives)

Noise Level dB(A) measured as:	Monday to Saturday			Sundays and Public Holidays		
	7am to 6pm	6pm to 10pm	10pm to 7am	9am to 6pm	6pm to 10pm	10pm to 9am
$L_{A10, adj, 10 mins}$	BG+5	BG+5	BG+3	BG+5	BG+5	BG+0
$L_{A1, adj, 10 mins}$	BG+10	BG+10	BG+5	BG+10	BG+10	BG+5

Note: In the event that the measured background noise level (BG) is less than 25 dB(A), then 25 dB(A) can be substituted for the measured background level.

END OF CONDITIONS FOR SCHEDULE F

Schedule G – Definitions

Key terms and/or phrases used in this document are defined in this section. Applicants should note that 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.

"administering authority" means:

a) for a matter, the administration and enforcement of which has been devolved to a local government under section 514 - the local government; or
b) for another matter - the chief executive.

"AHD" means 'Australian Height Datum' which is the Australian national standard of geodetic datum for altitude measurements and is measured in meters (m). The level of 0.0 meters (m) AHD approximates the mean sea level (as previously measured for the period 1966-1968).

"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.

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

"ANZECC (2000)" means *the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)* published by the *Australian and New Zealand Environment and Conservation Council* and *the Agriculture and Resource Management Council of Australia and New Zealand* or any equivalent update/replacement guidelines.

"ANZG (2018)" means Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Previously ANZECC (2000).

"ANZGFMWQ (2015)" means default guideline values proposed for ANZG2018 and still under consideration.

"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.

"assessed" and **"assessment"** by a suitably qualified and experienced person in relation to a consequence 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 of the assessment:

(a) exactly what has been assessed and the precise nature of that determination;
(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.

"authority" means environmental authority (mining activities) under the *Environmental Protection Act 1994*.

"certification", means assessment and approval must be undertaken by a suitably qualified and experienced person in relation to any assessment or documentation required by the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)*, including design plans, 'as constructed' drawings and specifications, construction, operation or an annual report regarding regulated structures, undertaken in accordance with the Board of Professional Engineers of Queensland Policy "Certification by RPEQs (ID: 1.4 (2A)).

"certifying", **"certify"** or **"certified"** have a corresponding meaning as 'certification'.

"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 the purpose of preparing a design plan.

"chief executive" means the chief executive of the Department of Environment and Heritage Protection or its successor.

"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.

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

"consequence 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 Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)*.

"dam" means a land-based structure or a void that contains, diverts or controls flowable substances, and includes any substances that are thereby contained, diverted or controlled by that land-based structure or void. 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.

"dam crest volume" means the volume of material (liquids and/or solids) that could be within the walls of a dam at any time when the upper level of that material is at the crest level of that dam. That is, the instantaneous maximum volume within the walls, without regard to flows entering or leaving (eg via spillway).

"Design Storage Allowance" or **"DSA"** means an available volume, estimated in accordance with the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)* published by the Department of Environment and Heritage Protection, that must be provided in a dam as at 1 November each year in order to prevent a discharge from that dam to an annual exceedance probability (AEP) specified in that Manual.

"designer" for the purposes of a regulated dam, means the certifier of the design plan for the regulated dam.

"emergency action plan" means documentation forming part of the operational plan held by the holder or a nominated responsible officer, that identifies emergency conditions that sets out procedures and actions that will be followed and taken by the dam owner and operating personnel in the event of an emergency. The actions are to minimise the risk and consequences of failure, and ensure timely warning to downstream communities and the implementation of protection measures. The plan must require dam owners to annually update contact details that are part of the plan, and to comprehensively review the plan at least every five years.

"environmental authority" means a licence or approval issued pursuant to the *Environmental Protection Act 1994.*

"flow event" means a surface water flow in a drainage feature or watercourse that occurs as a result of rainfall.

"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.

"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.

"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 consequence category in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)*.

"infrastructure" means dams, roads and tracks, buildings and other structures built for the purpose of mining activities but does not include facilities required for the long-term management of mining impacts or the protection of potential resources. Such facilities include dams containing hazardous waste, waste rock dumps, voids, or ore stockpiles and buildings or other structures whose ownership can be transferred and which have a residual beneficial use for the next owner of the operational land or the background land owner.

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

"leachate" means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the operational land which contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

"levee" means an embankment that only provides 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.

"low consequence dam" means any dam that is not a high or significant consequence category as assessed using the "*Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)*; and

"major anions" in regards to water quality monitoring, includes at minimum the carbonate ion (CO_3^{2-}), bicarbonate ion (HCO_3^-) and chloride ion (Cl^-).

"major cations" in regards to water quality monitoring, includes at minimum the sodium ion (Na+), potassium ion (K+), magnesium ion (Mg^2+) and calcium ion (Ca^2+).

"Mandatory Reporting Level" or **"MRL"** means a warning and reporting level determined in accordance with the criteria in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)* published by the administering authority.

"modification" or **"modifying"** (see definition of "construction").

"mineral" means a substance which normally occurs naturally as part of the earth's crust or is dissolved or suspended in water within or upon the earth's crust and includes a substance which may be extracted from such a substance, and includes—
(a) clay if mined for use for its ceramic properties, kaolin and bentonite;
(b) magnetite;
(c) metal or metalloid compounds, including but not limited to compounds containing gold, copper, silver, lead, nickel, and zinc.
(d) foundry sand;
(e) hydrocarbons and other substances or matter occurring in association with shale or coal and necessarily mined, extracted, produced or released by or in connection with mining for shale or coal or for the purpose

of enhancing the safety of current or future mining operations for coal or the extraction or production of mineral oil therefrom;
(f) limestone if mined for use for its chemical properties;
(g) marble;
(h) mineral oil or gas extracted or produced from shale or coal by in situ processes;
(i) peat;
(j) salt including brine;
(k) shale from which mineral oil may be extracted or produced;
(l) silica, including silica sand, if mined for use for its chemical properties;
(m) rock mined in block or slab form for building or monumental purposes;

but does not include—
(n) living matter;
(o) petroleum within the meaning of the *Petroleum Act 1923*;
(p) soil, sand, gravel or rock (other than rock mined in block or slab form for building or monumental purposes) to be used or to be supplied for use as such, whether intact or in broken form;
(q) water.

"operational plan" for a dam 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.

"prescribed environmental matters" has the meaning in section 10 of the *Environmental Offsets Act 2014*, limited to the matters of State environmental significant listed in schedule 2 of the Environmental Offsets Regulation 2014.

"prescribed native wildlife" for the purposes of this environmental authority, means native wildlife (including plants) listed as near threatened, vulnerable or endangered, under the *Nature Conservation (Wildlife) Regulation 2006.*

"receiving environment" in relation to an activity that causes or may cause environmental harm, means the part of the environment to which the harm is, or may be, caused. In relation to releases as defined in this environmental authority, the receiving environment can be further defined as any waters beyond the boundary of ML4867 AND/OR ML4919.

"reference site" specified in Schedule D - Table D4 (Receiving Waters Monitoring Locations).

"Register of Regulated Structures" includes**:**
(a) Date of entry in the register;
(b) Name of the structure, its purpose and intended/actual contents;
(c) The consequence category of the dam as assessed using the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)*;
(d) Dates, names, and reference for the design plan plus dates, names, and reference numbers of all document(s) lodged as part of a design plan for the dam;
(e) Name and qualifications of the suitably qualified and experienced person who certified the design plan and 'as constructed' drawings;
(f) For the regulated dam, other than in relation to any levees –
    i. The dimensions (metres) and surface area (hectares) of the dam measured at the footprint of the dam;
    ii. Coordinates (latitude and longitude in GDA94) within five metres at any point from the outside of the dam including its storage area
    iii. Dam crest volume (megalitres);
    iv. Spillway crest level (metres AHD).
    v. Maximum operating level (metres AHD);
    vi. Storage rating table of stored volume versus level (metres AHD);

vii. Design storage allowance (megalitres) and associated level of the dam (metres AHD);
viii. Mandatory reporting level (metres AHD);

(g) The design plan title and reference relevant to the dam;
(h) The date construction was certified as compliant with the design plan;
(i) The name and details of the suitably qualified and experienced person who certified that the constructed dam was compliant with the design plan;
(j) Details of the composition and construction of any liner;
(k) The system for the detection of any leakage through the floor and sides of the dam;
(l) Dates when the regulated dam underwent an annual inspection for structural and operational adequacy, and to ascertain the available storage volume for 1 November of any year;
(m) Dates when recommendations and actions arising from the annual inspection were provided to the administering authority;
(n) Dam water quality as obtained from any monitoring required under this authority as at 1 November of each year.

"regulated dam" means any dam in the significant or high consequence category as assessed using the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)* published by the administering authority.

“regulated structure” means any structure in the significant or high consequence category as assessed using the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)* published by the administering authority. A regulated structure does not include:

- 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;
- a sump or earthen pit used to store residual drilling material and drilling fluid only for the duration of drilling and well completion activities.

“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.

“release” means the discharge of water (whether intentional or due to failure to prevent) to the receiving environment from any area, structure or feature located on a mining lease listed on this environmental authority.

“sensitive place” means;

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- an educational institution; or
- a medical centre or hospital; or
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or
- a public park or gardens; or
- 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.

“significant residual impact” has the meaning in section 8 *Environmental Offsets Act 2014*.

“spotter/catcher” means a person who holds a rehabilitation permit in accordance with section 207 of the *Nature Conservation (Wildlife Management) Regulation 2006* for the purpose of care and rehabilitation of a sick, injured or orphaned protected animal, or a protected animal whose habitat has been, or will be, destroyed by human activity or a natural disaster.

“stable” means land form dimensions are or will be stable within tolerable limits now and in the foreseeable future. Stability includes consideration of geotechnical stability, settlement and consolidation allowances, bearing capacity (traffic ability), erosion resistance and geochemical stability with respect to seepage and contaminant generation.

“structure” means dam or levee.

"suitably qualified and experienced person" in relation to regulated structures means a person who is a Registered Professional Engineer of Queensland (RPEQ) under the provisions of the Professional Engineers Act 2002, and has demonstrated competency and relevant experience:

- for regulated dams, an RPEQ who is a civil engineer with the required qualifications in dam safety and dam design.
- for regulated levees, an RPEQ who is a civil engineer with the required qualifications in the design of flood protection embankments.

Note: It is permissible that a suitably qualified and experienced person obtain subsidiary certification from an RPEQ who has demonstrated competence and relevant experience in either geomechanics, hydraulic design or engineering hydrology.

“system design plan” means a plan that manages an integrated containment system that shares the required DSA volume across the integrated containment system.

“tolerable limits” means that a range of values could be accepted to achieve an overall environmental management objective (eg a range of settlement of a tailing capping could still meet the objective of draining the cap quickly, preventing pondage and limiting infiltration and percolation).

"watercourse" has the same meaning given in the *Water Act 2000*.

“waters” includes a river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea) or any part thereof.

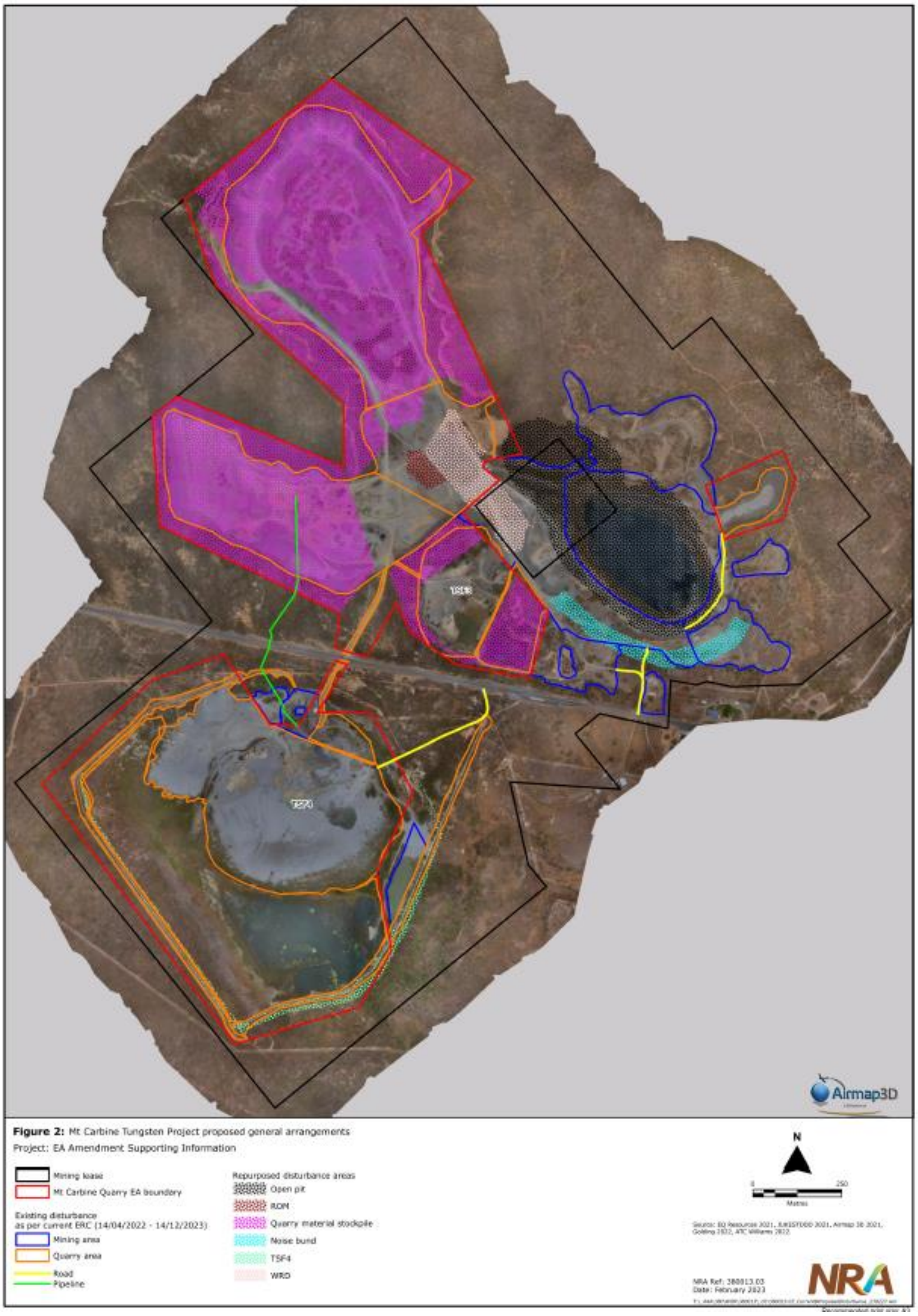
“water table level” means the top of the saturated zone of an unconfined aquifer (in m AHD), the standing water level.

“wet season” means the time of year, covering one or more months, when most of the average annual rainfall in a region occurs. For the purposes of DSA determination this time of year is deemed to extend from 1 November in one year to 31 May in the following year inclusive.

END OF CONDITIONS FOR SCHEDULE G

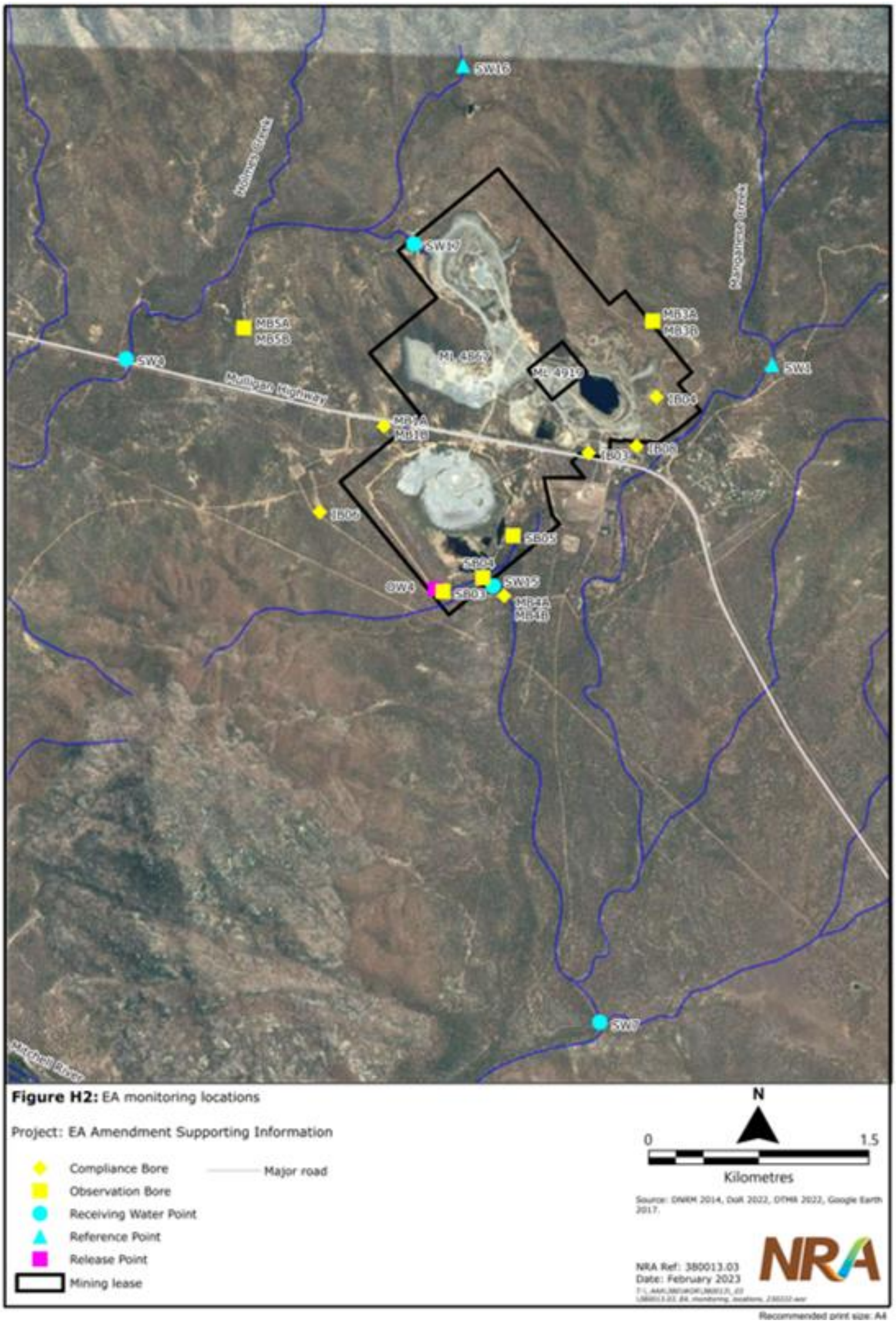
Schedule H – Maps / Plans

Schedule H – Figure H1 (Project Infrastructure Layout)



Queensland Government

Schedule H – Figure H2 (Monitoring and Release Points)



END OF CONDITIONS FOR SCHEDULE H

<u>END OF PERMIT</u>