Permit

Environmental Protection Act 1994

Environmental Authority

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

Environmental authority number: EPML00707713

Environmental authority takes effect on 14 April 2026

Environmental authority holder(s)

Name(s)	Registered address
QCoal Sonoma Pty Ltd	Level 15, 40 Creek Street BRISBANE CITY QLD 4000
CSC Sonoma Pty Ltd	Level 7, 300 Queen Street BRISBANE CITY QLD 4000
JS Sonoma Pty Ltd	Suite 3B, Level 33, 52 Martin Place SYDNEY NSW 2000
Watami (QLD) Pty Ltd	Level 2, 262 Adelaide Street BRISBANE CITY QLD 4000

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Schedule 3 13 - Mining black coal	ML 10325, ML 10326, ML 10327, ML 700075
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)	
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)	
Ancillary 31 - Mineral processing 2(b) - Processing, in a year, the following quantities of mineral products, other than coke - more than 100,000t	
Ancillary 60 - Waste disposal 2(e) - Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(b) - more than 20,000t but not more than 50,000t	
Ancillary 62 - Resource recovery and transfer facility operation 1(c) - Operating a facility for receiving and sorting, dismantling, baling or temporarily storing category 2 regulated waste	

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Environmentally relevant activity/activities	Location(s)
Ancillary 62 - Resource recovery and transfer facility operation 1(d) - Operating a facility for receiving and sorting, dismantling, baling or temporarily storing category 1 regulated waste	
Ancillary 63 - Sewage Treatment 1(a-i) - Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of 21 to 100EP - if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme	

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 land give written notice to the administering authority if they become aware of the following:

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

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

Take effect

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

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

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

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

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

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

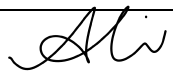
(b) if a development permit for a material change of use of premises under the *Planning Act 2016* is necessary for carrying out an activity that related to the authority—the day the development permit takes effect; or

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

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

The anniversary day of this EA is the same day each year as the effective date. The payment of the annual fee will be due each year on this day.

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

	14 April 2026
Signature	Date

Alison Cummings

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

Enquiries:

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Phone: (07) 4987 9320
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Obligations under the Environmental Protection Act 1994

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

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

Other permits required

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

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

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

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

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

Conditions of environmental authority

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 consists of the following Schedules, Definitions and Figures:

Schedule A: General

Schedule B: Air

Schedule C: Waste Management

Schedule D: Noise and Vibration

Schedule E: Groundwater

Schedule F: Surface Water

Schedule G: Sewage Treatment

Schedule H: Land and Rehabilitation

Schedule I: Dams and Levees

Schedule J: Watercourse Diversions

Schedule K: Biodiversity

Definitions

Figures:

Figure 1 – Authorised disturbance area and groundwater monitoring locations

Figure 2 – Authorised mine domains as of October 2025

Figure 3 – Mine affected water release points, sources and receiving waters

Figure 4 (a) – Location of pre-mining Matters of State Environmental Significance (ML10327, ML700075)

Figure 4 (b) – Pre-mining potential habitat for Koala (ML10327, ML700075)

Figure 4 (c) – Pre-mining potential habitat for Squatter Pigeon (ML10327, ML700075)

Schedule A: General	
Condition number	**Condition**
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	No more than **6.5 Mtpa (million tonnes per annum) of ROM (run-of-mine)** is to be extracted on site in a year.
A3	In carrying out the mining activity authorised by this environmental authority, disturbance of land on **Figure 1 – Authorised disturbance area and groundwater monitoring locations:** (a) may occur within the areas marked 'A', but only in accordance with condition **A5**; (b) must not occur in the areas marked 'B'; and (c) may occur in the areas marked 'C', but only in accordance with conditions **A4** and **A5**.
A4	Any disturbance within the areas marked 'C' on **Figure 1 – Authorised disturbance area and groundwater monitoring locations** is only authorised to the extent reasonably necessary for exploration activities, roads, fences, underground services, low-impact telecommunications facilities, electrical sub-stations, transmission grid works and supply network works, minor clean water diversions and drains, storage depots, similar minor infrastructure, and ancillary facilities for any of the above. The only water course diversions authorised under category 'C' are the existing Two Mile Creek and Coral Creek diversions.
A5	Any disturbance within the areas marked 'A' or 'C' on **Figure 1 – Authorised disturbance area and groundwater monitoring locations** must: (a) not impact adversely on areas marked 'B'; (b) not exceed **1,363ha** in areas marked 'A'; and (c) substantial changes to the location of pits, out of pit waste rock dumps and out of pit co-disposal area, compared to the current mine layout as illustrated in **Figure 2 – Authorised mine domains as of October 2025** must be discussed with the administering authority prior to making the changes**.** **Note**: A substantial change is where a proposed change to the location of pits and/or out of pit waste rock dumps, and out of pit co-disposal area could result in a change to the impacts on environmental values.
A6	**Maintenance of plant and equipment** 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 properly calibrated.

A7	**Monitoring and sampling** All monitoring and sampling required by conditions of this environmental authority must be carried out, interpreted, and recorded by an appropriately qualified person.
A8	**Plans, reports, and programs** Any plans, reports or programs required by a condition of this environmental authority must be developed and reviewed by an appropriately qualified person.
A9	**Record Keeping** Unless otherwise specified by a condition of this environmental authority, all monitoring records or reports required by this environmental authority must be kept for a period of not less than **5 years**.
A10	Upon request from the administering authority, copies of all records, plans, monitoring results and other documentation specifically required by the conditions of this environmental authority must be made available and provided to the administering authority within: (a) **10 business days**; or (b) an alternative timeframe agreed between the administering authority and the environmental authority holder.
A11	**Risk management** The holder of this environmental authority must develop and implement a risk management system for mining activities which mirrors the content requirements of the Standard for Risk Management (ISO31000:2018), or the latest edition of an Australian Standard for risk management, to the extent relevant to the environmental management, prior to the commencement of mining activities.
A12	**Notification of emergencies, incidents, and exceptions** 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.
A13	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.
A14	**Complaints** The following details must be recorded for all complaints received by the EA holder: (a) date and time the complaint was received; (b) if authorised by the person making the complaint, their name, address and contact number; and (c) reason and details of the complaint.

A15	As soon as reasonably practicable but no later than **10 business days** after receiving a complaint under condition **A14** (or a longer period agreed to in writing by the administering authority), an investigation must be undertaken and recorded to determine: (a) any potential circumstances and actions on site that may have contributed to the basis of the complaint; (b) conclusions formed; (c) reasonable and practicable measures that will be implemented to address the complaint; (d) abatement measures to minimise or prevent complaints of a similar nature from arising in the future; and (e) the outcome of the investigation.
A16	As soon as reasonably practicable but no later than **20 business days** from the completion of the investigation into a complaint under condition **A15** (or a longer period agreed to in writing by the administering authority), which has confirmed that circumstances and actions on site have contributed to the basis of the complaint, the reasonable and practicable measures identified in the investigation must be implemented.
A17	The reason for the complaint in A14, outcome of the investigation carried out under condition **A15,** and the abatement measures implemented under condition **A16** must be recorded.
A18	**Alternative Arrangements** The environmental authority holder may enter into alternative arrangements with the owners of sensitive or commercial places identified in a relevant management plan.
A19	Where an alternative arrangement has been entered into for a sensitive or commercial place, that place is no longer considered to be a sensitive or commercial place.
A20	**Third Party Reporting** The holder of this environmental authority must: (a) every **3 years**, obtain from an appropriately qualified third party a report on compliance with the conditions of this environmental authority; and (b) provide the report to the administering authority within **90 days** of its completion.
A21	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 **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 I: Dams and Levees** 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.

Schedule B: Air	
Condition number	**Condition**
B1	**Dust nuisance** The release of dust and/or particulate matter resulting from the mining activity must not cause an environmental nuisance at any sensitive or commercial place.
B2	When requested by the administering authority or as a result of a complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer), dust and particulate monitoring must be undertaken, and the results thereof notified to the administering authority within **14 days** following completion of monitoring.
B3	Dust and particulate monitoring for condition **B2** must be carried out in accordance with **Table B1 – Monitoring locations, parameters, and methods** and at a place or places relevant to the potentially affected dust sensitive place as agreed upon with the administering authority.
B4	Where monitoring identifies instances where a concentration specified in **Table B2 – Air quality limits** is exceeded at a sensitive or commercial place, the environmental authority holder must: (a) within **10 business days** submit an investigation report to the administering authority that includes: (i) the air quality data at the monitoring location; (ii) a description of meteorological conditions; (iii) the air quality data upwind of the mining activities (if known); (iv) the contribution of the Sonoma mining activities to the exceedance (if any); and (v) if the exceedance was caused by the mining activities, the immediate measures taken to reduce dust generated by the mining activities
B5	If the investigation under condition **B4** indicates that the exceedance was caused by the mining activities, the environmental authority holder must submit to the administering authority an additional report within **40 business days** following completion of monitoring, which includes: (a) further details as to the cause of the exceedance where available; (b) whether any environmental harm has occurred; (c) outline any actions required to mitigate environmental harm; and (d) additional measures to reduce dust generated by the mining activities.
B6	**Airshed Assessment** By 30 January 2028, an impact assessment will be submitted to the administering authority using the real-time continuous data collected from the stations specified in **Table B1 – Monitoring locations, parameters, and methods** to: (a) Provide a summary of the dust emissions generated from the mining operation over the 24 month period of monitoring; (b) Provide an overview of the meteorological and regional conditions; (c) Identify any actual sensitive receptors to the operation; (d) Identify any actual impacts to the sensitive receptors; and (e) Include any proposed changes or improvements to the monitoring network.

B7	**Continuous monitoring** Monitoring at the locations specified in **Table B1 – Monitoring locations, parameters, and methods** or as otherwise agreed with the administering authority must be implemented by **30 January 2026**.
B8	Meteorological conditions must be monitored in accordance with and at locations specified in **Table B1 – Monitoring locations, parameters, and methods.**
B9	**Submission of monitoring data** All monitoring data collected at the locations specified in **Table B1 – Monitoring locations, parameters, and methods** or as otherwise agreed with the administering authority, must be submitted to administering authority upon request.
B10	**Dust Management Plan** A Dust Management Plan must be developed and implemented for all stages of the authorised mining activities on the site.
B11	The Dust Management Plan must incorporate a program for continuous improvement for the management of dust and particulate matter resulting from the mining activities with respect to, but not limited to: (a) the collection of air quality and meteorological data using the monitoring methods described in **Table B1 – Monitoring locations, parameters, and methods;** (b) a system to identify adverse meteorological conditions likely to produce elevated levels of dust and/or other air quality parameters at the locations specified in **Table B1 – Monitoring locations, parameters, and methods** due to the mining activities; and (c) a Trigger Action Response Program (TARP).
B12	The Dust Management Plan required by condition **B10** must be reviewed by **30 September** each calendar year, with the first review commencing in **2026** and any recommendations must be incorporated into the Dust Management Plan and implemented.
B13	**Odour** The release of noxious or offensive odour(s) or any other noxious or offensive airborne contaminant(s) resulting from the mining activity must not cause an environmental nuisance at any sensitive or commercial place.
B14	If the administering authority receives a complaint related to odour nuisance, the environmental authority holder must address the complaint in accordance with conditions **A14, A15, A16 and A17** of this environmental authority.

Table B1 – Monitoring locations, parameters, and methods

Monitoring Point	Latitude (decimal degrees, GDA2020)	Longitude (decimal degrees, GDA2020)	Monitoring Parameter	Monitoring Frequency[2]	Monitoring Method
DS 1	-20.75084[1]	147.85788[1]	PM_{10}	Real time continuous	AS/NZS 3580.9.11:2022 AS/NZS 3580.19:2020[3]
DS 2	-20.61761[1]	147.83877[1]	PM_{10}	Real time continuous	AS/NZS 3580.9.11:2022 AS/NZS 3580.19:2020[3]
Sonoma Mine Infrastructure Area	-20.6384	147.8560	Weather (wind speed, wind direction, temperature rainfall)	Real time continuous	AS/NZS 3850.14:2014 AS/NZS 3580.19:2020[3]

[1]General locations, stations may be relocated depending on predominant wind direction and location of potential sensitive receptors. If required to amend location, the EA holder must notify the administering authority to determine it is still suitable and notify the administering authority upon movement.

[2]Continuous monitoring may not occur in situations of equipment breakdown, damage or failure, power loss, scheduled maintenance and performance specification testing.

[3] **Continuous monitoring** required by condition B7 and Table B1 – Monitoring locations, parameters, and methods, instrument availability and data quality must be maintained to ensure that 75% of hourly averages in each calendar quarter and 75% of 24 hour averages are valid when assessed in accordance with AS3580.19 *Methods for sampling and analysis of ambient area – Method 19: Ambient air quality data validation and reporting.*

Table B2 – Air quality limits

Monitoring Location	Parameter	Air Quality Limit [2, 3]	Monitoring Method
All applicable compliance locations as specified in **Table B1;** or as per condition **B3**	PM_{10}	50µg/m^3 (24-hr avg)[1]	AS/NZS 3580.9.6:2015 AS/NZS 3580.9.7:2009 AS3580.9.8:2022 AS358.9.9:2017 AS/NZS 3580.9.11:2022 AS/NZS 3580.19:2020
	TSP	90µg/m^3	AS/NZS 3580.9.3:2015 AS/NZS 3580.19:2020 *Any alternative method of monitoring TSP that may be permitted by the Air Quality Sampling Manual as published from time to time by the administering authority.*
	Dust deposition	120mg/m^2/day	AS/NZS3580.10.1:2016 AS/NZS 3580.19:2020

[1]Cumulative (i.e. incremental increase in concentrations due to the Sonoma Coal Mine plus background concentrations due to all other sources).

[2]TSP is an annual calculation.

[3]Excludes events such as bushfires, prescribed burning, dust storms, fire incidents, illegal activities

Schedule C: Waste Management	
Condition number	**Condition**
C1	**Burning Waste** 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.
C2	The holder of this environmental authority may burn vegetation cleared in the course of carrying out extraction activities provided that the activity does not cause environmental harm at any sensitive place or commercial place.
C3	**Tailings disposal** Procedures for managing tailings disposal must be in place and should include: (a) containment of tailings; (b) the management of seepage and leachates both during operation and the foreseeable future; (c) the control of fugitive emissions to air; (d) a program of progressive sampling and characterisation to identify acid producing potential and metal concentrations of tailings; (e) maintaining records of the relative locations of any other waste stored within the tailings; (f) rehabilitation strategy; and (g) monitoring of rehabilitation, research and/or trials to verify the requirements and methods for decommissioning and final rehabilitation of tailings, including the prevention and management of acid mine drainage, erosion minimisation and establishment of vegetation cover.
C4	**Storage and disposal of tyres** Tyres must be stored and disposed of in accordance with the latest version of the Operational policy - *Disposal and storage of scrap tyres at mine sites* (ESR/2016/2380).
C5	The holder of the environmental authority must keep a record of the number and location of tyres disposed of in accordance with condition **C4**.
C6	**Waste management Plan** The holder of this environmental authority must develop, document, and implement a non-mineral waste management plan for all authorised activities.

C7	The waste management plan required under condition **C6** must include: (a) a description of how waste is generated; (b) a program for reusing, recycling, or disposing of all wastes; (c) the waste management control strategies including: (i) the type of wastes; (ii) segregation of the wastes; (iii) storage of the wastes; (iv) transport of the wastes; (v) monitoring and reporting matters concerning the waste; (vi) emergency response planning; (vii) disposal, reused and recycling options; (d) the hazard characteristics of the wastes generated including disposal procedures for regulated wastes; (e) how the waste will be managed in accordance with the waste and resource management hierarchy, including a description of the types of waste that will be dealt with under each of the waste management practices in the waste management hierarchy (i.e. avoidance, reuse, recycling, energy recovery, disposal); (f) how the waste will be stored, handled, and transferred in a proper and effective manner; (g) procedures for identifying and implementing opportunities to minimise the amount of waste generated, promote efficiency in the use of resources and improve the waste management practices employed; (h) procedures for dealing with accidents, spills, and other incidents that may impact on waste management; (i) details of any management system employed, or planned to be employed, to deal with the waste; (j) indicators or other criteria on which the performance of the waste management practices will be assessed; (k) staff training and induction to the waste management program; (l) a system for regular review; and (m) identify responsible staff (positions) for implementing, managing, and reporting under the Waste Management Plan.
C8	The non-mineral waste management plan required under condition **C6** must be regularly reviewed and updated at intervals of no greater than **5 years.**
C9	Regulated waste records must be kept for **5 years**, and must include the following information: (a) date of pickup of waste; (b) description of waste; (c) cross reference to relevant waste transport documentation; (d) quantity of waste; (e) origin of the waste; (f) destination of the waste; and (g) intended fate of the waste, for example, type of waste treatment, reprocessing, or disposal. **Note**: Records of documents maintained in compliance with a waste tracking system established under the *Environmental Protection Act 1994* or any other law for regulated waste will be deemed to satisfy this condition.
C10	Records of trade and regulated wastes or material leaving the mining lease for recycling or disposal, including the final destination and method of treatment, must be in accordance with the *Waste Reduction and Recycling Act 2011.*

C11	All regulated waste received at and removed from the site must be transported by a person who holds a current authority to transport such waste under the provisions of the *Environmental Protection Act 1994*.
C12	Except as otherwise provided by the conditions of this authority, all waste removed from the site must be taken to a facility that is lawfully allowed to accept such waste under the provisions of the *Environmental Protection Act 1994*.

Schedule D: Noise and Vibration	
Condition number	**Condition**
D1	**Noise nuisance** Noise resulting from the authorised mining activities must not cause an environmental nuisance at any sensitive or commercial place
D2	When requested by the administering authority, or as a result of a complaint noise monitoring must be undertaken and the results must be notified within **10 business days** to the administering authority following completion of monitoring.
D3	Monitoring undertaken in accordance with condition **D2** must be carried out at a place or places relevant to the potentially affected noise sensitive place as agreed upon with the administering authority.
D4	All noise monitoring which is conducted as per condition **D2** must be undertaken in accordance with the following noise monitoring requirements: (a) all noise monitoring must be conducted in accordance with the administering authority's most recent version of the *Noise Measurement Manual* (ESR/2016/2195), the relevant Australian Standard and the *Environmental Protection Regulation 2019* (Chapter 5, Part 4).; (b) source noise levels must be expressed as component noise levels for the purposes of comparison with noise limits; (c) all noise measurements must be taken using an appropriate sound level meter as classified under AS IEC 61672; and (d) monitoring location(s) must be relevant to the matter(s) under investigation.
D5	If the results of the noise monitoring requested in accordance with condition **D2** exceed the limits in **Table D1 – Noise limits**, then the environmental authority holder must: (a) address the complaint including the use of appropriate dispute resolution if required; and (b) implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance.
D6	**Low Frequency Noise** Noise emissions from the activity, when including substantial low frequency noise, must not cause an overall sound pressure level at a noise sensitive place exceeding 55 dB(Z). **Note**: Substantial low frequency noise means a noise emission that has an unbalanced frequency spectrum shown in a one-third octave band measurements, with a predominant component located within the frequency range 10 to 200 Hz.
D7	**Blasting** The holder of this environmental authority must ensure that blasting does not cause the limits for peak particle velocity and air blast overpressure in **Table D2 – Blasting noise limits** to be exceeded at a sensitive place or commercial place. Peak particle velocity and/or air blast overpressure resulting from blasting must not cause an environmental nuisance at any sensitive or commercial place.

D8	The holder of this environmental authority must develop and implement a blast monitoring program to monitor compliance with **Table D2 – Blasting noise limits** for: (a) at least 50% of all blasts undertaken on this site in each month at the nearest and most affected sensitive place(s) or commercial place(s); and (b) all blasts conducted during any time period specified by the administering authority at the nearest and most affected sensitive place(s) or commercial place(s) or another such place to investigate an allegation of environmental nuisance caused by blasting.
D9	If the results of blast monitoring undertaken as per condition **D7** exceed the limits in **Table D2 – Blasting noise limits**, then the environmental authority holder must investigate and report to the administering authority within **10 business days** following completion of monitoring.

Table D1 – Noise limits

Noise level measured in dB(A)	Monday to Saturday			Sunday and Public Holidays		
	7am-6pm	6pm-10pm	10pm-7am	9am-6pm	6pm-10pm	10pm-9am
	Noise measured at a nuisance **sensitive place**					
$LA_{eq\ adj,10}$	Background Plus 5	Background Plus 5	Background Plus 0	Background Plus 5	Background Plus 5	Background Plus 0
$LA_{1adj,10}$	Background Plus 10	Background Plus 10	Background Plus 5	Background Plus 10	Background Plus 10	Background Plus 5
	Noise measured at a **commercial place**					
$LA_{eq\ adj,10}$	Background Plus 10	Background Plus 10	Background Plus 5	Background Plus 10	Background Plus 10	Background Plus 5
$LA_{1adj,10}$	Background Plus 15	Background Plus 15	Background Plus 10	Background Plus 15	Background Plus 15	Background Plus 10

Associated notes and requirements:

(a) 'Background' means background noise level, measured in the absence of the noise under investigation, as **LA90,T** being the A-weighted sound pressure level exceeded for ninety (90) per cent of the time period of 15 minutes, using Fast response.

(b) "**LAeq adj,T"** means the equivalent continuous A-weighted sound pressure level, adjusted for noise character, measured in the presence of the noise under investigation over a time period of 10 minutes, using Fast response.

(c) "**LA1 adj,T**" means the A-weighted sound pressure level, adjusted for noise character, measured in the presence of the noise under investigation and exceeded for one (1) per cent of the time period of 10 minutes, using Fast response.

Table D2 – Blasting noise limits

Blasting noise limits	Sensitive or commercial blasting noise limits place limits	
	Daytime **7am to 6pm**	**Evening/Night/Early Morning** **6pm to 7am**
Airblast overpressure	115 dB (Linear) Peak for nine (9) out of ten (10) consecutive blasts initiated and not greater than 120 dB (Linear) Peak at any time	No blasting is allowed during these times
Ground vibration peak particle velocity	5mm/second peak particle velocity for nine (9) out of ten (10) consecutive blasts and not greater than 10 mm/second peak particle velocity at any time	No blasting is allowed during these times

Schedule E: Groundwater	
Condition number	**Condition**
E1	Contaminants must not be released directly or indirectly to groundwater.
E2	All groundwater sampling and monitoring methods must be in accordance with the latest version of the administering authority's *Monitoring and Sampling Manual 2018*, unless otherwise approved by the administering authority.
E3	**Review of groundwater quality triggers** By **30 September 2026**, a report must be provided to the administering authority that reviews the continued suitability of groundwater quality trigger levels in **Table E2 – Groundwater quality triggers** based on data from at least **8 monitoring events**.
E4	All groundwater quality and groundwater level monitoring data collected in accordance with the conditions of this environmental authority must be provided to the administering authority via WaTERS with each annual return**.**
E5	**Groundwater quality** Groundwater quality must be monitored: (a) at the locations specified in **Table E1 – Groundwater monitoring locations and frequency** and illustrated in **Figure 1 – Authorised disturbance area and groundwater monitoring locations;** (b) at the frequencies specified in **Table E1 – Groundwater monitoring locations and frequency**; and (c) for the quality characteristics listed in **Table E2 – Groundwater quality triggers.**
E6	If monitoring results from groundwater bores identified in **Table E1 – Groundwater monitoring locations and frequency** exceed any of the trigger levels stated in **Table E2 – Groundwater quality triggers** on **three (3)** consecutive monitoring occasions the environment authority holder must (a) notify the administering authority via WaTERS within two business days of receiving the results; and (b) complete an investigation under condition **E7**. **Note:** Where **3 consecutive exceedances** of a trigger level have occurred and are being investigated in accordance with **E6(b)** of this condition, no further reporting under **E6(a)** is required for subsequent trigger events for that quality characteristic during the investigation period.
E7	**Exceedance investigation - Groundwater quality** Where groundwater from bores identified in **Table E1 – Groundwater monitoring locations and frequency** exceeds any of the trigger levels specified in **Table E2 – Groundwater quality triggers** on **3 consecutive sampling occasions**, the holder of this environmental authority must: (a) complete an investigation to determine if the exceedance is the result of: (i) activities authorised under this environmental authority; or (ii) natural variation; or (iii) neighbouring land use resulting in groundwater impacts; and (b) submit a report to the administering authority within **28 days** of receiving the results.

E8	If the investigation under condition **E7** determines that the exceedance was the result of activities authorised under this environmental authority, then a further investigation must be completed, and a report must be submitted to the administering authority within **56 days** after submission of the exceedance investigation report under condition **E7.** The investigation report must include: (a) the likely source, cause and extent of contamination and other investigation outcomes; and (b) must detail the appropriate mitigation and management measures (where applicable) undertaken, with evidence upon request to address any groundwater contamination and prevent recurrence of groundwater contamination.
E9	**Groundwater Standing Water Level (SWL)** Groundwater SWL must be monitored: (a) at the locations specified in **Table E1 – Groundwater monitoring locations and frequency** and illustrated in **Figure 1 – Authorised disturbance area and groundwater monitoring locations**; and (b) at the frequencies specified in **Table E1 – Groundwater monitoring locations and frequency.**
E10	The SWL in monitoring results from groundwater bores identified in **Table E1 – Groundwater monitoring locations and frequency** (with exception of dry bores) must be reviewed against the previous **12 months** of SWL monitoring data by **1 April**.
E11	**Groundwater standing water level (SWL)** When a bore listed in **Table E1 – Groundwater monitoring locations and frequency** (with the exception of dry bores) exceeds a fluctuation of **2 meters** per year, the holder of this environmental authority must: (a) notify the administering authority via WaTERS within **24 hours** of becoming aware; (b) complete an investigation into the cause of exceedance within **10 business days** of becoming aware; and (c) if the investigation carried out under condition **E11(b)** determines that the mining activities authorised by this environmental authority are a potential cause or contributor to the exceedance: (i) notify the administering authority within **24 hours** of making the determination; (ii) identify whether any actual environmental harm has occurred; and (iii) identify and implement mitigations to minimise the harm.
E12	**Bore Specific SWL Thresholds** By **30 November 2026**, the environmental authority holder must provide to the administering authority a report: (a) proposing groundwater standing water level triggers to replace all TBCs in **Table E3 – Groundwater standing water level triggers;** and (b) providing justification as to those proposed triggers and values (such as modelling, monitoring data, risk assessments).
E13	**Groundwater Monitoring and Management Program** A Groundwater Monitoring and Management Program (GMMP) must be implemented and maintained, including updates as required by reviews of the monitoring data, GMMP or model.

E14	The GMMP required by condition **E13** must: (a) provide a hydrogeological conceptual model; (b) provide an analytical or numerical groundwater model including interaction or impact from groundwater on surface water; (c) identify all potential sources of contamination to groundwater from the activities; (d) identify all environmental values that may be impacted; (e) detail groundwater levels in all relevant hydrogeological units present across and adjacent to the site to confirm existing groundwater flow paths; (f) include details of a groundwater monitoring and data analysis program to: (i) detect any impacts to groundwater quality due to the activities authorised under this environmental authority; (ii) detect any changes to groundwater level due to the activities authorised under this environmental authority; and determine compliance with conditions **E6,** and **E10**; and (iii) determine trends in groundwater quality and level; (g) document groundwater management and monitoring methodologies undertaken for the duration of all the activities authorised under this environmental authority; (h) provide an appropriate quality assurance and quality control program; and (i) include a review process for the GMMP to identify improvements to the program that includes addressing any comments provided by the administering authority.
E15	**Annual Groundwater Monitoring Report** An Annual Groundwater Monitoring Report (AGMR) must be completed and submitted to the administering authority by **1 April** each calendar year.
E16	The AGMR required by condition **E15** must include: (a) all quality and SWL monitoring data of all groundwater bores listed within **Table E1 – Groundwater monitoring locations and frequency**, for the annual monitoring period; (b) an assessment of groundwater quality and SWL trends for all data from all groundwater bores listed in **Table E1 – Groundwater monitoring locations and frequency**; (c) an assessment of any impacts due to mining activities authorised by this environmental authority on groundwater quality and level; (d) review of ongoing adequacy of the monitoring network and propose replacement bores (if required) where bores have been removed as part of mining activities; and (e) comparison with receiving environment surface water quality monitoring results to determine any interaction or impact from groundwater on surface water.
E17	**Replacement bores** If any groundwater monitoring bore listed in **Table E1 – Groundwater monitoring locations and frequency,** are scheduled to be decommissioned due to planned authorised activities, the holder must: (a) replace the bore(s) at least **12 months** prior to decommissioning; with groundwater monitoring bores that targets the same hydrogeological unit in a suitable location; and (b) the location of replacement bores be provided for inclusion in **Table E1 – Groundwater monitoring locations and frequency**.
E18	Within **27 months** after installation of replacement bores as per condition **E17**, the environmental authority holder must submit report to administering authority that includes: (a) groundwater quality triggers based on at least **8 monitoring events** for inclusion in **Table E2 – Groundwater quality triggers**; and (b) groundwater SWL triggers for inclusion in **Table E3 – Groundwater standing water level triggers.**

E19	**Bore construction and maintenance and decommissioning** The construction, maintenance, operation, and decommissioning of each groundwater monitoring bore (with the exception of bores installed prior to the EA commencement date) must be undertaken by an appropriately qualified person in a manner that: (a) prevents contaminants entering the groundwater; (b) ensures representative groundwater samples from the target hydrogeological unit/s including composite units where intended; and (c) does not alter the hydrogeological environment
E20	A bore report must be kept for each monitoring bore which includes: (a) a unique identification reference number and geographic coordinate location; (b) construction information including but not limited to the depth of bore, depth and length of casing, depth and length of screening and bore sealing details; (c) stratigraphy and target hydrogeological unit of the bore; (d) depth at which groundwater was intercepted; and (e) the final standing water level (SWL) after bore development.

Table E1 – Groundwater monitoring locations and frequency

Monitoring Point	Location GDA2020		Aquifer	Screen depth (m)	Surface RL (m)[2]	Monitoring Frequency[1]
	Latitude	Longitude				
PZ 1	-20.609912	147.837415	Coal measures	20.1-21.75	163.336	Quarterly
PZ 2	-20.62285	147.86804	Coal measures	66.0-69.85	176.469	Quarterly
PZ 4	-20.629651	147.862035	Coal measures	69.1-73.1	175.408	Quarterly
PZ 5	-20.62355	147.86759	Coal measures	19.07-21.88	176.005	Quarterly
PZ 6	-20.601383	147.864880	Coal measures	23.6-24.46	170.692	Quarterly
PZ 7B[3]	-20.608149	147.852366	Alluvium	4.48-7.42	166.883	Quarterly
PZ 7C[3]	-20.609006	147.849031	Alluvium	5.75-8.7	163.689	Quarterly
PZ 7E[3]	-20.608528	147.850737	Alluvium	4.12-7.1	167.057	Quarterly
PZ 8	-20.605915	147.830724	Alluvium	16.4-19.0	160.185	Quarterly
PZ 9	-20.609094	147.813765	Coal measures	24.0-26.0	153.021	Quarterly

[1]Monitoring is not required where a bore has been removed as a direct result of the mining activity.

[2]RL must be calculated from the nearest 5cm from the top of the bore casing.

[3] Dry bores

Table E2 – Groundwater quality triggers

Quality Parameter	Unit	Investigation Trigger Level for Bores									
		PZ 1	PZ 2	PZ 6	PZ 7B	PZ 7C	PZ 7E	PZ 8	PZ 9	PZ 4	PZ 5
		Coal measures			Alluvium				Coal measures		
pH	pH Units	6.0-8.5									
Electrical Conductivity	µS/cm	1611[1]	2641[1]	2119[1]	2132[2]	2132[2]	2132[2]	2073[1]	1873[1]	3107[1]	2146[1]
Total Dissolved Solids	mg/L	1117[1]	1082[1]	1281[1]	1034[2]	1034[2]	1034[2]	849[1]	841[1]	1814[1]	1191[1]
Sulfate	mg/L	44[1]	15[1]	62[1]	144.2[2]	144.2[2]	144.2[2]	53[1]	55[1]	248[1]	32[1]
Hardness, Calcium, Chloride, Sodium, Potassium, Magnesium, Bicarbonate, Carbonate, Fluoride	mg/L	For interpretation purposes only									
Ammonia-N	mg/L	**See Note 5**	2.1[1]	1[1]	1[3]	1[3]	1[3]	1.3[1]	0.53[1]	1.7[1]	3.7[1]
Nitrate-N	mg/L	50[3]									
Nitrite-N	mg/L	0.1[3]									
Aluminium (dissolved)	mg/L	0.055[3]									
Arsenic (dissolved)	mg/L	0.013[3]									
Boron (dissolved)	mg/L	0.136[1]	0.310[1]	0.122[1]	0.370[3]	0.370[3]	0.370[3]	0.066[1]	0.112[1]	0.251[1]	0.158[1]
Cadmium (dissolved)	mg/L	0.0002[3]									
Chromium (dissolved)	mg/L	0.0033[3]									
Copper (dissolved)	mg/L	0.0076[1]	0.005[3]	0.005[3]	0.005[3]	0.005[3]	0.005[3]	0.0076[1]	0.005[3]	0.005[3]	0.013[1]
Lead (dissolved)	mg/L	0.0034[3]									
Mercury (dissolved)	mg/L	0.0006[3]									
Molybdenum (dissolved)	mg/L	0.034[3]									
Nickel (dissolved)	mg/L	0.012[1]	0.01[1]	0.01[1]	0.01[2]	0.01[2]	0.01[2]	0.01[1]	0.01[1]	0.01[1]	0.01[1]
Selenium (dissolved)	mg/L	0.01[4]									
Zinc (dissolved)	mg/L	0.06[1]	0.088[1]	0.06[1]	0.066[2]	0.066[2]	0.066[2]	0.048[1]	0.035[1]	0.056[1]	0.08[1]
TRH (C6-C10)	µg/L	20[4]									
TRH (C10-C40)	µg/L	100[4]									

[1] *Bore specific 95th percentile data 2018-2024*
[2] Aquifer specific 95th percentile data 2018-2024
[3] *ANZG (2018) 95% aquatic ecosystem species protection value for slightly to moderately disturbed ecosystems or ANZECC-ARMCANZ 2000 guideline vol 3 (freshwater)*
[4] LOR- typical reporting limit for method stated. CMS- analytical method required to achieve LOR
[5] Ammonia trigger value for replacement Bore PZ 1 to be determined in accordance with condition E18.

Table E3 – Groundwater standing water level triggers

Monitoring bore	Hydrogeological unit	Casing Height (TOC)(m)	Ground level Elevation (mAHD)	Groundwater SWL triggers (mAHD)
PZ 1	Coal measures	163.99	163.336	TBC
PZ 2	Coal measures	176.87	176.469	TBC
PZ 4	Coal measures	175.791	175.408	TBC
PZ 5	Coal measures	176.702	176.005	TBC
PZ 6	Coal measures	171.277	170.692	TBC
PZ 7B	Alluvium	167.473	166.883	TBC
PZ 7C	Alluvium	164.276	163.689	TBC
PZ 7E	Alluvium	167.962	167.057	TBC
PZ 8	Alluvium	160.671	160.185	TBC
PZ 9	Coal measures	153.551	153.021	TBC

Schedule F: Surface Water	
Condition number	**Condition**
F1	Contaminants that will, or have the potential to cause environmental harm, must not be released directly or indirectly to any waters as a result of the authorised mining activities, except as permitted under the conditions of this environmental authority.
F2	**Contaminant release** The release of mine affected water to waters must only occur from the release points specified in **Table F1 – Mine affected water release points, sources and receiving waters** and depicted in **Figure 3 – Mine affected water release points, sources and receiving waters** attached to this environmental authority.
F3	The release of mine affected water to waters from the release points must be monitored at the locations specified in **Table F1- Mine affected water release points, sources and receiving waters** for each quality characteristic and at the frequency specified in **Table F2 – Mine affected water release limits** and **Table F3 – Release contaminant trigger investigation levels, potential contaminants**. **Note:** The administering authority will take into consideration any extenuating circumstances prior to determining an appropriate enforcement response in the event condition **F5** is contravened due to a temporary lack of safe or practical access. The administering authority expects the environmental authority holder to take all reasonable and practicable measures to maintain safe and practical access to designated monitoring locations.
F4	The release of mine affected water to waters in accordance with condition **F2** must not exceed the release limits stated in **Table F2 – Mine affected water release limits** when measured at the monitoring points specified in **Table F1 – Mine affected water release points, sources and receiving waters** for each quality characteristic.
F5	**Mine affected water release events** The holder must ensure a stream flow gauging station/s is installed, operated, and maintained to determine and record stream flows at the locations and flow recording frequency specified in **Table F4 – Mine affected water release during flow events**.
F6	The release of mine affected water to waters in accordance with condition **F2** must only take place during periods of natural flow in accordance with the receiving water flow criteria for discharge specified in **Table F4 – Mine affected water release during flow events** for the release point(s) specified in **Table F1 – Mine affected water release points, sources and receiving waters**.
F7	The daily quantity of mine affected water released from each release point must be measured and recorded at the monitoring points in **Table F1 – Mine affected water release points, sources and receiving waters**.
F8	Releases to waters must be undertaken so as not to cause erosion of the bed and banks of the receiving waters, or cause a material build-up of sediment in such waters.

F9	**Notification of release event** The environmental authority holder must notify the administering authority via WaTERS as soon as practicable and no later than **24 hours** after commencing to release mine affected water to the receiving environment. Notification must include the submission of written advice to the administering authority of the following information: (a) release commencement date/time; (b) release point/s; (c) release rate; (d) release salinity and/or electrical conductivity; (e) receiving water/s including the natural flow rate; and (f) details regarding the compliance of the release with the conditions of **Schedule F: Surface Water**.
F10	The environmental authority holder must notify the administering authority via WaTERS as soon as practicable, and no later than **24 hours** after cessation of a release notified under condition **F9**. The cessation notification must include the following information: (a) release cessation date and time; (b) release point/s; (c) release rate; (d) water quality of release; (e) total volume of water released; (f) natural flow rate in the receiving water; and (g) details regarding the compliance of the release with the conditions of this environmental authority. **Note:** Successive or intermittent releases from a Release Point occurring within **24 hours** of the cessation of any individual release can be considered part of a single release event and do not require individual notification for the purpose of compliance with conditions **F9, F10** and **F11,** provided the relevant details of the release are included within the notification provided in accordance with conditions **F9, F10** and **F11.**
F11	The environmental authority holder must within **28 days** after cessation of a release event notified under condition **F10** provide a report to the administering authority via WaTERS, which must include the following information: (a) all continuous and in-situ water quality monitoring results (including laboratory analyses); and (b) any further matters pertinent to the water release event.

F12	**Release trigger exceedance:** If quality characteristics of the release exceed any of the trigger levels specified in **Table F3 – Release contaminant trigger investigation levels, potential contaminants** during a release event, the environmental authority holder must compare the downstream results in the receiving waters (**Table F6 – Receiving water upstream background sites and downstream monitoring points**) to the trigger values specified in **Table F3 – Release contaminant trigger investigation levels, potential contaminants** and: (a) where the trigger values are not exceeded then no action is to be taken; or (b) where the downstream results exceed the trigger values specified in **Table F3 – Release contaminant trigger investigation levels, potential contaminants** for any quality characteristic, compare the results of the downstream site to the data from background monitoring sites (**Table F6 – Receiving water upstream background sites and downstream monitoring points**); and (i) if the result is less than the background monitoring site data, then no action is to be taken; or (ii) if the result is greater than the background monitoring site data, notify the administering authority via WaTERS within **two business days** of receiving the result, and complete an investigation and provide a written report to the administering authority via WaTERS within **28 days** of receiving the result, outlining: I. details of the investigations carried out; and II. whether the result is directly associated with mining activities, and, if so: 1. whether environmental harm has occurred, and 2. actions taken to prevent environmental harm. **Note**: Where an exceedance of a trigger level has occurred and is being investigated, in accordance with **F12(2)(b)** of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.

Table F1 – Mine Affected Water Release Points, Sources and Receiving Waters

Release Point (RP)[1]	Location (GDA2020)		Mine Affected Water Source and Location	Monitoring Point	Receiving waters description
	Latitude	Longitude			
RP1	-20.611277	147.833719	Sediment Dam 3	Spillway	Pelican Creek via Coral Creek
RP2	-20.63040	147.85252	Dam 5	Spillway	Pelican Creek via Two Mile Creek
RP3	-20.616874	147.837971	Sediment Dam 4	Spillway	Pelican Creek via Coral Creek
RP4	-20.62841	147.84609	Return Water Dam	Spillway	Pelican Creek via Two Mile Creek

Note: Where fixed release infrastructure is not currently installed portable pipes and pumps will be utilised.

F13	**Notification of release event exceedance** If the release limits defined in **Table F2 – Mine affected water release limits** are exceeded, the holder of the environmental authority must notify the administering authority within **24 hours** of receiving the results.
F14	The environmental authority holder must, within **28 days** of a release that is not compliant with the conditions of this environmental authority, provide a report to the administering authority via WaTERS detailing: (a) the reason for the release; (b) the location of the release; (c) the total volume of the release and which (if any) part of this volume was non-compliant; (d) the total duration of the release and which (if any) part of this period was non-compliant; (e) all water quality monitoring results (including all laboratory analyses); (f) identification of any environmental harm as a result of the non-compliance; (g) all calculations; and (h) any other matters pertinent to the water release event.
F15	**Receiving environment monitoring and contaminant trigger levels** The quality of the receiving waters must be monitored at the locations specified in **Table F6 – Receiving water upstream background sites and downstream monitoring points** and **Figure 3 – Mine affected water release points, sources and receiving waters** for each quality characteristic and at the monitoring frequency stated in **Table F5 – Receiving waters contaminant trigger levels.**
F16	If quality characteristics of the receiving water at the downstream monitoring points exceed any of the trigger levels specified in **Table F5 – Receiving waters contaminant trigger levels** during a release event, the environmental authority holder must compare the downstream results to the upstream results in the receiving waters and: (a) if the result is less than the upstream monitoring data, then no action is to be taken; or (b) if the result is greater than the upstream monitoring data, notify the administering authority via WaTERS within **2 business days** of receiving the result, and complete an investigation and provide a written report to the administering authority via WaTERS within **28 days** of receiving the result, outlining (i) details of the investigations carried out; and (ii) whether the result is directly associated with the release, and, if so: I. whether environmental harm has occurred; and II. actions taken to prevent environmental harm. **Note:** Where an exceedance of a trigger level has occurred and is being investigated, in accordance with condition **F16(2)** of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.

Table F2 – Mine Affected Water Release Limits

Quality Parameter	Release Limit	Monitoring frequency	Comment
Electrical conductivity (µS/cm)	Release limits specified in **Table F4**	Daily during release (the first sample must be taken within 2 hours of commencement of release)	-
pH (pH Unit)	6.5 (minimum) 9.0 (maximum)	Daily during release (the first sample must be taken within 2 hours of commencement of release)	-
Turbidity[1] (NTU)	300	At commencement and prior to cessation of release (at a minimum) and weekly during a release	Turbidity is required to assess ecosystem impacts and can provide instantaneous results.

[1]The determination of suitability for release of water should be informed by monitoring undertaken prior to release.

Table F3 – Release contaminant trigger investigation levels, potential contaminants

Quality Parameter	Unit	Trigger Levels	Comment on Trigger Level	Monitoring Frequency
Aluminium	mg/L	0.082	80th percentile of background	Commencement of release and thereafter weekly during release
Arsenic	mg/L	0.013	For aquatic ecosystem protection, based on SMD guideline	
Cadmium	mg/L	0.0002	For aquatic ecosystem protection, based on SMD guideline	
Chromium	mg/L	0.001	For aquatic ecosystem protection, based on SMD guideline	
Copper	mg/L	0.002	For aquatic ecosystem protection, based on LOR for ICPMS	
Iron	mg/L	0.3	For aquatic ecosystem protection, based on low reliability guideline	
Lead	mg/L	0.004	For aquatic ecosystem protection, based on SMD guideline	
Mercury	mg/L	0.02	For ecosystem protection based on LOR for CVFIMS	
Nickel	mg/L	0.011	For aquatic ecosystem protection, based on SMD guideline	
Zinc	mg/L	0.008	For aquatic ecosystem protection, based on SMD guideline	
Boron	mg/L	0.37	For aquatic ecosystem protection, based on SMD guideline	
Cobalt	mg/L	0.09	For aquatic ecosystem protection, based on low reliability guideline	
Manganese	mg/L	1.9	For aquatic ecosystem protection, based on SMD guideline	
Molybdenum	mg/L	0.034	For aquatic ecosystem protection, based on low reliability guideline	
Selenium	mg/L	0.01	For aquatic ecosystem protection, based on LOR for ICPMS	
Silver	mg/L	0.001	For aquatic ecosystem protection, based on LOR for ICPMS	
Uranium	mg/L	0.001	For aquatic ecosystem protection, based on LOR for ICPMS	
Vanadium	mg/L	0.01	For aquatic ecosystem protection, based on LOR for ICPMS	
Ammonia	mg/L	0.9	For aquatic ecosystem protection, based on SMD guideline	
Nitrate	mg/L	1.1	For aquatic ecosystem protection, based on ambient Qld WQ Guidelines (2006) for TN	
Petroleum hydrocarbons (C6-C9)	µg/L	20	For aquatic ecosystem protection, based on LOR	
Petroleum hydrocarbons (C10-C36)	µg/L	100	For aquatic ecosystem protection, based on LOR	
Fluoride (total)	mg/L	2.0	Protection of livestock and short-term irrigation guideline	
Sodium	mg/L	180	Based on Australian Drinking Water Guidelines	
Suspended Solids	mg/L	150	Based on receiving water reference data from Drake Coal Mine	

Quality Parameter	Unit	Trigger Levels	Comment on Trigger Level	Monitoring Frequency
Sulfate (SO_4^{2-})	mg/L	250	Drinking water environmental values from NHMRC 2006 guidelines or ANZECC	

Note:

(a) Trigger levels for metal/metalloids apply if dissolved results exceed trigger.

(b) SMD – slightly moderately disturbed level of protection, guideline refers ANZECC & ARMCANZ (2000)

(c) LOR – typical reporting for method stated. ICPMS/CV FIMS – analytical method required to achieve LO

F17	**Receiving Environment Monitoring Program (REMP)** The environmental authority holder must develop and implement a REMP to monitor, identify and describe any adverse impacts to surface water environmental values, quality and flows due to the authorised mining activity. This must include monitoring the effects of the mine on the receiving environment periodically (under natural flow conditions) and while mine affected water is being discharged from the site. For the purposes of the REMP, the receiving environment is the waters of Coral Creek, Two Mile Creek, and Pelican Creek, and connected or surrounding waterways within **10km** downstream of the release. The REMP should encompass any sensitive receiving waters or environmental values downstream of the authorised mining activity that will potentially be directly affected by an authorised release of mine affected water.
F18	A REMP Design Document that addresses the requirements of conditions **F17** and **F19** must be made available to the administrating authority upon request.
F19	The REMP must address (but not necessarily be limited to) the following: (a) description of potentially affected receiving waters including key communities and background water quality characteristics based on accurate and reliable monitoring data that takes into consideration any temporal variation (e.g. seasonality); (b) description of applicable environmental values and water quality objectives to be achieved (i.e. as scheduled pursuant to the Environmental Protection (Water) Policy 2009); (c) any relevant reports prepared by other governmental or professional research organisations that relate to the receiving environment within which the REMP is proposed; (d) water quality targets within the receiving environment to be achieved, and clarification of contaminant concentrations or levels indicating adverse environmental impacts during the REMP; (e) monitoring for any potential adverse environmental impacts caused by the release; (f) monitoring of stream flow and hydrology; (g) monitoring of toxicants should consider the indicators specified in **Table F3 – Release contaminant trigger investigation levels, potential contaminants** to assess the extent of the compliance of concentrations with water quality objectives and/or the ANZECC and ARMCANZ 2000 guidelines for slightly to moderately disturbed ecosystems; (h) monitoring of physico-chemical parameters as a minimum those specified in **Table F2 – Mine affected water release limits** (in addition to dissolved oxygen saturation and temperature); (i) monitoring biological indicators (for macroinvertebrates in accordance with the AusRivas methodology) and metals/metalloids in sediments (in accordance with ANZECC and ARMCANZ 2000, BATLEY and/or the most recent version of AS5667.1 Guidance on Sampling of Bottom Sediments) for permanent, semi- permanent water holes and water storages; (j) the locations of monitoring points (including the locations specified in **Table F6 – Receiving water upstream background sites and downstream monitoring points** which are background and downstream impacted sites for each release point); (k) the frequency or scheduling of sampling and analysis sufficient to determine water quality objectives and to derive site specific reference values within **2 years** (depending on wet season flows) in accordance with the Queensland Water Quality Guidelines 2006. For ephemeral streams, this should include periods of flow irrespective of mine or other discharges; (l) specify sampling and analysis methods and quality assurance and control; (m) any historical datasets to be relied upon; (n) description of the statistical basis on which conclusions are drawn; and (o) any spatial and temporal controls to exclude potential confounding factors.

Table F4 – Mine affected water release during flow events

Receiving water/stream	Release Point (RP)	Gauging Station	Gauging Station Latitude	Gauging Station Longitude	Receiving Water Flow Recording Frequency	Receiving Water Flow Criteria for discharge (m^3/s)	Maximum Release Rate (for all combined RP flows)	Electrical Conductivity Release Limits
Pelican Creek (via Coral and Two Mile Creek)	RP1 (SD3)	Gauging Station 1	-20.585721	147.851138	Continuous (minimum daily)	Medium flow (low) more than 1.5 m^3/s	0.5 m^3/s	Electrical conductivity 1,200 µS/cm
	RP2 (D5)							
	RP3 (SD4)					Medium Flow (high) more than 5 m^3/s	5 m^3/s	Electrical conductivity 2,000 µS/cm

Table F5 – Receiving waters contaminant trigger levels

Quality Characteristic	Trigger Level	Monitoring Frequency
pH	6.5 – 9.0	Daily during the release
Electrical Conductivity (µS/cm)	1,000	
Total suspended solids (mg/L)	150	
Sulfate (SO_4^{2-}) (mg/L)	250	

F21	**Water re-use** Mine affected water may be piped or trucked or transferred by some other means that does not contravene the conditions of this environmental authority and deposited into artificial water storage structures, such as farm dams or tanks, or used directly at properties owned by the environmental authority holder or a third party (with the consent of the third party).
F22	If the responsibility of the water contaminated by mining activities (the water) is given or transferred to another person in accordance with condition **F23**, then: (a) the responsibility of the water must only be given or transferred in accordance with a written agreement (the third party agreement); and (b) include in the third party agreement a commitment from the person utilising the water to use water in such a way as to prevent environmental harm or public health incidences and specifically make the persons aware of the General Environmental Duty (GED) under section 319 of the *Environmental Protection Act 1994*, environmental sustainability of the water disposal and protection of environmental values of waters.
F23	**Annual Water Monitoring Data Submission** The following information must be recorded in relation to all mine affected surface water release monitoring required under the conditions of this environmental authority and submitted to the administering authority via WaTERS with each annual return: (a) the date on which the sample was taken; (b) the time at which the sample was taken; (c) the monitoring point at which the sample was taken; (d) the measured or estimated daily quantity of mine affected water released from all release points; (e) the release flow rate at the time of sampling for each release point; and (f) the results of all surface water monitoring.
F24	**Water Management Plan** A Water Management Plan must be developed and implemented for all stages of mining activities.
F25	The Water Management Plan must: (a) provide for effective water management of actual and potential environmental impacts resulting from water management associated with the mining activities carried out under this environmental authority; and (b) be developed in accordance with the administering authority's most recent version of the guideline for '*Application requirements for activities with impacts to water*' (Section 4.4 ESR/2015/1837) or any updates that become available from time to time and must include at least the following components: (i) a study of the source on contaminants; (ii) a water balance model for the site; (iii) a map showing the water management system for the site; (iv) measures to manage, reduce and prevent saline drainage; (v) measures to manage, reduce and prevent acid rock drainage; and (vi) contingency procedures for incidents and emergencies.

F26	On an annual basis the Water Management Plan must either be: (a) updated and re-issued in accordance with the requirements of conditions **F26** and **F27**(with the update commencing by **30 November** each calendar year; or (b) reviewed for continued suitability (review to commence by **30 November** each calendar year). The review must be documented and include: (i) a statement that the review has been undertaken by an appropriately qualified person; (ii) an assessment of the plan against the requirements under **F26** and **F27,** including identify where updates are required; (iii) identification of any actual or potential environmental impacts which are not effectively managed by the Water Management Plan; (iv) make recommendations to ensure actual or potential environmental impacts are effectively managed (if required); and (v) provide details and timelines to implement the recommendations (if required).
F27	**Stormwater and water sediment controls** An Erosion and Sediment Control (ESC) Plan must be developed and implemented for all stages of the mining activities.
F28	The ESC Plan must: (a) demonstrate how erosion and sediment control measures detailed in the plan adequately minimise the release of sediment to receiving waters; (b) assess the size and characteristics of all catchment areas; (c) assessment of relevant properties of soil; (d) specify minimum design criteria for erosion and sediment control structures to achieve the management intent of receiving waters; (e) locations and descriptions of major erosion and sediment control measures (sediment dams and related drainage management); and an audit schedule to ensure erosion and sediment control measures are maintained.
F29	On an annual basis the ESC Plan must either be: (a) updated and re-issued in accordance with the requirements of conditions **F29** and **F30** (with the update commencing by **30 November** each calendar year); or (b) reviewed for continued suitability (review to commence by **30 November** each calendar year) with the review to include: (i) a statement that the review has been undertaken by an appropriately qualified person; (ii) an assessment of the plan against the requirements under condition **F29** and identify where updates are required; (iii) identification of any actual or potential environmental impacts which are not effectively managed by the Erosion Sediment Control Plan; (iv) make recommendations to ensure actual or potential environmental impacts are effectively managed (if required); and (v) provide details and timelines to implement the recommendations (if required).
F30	Stormwater, other than mine affected water, is permitted to be released to waters from: (a) erosion and sediment control structures that are installed and operated in accordance with the erosion and sediment control plan required by condition **F29**; and (b) water management infrastructure that is installed and operated, in accordance with a water management plan that complies with condition **F26**, for the purpose of ensuring water does not become mine affected water.

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Table F6 – Receiving water upstream background sites and downstream monitoring points

Monitoring Points	Receiving Waters Location Description	Relevant Release Point	Latitude	Longitude
Upstream Background Monitoring Points				
SW2	Coral Creek 3,330 metres upstream of release point RP1 and 3,170 metres upstream of release point RP3	RP1, RP3	-20.602263	147.864223
SW8	Two Mile Creek 1,140 metres upstream of release point RP2	RP2,RP4	-20.629549	147.864357
SW14	Upstream of confluence of Coral and Pelican Creeks	RP1, RP2, RP3, RP4	-20.585721	147.851147
Downstream Monitoring Points				
SW1	Coral Creek 2,065 metres downstream of release point RP1 and 2,800 metres downstream of release point RP3	RP1, RP3	-20.612250	147.817112
SW7	Two Mile Creek 4,280 metres downstream of release point RP2	RP2,RP4	-20.632465	147.835302
SW15	Downstream of confluence of Two Mile and Coral Creeks with Pelican Creek at upstream side of Myuna Road Crossing	RP1, RP2, RP3, RP4	-20.598503	147.756536

Note: The data from background monitoring points must not be used where they are affected by releases from other mines.

Schedule G: Sewage Treatment	
Condition number	**Condition**
G1	Contaminants generated by sewage treatment activities must not be released to waters. *Note: 'waters' does not include structures associated with the mine affected water management system.*
G2	Treated sewage effluent may only be released to land in accordance with the conditions of this approval at the following locations: (a) within the nominated area(s) identified in **Figure 3 – Mine- Affected water release points, sources and receiving waters** (irrigation areas); (b) haul roads and areas of the mining activity for the purpose of dust suppression; (c) re-use in coal processing; (d) secondary water storage; and (e) firefighting.
G3	The release of treated sewage effluent to the nominated irrigation area identified in condition **G4**, must be monitored for each quality characteristic and at the frequency specified in **Table G1 – Contaminants release limits to land.**
G4	The release of treated sewage effluent to the nominated irrigation area identified in condition **G4**, must not exceed the release limits stated in **Table G1 – Contaminants release limits to land.**
G5	Irrigation with treated effluent must be carried out in a manner such that: (a) vegetation is not damaged; (b) there is no surface ponding of effluent; and (c) there is no run-off of effluent.
G6	If irrigation areas are accessible to employees or the general public, prominent signage must be provided advising that effluent is present, and care should be taken to avoid consuming or otherwise coming into unprotected contact with the effluent.
G7	The daily volume of treated effluent used for irrigation must be measured and records kept of the volumes of effluent released.
G8	When circumstances prevent the irrigation or beneficial reuse of treated sewage effluent such as during or following rain events, waters must be directed to a wet weather storage or alternative measures must be taken to store/lawfully dispose of effluent.
G9	A minimum area of **one ha** of land, excluding any necessary buffer zones, must be utilised for the irrigation of treated sewage effluent.
G10	Treated sewage effluent must only be supplied to another person or organisation that has a written plan detailing how the user of the treated sewage effluent will comply with their general environmental duty under section 319 of the Act whilst using the treated sewage effluent. **Note**: The supply of treated wastewater for re-use is regulated under *the Water Supply (Safety and Reliability) Act 2008.*

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Table G1 – Contaminant release limits to land

Contaminant	Unit	Release limit	Limit type	Monitoring Frequency
5-day Biochemical oxygen demand (BOD)	mg/L	20	Maximum	Monthly
Total suspended solids	mg/L	30	Maximum	Monthly
Nitrogen	mg/L	30	Maximum	Monthly
Phosphorus	mg/L	15	Maximum	Monthly
E-coli	Organisms/100ml	1,000	Maximum	Monthly
pH	pH units	6.0 – 9.0.	Range	Monthly

Schedule H: Land	
Condition number	**Condition**
H1	**Mining waste management** A waste rock and spoil disposal plan must be developed, implemented, and include, where relevant, at least: (a) effective characterisation of the waste rock and spoil to predict under the proposed placement and disposal strategy the quality of runoff and seepage generated concerning potentially environmentally significant effects including salinity, acidity, alkalinity, and dissolved metals, metalloids, and non-metallic inorganic substances; and (b) a program of progressive sampling and characterisation to identify dispersive and non-dispersive spoil and the salinity, acid and alkali producing potential and metal concentrations of waste rock; and (c) 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 potential generation of acid mine drainage; and (d) where relevant, a sampling program to verify encapsulation and/or placement of potentially acid-forming and acid-forming waste rock; and (e) how often the performance of the plan will be assessed; and (f) the indicators or other criteria on which the performance of the plan will be assessed; and (g) rehabilitation strategy; and (h) identification of areas proposed to contain tailings; and (i) 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.
H2	**Chemicals and flammable or combustible liquids** All flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm and maintained in accordance with the current edition of *AS 1940 – Storage and Handling of Flammable and Combustible Liquids*.
H3	All chemicals and flammable or combustible liquids stored on site that have the potential to cause environmental harm must be stored in or serviced by an effective containment system that is impervious to the materials stored and managed to prevent the release of liquids to waters or land. Where no relevant Australian standard exists store such materials within an effective on-site containment system, the environmental authority holder must, at a minimum, minimise the potential for contamination of land and waters by diverting stormwater around contaminated areas and facilities used for the storage of chemicals and flammable or combustible liquids.
H4	**Weed Management** A weed management plan must be developed and implemented for this site outlining: (a) areas of control priority and the methods used to determine such areas: (b) strategies to promote dense grass growth (which out-competes weeds) through reduced disturbance; (c) monitoring methodologies that document the spread of weeds and any new outbreaks; (d) methods for the control of weeds. These methods should include best practice management; (e) stringent wash-down and inspection procedures for both machinery involved in clearing/construction activities and those operating outside of designated roads during mine operation; and (f) promotion of the awareness of weed management issues at the site.

Schedule I: Dams and Levees	
Condition number	**Condition**
I1	**Consequence Category** 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.
I2	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.
I3	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).
I4	**Design and Construction of a Regulated Structure** 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).
I5	Construction of a regulated structure is prohibited unless: (a) the holder has submitted a consequence category assessment report and certification to the administering authority; and (b) certification of the design plan and operating procedures (except where the structure does not require operating procedures such as for levees) has been certified by a suitably qualified and experienced person for compliance with the relevant condition of this authority.
I6	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.

I7	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)*;* (b) be designed and constructed with due consideration given to ensuring that the design integrity would not be compromised on account of: (i) floodwaters 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. (c) for dams associated with a failure to contain; have the floor and sides of the dam designed and constructed to prevent or minimise the passage of the wetting front and any entrained contaminants through either the floor or sides of the dam during the operational life of the dam and for any period of decommissioning and rehabilitation of the dam.
I8	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.
I9	**Operation of a regulated structure** Operation of a regulated structure**,** except for an existing structure, is prohibited unless the holder has submitted to the administering authority: (a) one paper copy and one electronic copy of the design plan and certification of the 'design plan' in accordance with conditions **I4** to **I6**; (b) a set of 'as constructed' drawings and specifications; (c) certification of those 'as constructed drawings and specifications' in accordance with condition **I8**; (d) where the regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the Design Storage Allowance (DSA) volume across the system, a copy of the certified system design plan; (e) the requirements of this authority relating to the construction of the regulated structure have been met; (f) the holder has entered the details required under this authority, into a Register of Regulated Structures; and (g) there is a current operational plan for the regulated structure (except where the structure does not require operating procedures such as for levees).
I10	Each regulated structure must be maintained and operated, for the duration of its operational life until decommissioned and rehabilitated, in a manner that is consistent with the current operational plan and, if applicable, the current design plan and associated certified 'as constructed' drawings.
I11	**Mandatory Reporting Level** Conditions **I12** to **I15** inclusive only apply to Regulated Structures which have not been certified as low consequence category for 'failure to contain – overtopping'.
I12	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.
I13	The holder must, as soon as practical and within **48 hours** of becoming aware, notify the administering authority when the level of the contents of a regulated dam reaches the MRL.

I14	The holder must immediately on becoming aware that the MRL has been reached, act to prevent the occurrence of any unauthorised discharge from the regulated dam.
I15	The holder must record any changes to the MRL in the Register of Regulated Structures.
I16	**Design storage allowance** 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.
I17	By **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 DSA volume for the dam (or network of linked containment systems).
I18	The holder must, as soon as possible, and within **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.
I19	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.
I20	**Annual Inspection** Each regulated structure must be inspected each calendar year by a suitably qualified and experienced person.
I21	At each annual inspection, the condition and adequacy of all components of the regulated structure must be assessed and a suitably qualified and experienced person must prepare an annual inspection report containing details of the assessment and include recommended actions to ensure the integrity of the regulated structure. Regulated structures must be assessed: (a) against the most recent hazard assessment report and design plan (or system design plan); (b) against recommendations contained in previous annual inspections reports; (c) against recognised dam safety deficiency indicators; (d) for changes in circumstances potentially leading to a change in hazard 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.
I22	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).

I23	The environmental authority holder must: (a) within **20 business days** of receipt of the annual inspection report, provide to the administering authority: (i) the recommendations section of the annual inspection report; and (ii) if applicable, any actions being taken in response to those recommendations; and (b) if, following receipt of the recommendations and (if applicable) actions, the administering authority requests a full copy of the annual inspection report from the holder, provide this to the administering authority within **10 business days** of receipt of the request.
I24	**Transfer arrangements** 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 on transfer of this authority.
I25	**Register of Regulated Structures** A Register of Regulated Structures must be established and maintained by the holder for each regulated dam.
I26	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.
I27	The holder must make a final entry of the required information in the Register of Regulated Structures once compliance with conditions **I9** and **I10** has been achieved.
I28	The holder must ensure that the information contained in the Register of Regulated Structures is current and complete on any given day.
I29	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.
I30	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.

Schedule J: Watercourse Diversions	
Condition number	**Condition**
J1	**Permanent watercourse diversions** Permanent watercourse diversions, or the re-establishment of a pre-existing watercourse where a temporary watercourse diversion is being replaced, must be designed, and constructed to: (a) incorporate natural features (including geomorphic and vegetation) present at the location of the diversion; (b) maintain the pre-existing hydrologic characteristics of surface water and groundwater systems for the area in which the watercourse diversion is located; (c) maintain the hydraulic characteristics of the permanent watercourse diversion that are equivalent to other local watercourses and are suitable for the area in which the diversion is located without using artificial structures that require ongoing maintenance; (d) maintain sediment transport and water quality regimes that allow the diversion to be self-sustaining, while minimising any impacts to upstream and downstream water quality, geomorphology, or vegetation; and (e) maintain equilibrium and functionality in all substrate conditions at the location of the diversion.
J2	**Temporary watercourse diversions** Temporary watercourse diversions must be designed and constructed to: (a) maintain the pre-existing hydrologic characteristics of surface water systems for the area in which the watercourse diversion is located; (b) maintain the hydraulic characteristics of the watercourse diversion that are equivalent to other local watercourses and are suitable for the area in which the diversion is located. Where structures that require ongoing maintenance are used, they must not compromise the equilibrium and performance of the temporary watercourse diversion and adjoining watercourses; (c) maintain sediment transport and water quality regimes that minimise any impacts to upstream and downstream water quality, geomorphology, or vegetation; and (d) maintain equilibrium and functionality at all substrate conditions at the location of the diversion.
J3	**Design plan – All diversion** For all watercourse diversions other than for Two Mile Creek and Coral Creek a Design Plan certified by a Registered Professional Engineer of Queensland that achieves condition **J1** for permanent watercourse diversions and condition **J2** for temporary watercourse diversions must be submitted to the administering authority for approval at least **10 business days** before commencing construction of the diversion.
J4	**Construction and operation – All diversions** A certified set of 'as constructed' drawings and specification must be submitted to the administering authority within **60 business days** from the completion of construction of the temporary or permanent watercourse diversion, or re-establishment of the pre-existing watercourse. These drawings and specifications must state: (a) that the 'as constructed' drawings and specifications meet the original intent of the approved Design Plan for the watercourse diversion; and (b) construction of the watercourse diversion is in accordance with the approved Design Plan
J5	**Register – All diversions**

	The details of watercourse diversions planned and constructed under an environmental authority must be accurately recorded on the Register of Regulated Structures kept by the holder of the authority. An electronic copy must be provided to the administering authority on request.
J6	The older of this authority is required to monitor the performance of all diversions by way of a performance report prepared for each diversion by a registered professional engineer (RPEQ) at the following times: (a) **April** of each year; and (b) at any time when poor performance and/or potential failure of the diversion are observed. **Note:** Monitoring of the works must include recommendations as per ACARP Project C9068 "Monitoring and Evaluation Program for Bowen Basin River Diversions". **2** hard copies and an electronic copy shall be furnished to the Chief Executive by **30 June** each year.
J7	The performance report must detail the following: (a) the performance of the diversion by way of comparison with the relevant approved Design Plans, specifications, and monitoring/maintenance strategies therein; (b) surveys to identify and quantify any changes to the channel bed and permanent corridor width subjected to settlement; (c) detail any remedial works to be undertaken including a timetable for completion of proposed works; and (d) any recommendations on measures to be taken to ensure the physical integrity of the works.
J8	The holder of this authority must maintain to the satisfaction of the administering authority the diversion in accordance with the conditions of this environmental authority. Where the operation of the diversion channel in the opinion of the administering authority has demonstrated that acceptable channel stability cannot be achieved the administering authority may direct the holder to take whatever approved measure and modifications are considered necessary by the administering authority for the protection and proper maintenance of the inference.

Schedule K: Biodiversity	
Condition number	**Condition**
K1	**Impacts to State Environmental Matters** Significant residual impacts to prescribed environmental matters are limited to those impacts specified in **Table K1 – Significant residual impacts to prescribed environmental matters** and for Matters of State Environmental Significance, as illustrated in the **Figure 4 (a) – Location of pre-mining Matters of State Environmental Significance (ML10327, ML700075), Figure 4 (b) – Pre-mining potential habitat for Koala (ML10327, ML700075)** and **Figure 4 (c) – Pre-mining potential habitat for Squatter Pigeon (ML10327, ML700075).**
K2	If prescribed environmental matters not listed in **Table K1 – Significant residual impacts to prescribed environmental matters** are impacted by mining activities, a report must be produced by an appropriately qualified person detailing whether the impact constitutes a significant residual impact to the matter.
K3	Any offsets to prescribed environmental matters must be delivered in accordance with the *Environmental Offsets Act 2014* and Queensland Environmental Offsets Policy (EPP/2015/1658), as amended from time to time**.**
K4	**Staged Impacts** The significant residual impacts to a prescribed environmental matter listed in **Table K1 – Significant residual impacts to prescribed environmental matters** may be carried out in stages. An environmental offset can be delivered for each stage of the impacts to prescribed environmental matters.
K5	Prior to the commencement of each stage, a report completed by an appropriately qualified person, that includes an analysis of the following must be provided to the administering authority: (a) for the forthcoming stage – the estimated significant residual impacts to each prescribed environmental matter; and (b) for the previous stage, if applicable – the actual significant residual impacts to each prescribed environmental matter, to date.
K6	The report required by condition **K5** must be approved by the administering authority before a notice of election for the forthcoming stage, if applicable, is lodged with the administering authority.
K7	A notice of election for the staged environmental offset referred to in condition **K6,** must be provided to the administering authority no less than **3 months** before the proposed commencement of that stage, unless a lesser timeframe has been agreed to by the administering authority.

Table K1: Significant residual impacts to prescribed environmental matters

Prescribed Environmental Matters	Location of impact	Maximum Extent of Impact	State Environmental Offset Required
RE 11.3.30 (Intersecting watercourse)	ML700075 and ML10327	0.4 ha	Y
RE 11.3.25 (Intersecting watercourse)		2.1 ha	Y
RE 11.3.7/11.3.31 (Intersecting watercourse)		1.5 ha	Y
RE 11.3.25		11.3 ha	Y
RE 11.3.25a		14.6 ha	Y
RE 11.3.27f		11.9 ha	Y
RE 11.3.31		21.9 ha	Y
RE 11.3.4		6.4 ha	Y
RE 11.3.7		54.9 ha	Y
RE 11.9.10		6.0 ha	Y
Squatter Pigeon (Southern) (*Geophaps scripta scripta*)*		197.5 ha	Y
Koala (*Phascolarctos cinereus*)*		264.5 ha	Y

*This matter is to be managed in accordance with State offset requirements and may be amended upon finalisation of referral under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

END OF CONDITIONS

Definitions

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

Acid mine drainage means any contaminated discharge emanating from a mining activity formed through a series of chemical and biological reactions when geological strata is disturbed and exposed to oxygen and moisture.

Adversely means in a way that results in a material change in condition within Category 'B' areas such that there is a harmful or unfavourable impact to a specific receptor or environmental value.

Affected person is someone whose drinking water can potentially be impacted as a result of discharges from a dam, or their life can be put at risk due to dwellings or workplaces being in the path of a dam break flood.

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

Alternative arrangement means a mutual agreement between a landholder and the EA holder that changes how the landholder (including their property and residence) is treated for the purposes of being considered a sensitive or commercial receptor to the mining operation.

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

Annual inspection report means an assessment prepared by a suitably qualified and experienced person containing details of the assessment against the most recent consequence assessment report and design plan (or system design plan):

(a) against recommendations contained in previous annual inspections reports;
(b) against recognised dam safety deficiency indicators;
(c) for changes in circumstances potentially leading to a change in consequence category;
(d) for conformance with the conditions of this authority;
(e) for conformance with the 'as constructed' drawings;
(f) 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
(g) for evidence of conformance with the current operational plan.

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

Approved design plans are defined as**:**

(a) design of Two Mile Creek Diversion, Brisbane Stormwater Management Pty Ltd, 30 March 2012
(b) design of Two Mile Creek Diversion Addendum Report, Brisbane Stormwater Management Pty Ltd, 17 September 2012
(c) Two Mile Creek Diversion Addendum Report for Temporary Crossing (Engeny, Dec 2020)
(d) Two Mile Creek Diversion Addendum Report for Final Landform (Engeny, Feb 2022)
(e) design of Coral Creek Diversion, Brisbane Stormwater Management Pty Ltd, May 2011
(f) design of Coral Creek Diversion Addendum Report, Brisbane Stormwater Management Pty Ltd, November 2011
(g) North Sonoma Creek Diversion Design Plan, Engeny Water Management Pty Ltd, May 2018

Assessed or **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 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 an environmental authority or a development approval.

Background, with reference to the **Schedule F: Surface Water** means the average of samples taken prior to the commencement of mining from the same waterway that the current sample has been taken.

Blasting means the use of explosive materials to fracture:

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

Certification, certifying or **certified** by an appropriately qualified and experienced person in relation to a design plan or an annual report regarding dams/structures, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit at any time:

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

Certification means assessment and approval must be undertaken by a suitably qualified and experienced person in relation to any assessment or documentation required by this Manual, 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'.

Chemical means:

(a) an agricultural chemical product or veterinary chemical product within the meaning of the *Agricultural and Veterinary Chemicals Code Act 1994* (Commonwealth);
(b) a dangerous good under the Australian Code for the Transport of Dangerous Goods by Road and Rail approved by the Australian Transport Council;
(c) a lead hazardous substance within the meaning of the *Workplace Health and Safety Regulation 1997*;
(d) a drug or poison in the Standard for the Uniform Scheduling of Drugs and Poisons prepared by the Australian Health Ministers' Advisory Council and published by the Commonwealth; or
(e) any substance used as, or intended for use as:

(i) a pesticide, insecticide, fungicide, herbicide, rodenticide, nematicide, miticide, fumigant or related product;
(ii) a surface active agent, including, for example, soap or related detergent;
(iii) a paint solvent, pigment, dye, printing ink, industrial polish, adhesive, sealant, food additive, bleach, sanitiser, disinfectant, or biocide;
(iv) a fertiliser for agricultural, horticultural, or garden use;
(v) a substance used for, or intended for use for mineral processing or treatment of metal, pulp and paper, textile, timber, water, or wastewater; or
(vi) manufacture of plastic or synthetic rubber.

Commercial place means a workplace used as 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.

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).

Construction or **constructed** in relation to a regulated structure includes building a new regulated structure and lifting or otherwise modifying an existing regulated structure, but does not include investigations and testing necessary for the purpose of preparing a design plan.

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 and **associated works**.

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 (for example, via spillway).

Design plan is a document setting out how all identified consequence scenarios are addressed in the planned design and operation of a regulated structure.

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 administering authority, 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.

Disturbance of land includes:

(a) compacting, removing, covering, exposing, or stockpiling of earth;
(b) removal or destruction of vegetation or topsoil or both to an extent where the land has been made susceptible to erosion;
(c) carrying out mining within a watercourse, waterway, wetland, or lake;
(d) the submersion of areas by tailings or hazardous contaminant storage and dam/structure walls;
(e) temporary infrastructure, including any infrastructure (roads, tracks, bridges, culverts, dam/structures, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after the mining activity has ceased; or

(f) releasing of contaminants into the soil, or underlying geological strata.

However, the following areas are not included when calculating areas of 'disturbance':

(a) areas off lease (e.g. roads or tracks which provide access to the mining lease);
(b) areas previously disturbed which have achieved the rehabilitation outcomes;
(c) by agreement with the administering authority, areas previously disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);
(d) areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dam/structures, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be left by agreement with the landowner; or
(e) disturbance that pre-existed the grant of the tenure.

Effluent treated waste water released from sewage treatment plants.

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 information.

Existing structure means a structure that prior to 18 September 2014 meets any or both of the following, a structure:

(a) with a design that is in accordance with the *Manual for Assessing Hazard Categories and Hydraulic Performance of Dams* and that is considerably in progress;
(b) that is under considerable construction or that is constructed.

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 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 '*Manual for Assessing Hazard Categories and Hydraulic Performance of Dams*'.

Holder means:

(a) where this document is an environmental authority, any person who is the holder of, or is acting under, that environmental authority; or
(b) where this document is a development approval, any person who is the registered operator for that development approval.

Hydraulic performance means the capacity of a regulated dam to contain or safely pass flowable substances based on the design criteria specified for the relevant consequence category in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures* (ESR/2016/1933).

Infrastructure means water storage dams, levees, roads and tracks, buildings and other structures built for the purpose of the mining activity.

Land in **Schedule H** – **Land** of this document means land excluding waters and the atmosphere, that is, the term has a different meaning from the term as defined in the *Environmental Protection Act 1994*. For the purposes of the *Acts Interpretation Act 1954*, it is expressly noted that the term '**land**' in this environmental authority relates to physical land and not to interests in land.

Land use means the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

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).

m means metres.

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.

Manual means the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures* (ESR/2016/1933) published by the administering authority.

Measures includes any measures to prevent or minimise environmental impacts of the mining activity such as bunds, silt fences, diversion drains, capping, and containment systems.

Mine affected water:

(a) means the following types of water:

  (i) pit water, tailings dam water, processing plant water;
  (ii) water contaminated by a mining activity which would have been an environmentally relevant activity under Schedule 2 of the *Environmental Protection Regulation 2008* if it had not formed part of the mining activity;
  (iii) rainfall runoff which has been in contact with any areas disturbed by mining activities which have not yet been rehabilitated, excluding rainfall runoff discharging through release points associated with erosion and sediment control structures that have been installed in accordance with the standards and requirements of an Erosion and Sediment Control Plan to manage such runoff, provided that this water has not been mixed with pit water, tailings dam water, processing plant water or workshop water;
  (iv) groundwater which has been in contact with any areas disturbed by mining activities which have not yet been rehabilitated;
  (v) groundwater from the mine's dewatering activities;
  (vi) a mix of mine affected water (under any of paragraphs i)-v) and other water.

(b) does not include surface water runoff which, to the extent that it has been in contact with areas disturbed by mining activities that have not yet been completely rehabilitated, has only been in contact with:

  (i) land that has been rehabilitated to a stable landform and either capped or revegetated in accordance with the acceptance criteria set out in the environmental authority but only still awaiting maintenance and monitoring of the rehabilitation over a specified period of time to demonstrate rehabilitation success; or
  (ii) land that has partially been rehabilitated and monitoring demonstrates the relevant part of the landform with which the water has been in contact does not cause environmental harm to waters or groundwater, for example:

I. areas that are been capped and have monitoring data demonstrating hazardous material adequately contained with the site;
II. evidence provided through monitoring that the relevant surface water would have met the water quality parameters for mine affected water release limits in this environmental authority, if those parameters had been applicable to the surface water runoff; or

(iii) both.

Mineral waste means waste materials resulting from the extraction and processing of coal including overburden, inter-burden, waste rock, tailings, and rejects.

Mining waste means waste rock, spoil, overburden and interburden.

Modification or modifying (see definition of **construction**).

Natural flow means the flow of water through waters caused by nature.

Non polluting means having no adverse impacts upon the receiving environment.

Operational plan includes:

(a) normal operating procedures and rules (including clear documentation and definition of process inputs in the DSA);
(b) 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.

Peak particle velocity (ppv) means a measure of ground vibration magnitude which is the maximum rate of change of ground displacement with time, usually measured in millimetres/second (mm/s).

Permanent watercourse diversion is a man-made structure that incorporates the geomorphologic, hydraulic, hydrologic, and ecological components of a local watercourse and is designed, constructed, operated, and maintained according to an engineering standard that ultimately achieves a self-sustaining watercourse able to function without features or characteristics that rely on ongoing maintenance or that impose a financial or other burden on the proponent, government, or the community.

Protected area means – a protected area under the *Nature Conservation Act 1992*; or

(a) a marine park under the *Marine Parks Act 1992*; or
(b) a World Heritage Area.

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. The receiving environment includes (but is not limited to):

(a) a watercourse;
(b) groundwater; and
(c) an area of land that is not specified in of this environmental authority.

The term does not include land that is specified in Authorised Activities of this environmental authority.

Receiving waters means the waters into which this environmental authority authorises releases of mine affected water.

Register of regulated structure 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 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) 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;
(b) a sump or earthen pit used to store residual drilling material and drilling fluid only for the duration of drilling and well completion activities; and
(c) a flare pit.

Rehabilitation the process of reshaping and revegetating land to restore it to a stable landform.

Release event means a surface water discharge from mine affected water storages or contaminated areas on the licensed place meaning the mining activities carried out at the mining tenements detailed in **Figure 1 – Authorised disturbance area and groundwater monitoring locations** of this environmental authority.

Residual drilling material means waste drilling materials including muds and cuttings or cement returns from well holes and which have been left behind after the drilling fluids are pumped out.

RL means reduced level, relative to mean sea level as distinct from depths to water.

Representative means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the mining activities.

Sensitive place means:

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

Note: The definition of 'sensitive place' and 'commercial place' is based on Schedule 1 of *EPP Noise*. That is, a sensitive place is inside or outside on a dwelling, library & educational institution, childcare or kindergarten, school or playground, hospital, surgery or other medical institution, commercial & retail activity, protected area or an area identified under a conservation plan under *Nature Conservation Act 1992* as a critical habitat or an area of major interest, marine park under *Marine Parks Act 2004*, park or garden that is outside of the mining lease and open to the public for the use other than for sport or organised entertainment. A commercial place is inside or outside a commercial or retail activity.

A mining camp (i.e., accommodation and ancillary facilities for mine employees or contractors or both, associated with the mine the subject of the environmental authority) is not a sensitive place for that mine or mining project, whether or not the mining camp is located within a mining tenement that is part of the mining project the subject of the environmental authority. For example, the mining camp might be located on neighbouring land owned or leased by the same company as one of the holders of the environmental authority for the mining project, or a related company. Accommodation for mine employees or contractors is a sensitive place if the land is held by a mining company or related company, and if occupation is restricted to the employees, contractors and their families for the particular mine or mines which are held by the same company or a related company.

For example, a township (occupied by the mine employees, contractors and their families for multiple mines that are held by different companies) would be a sensitive place, even if part or all of the township is constructed on land owned by one or more of the companies.

Note: a sensitive or commercial place does not include neighbouring mining operations.

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

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:

(a) for regulated dams, an RPEQ who is a civil engineer with the required qualifications in dam safety and dam design.
(b) 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.

SWL means standing water level.

System design plan means a plan that manages an integrated containment system that shares the required DSA and/or ESS volume across the integrated containment system.

Temporary watercourse diversion is a man-made structure that may incorporate geomorphologic, hydraulic, hydrologic, and ecological components of a local watercourse and is designed, constructed, operated, and maintained according to an engineering standard that ensures the diversion does not compromise the equilibrium and performance

of the diversion and adjoin watercourses. A temporary diversion is replaced by a permanent diversion, or the re-establishment of the pre-existing watercourse, within the timeframe specified in the design plan.

The Act means the *Environmental Protection Act 1994*.

µS/cm means micro siemens per centimetre.

Void means any constructed, open excavation in the ground.

Waste as defined in section 13 of the *Environmental Protection Act 1994*.

'waste and resource management hierarchy' has the meaning given by section 9 of the *Waste Reduction and Recycling Act 2011*.

Watercourse has the same meaning given in the *Water Act 2000*.

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

Waters includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), storm water channel, storm water drain, and groundwater and any part thereof.

WaTERS means the Queensland Government's WaTERS database system.

Wet season means the time of year, covering one or more conditions, 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.

Figures:

Figure 1 – Authorised disturbance area and groundwater monitoring locations

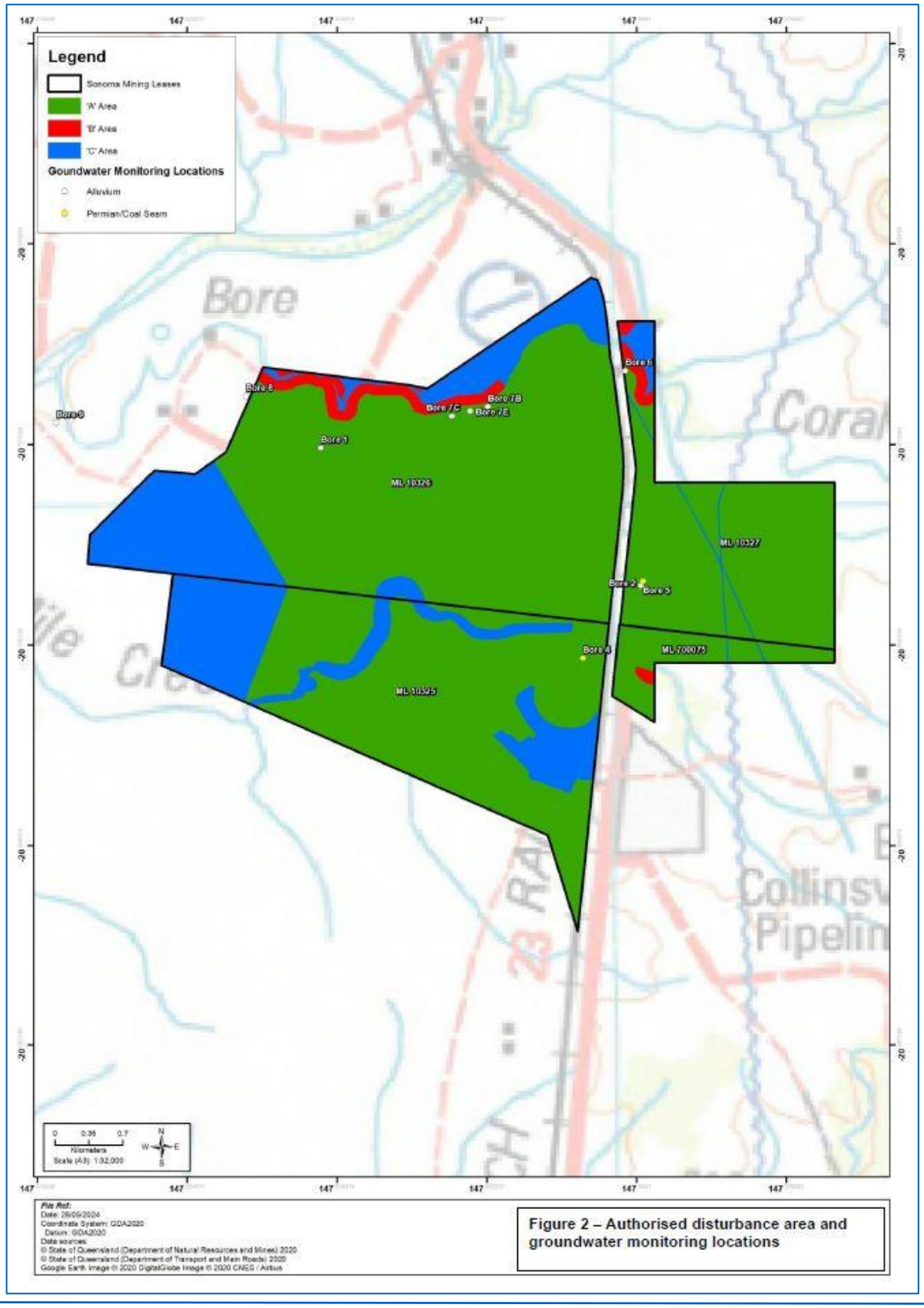

Figure 2 – Authorised mine domains as of October 2025

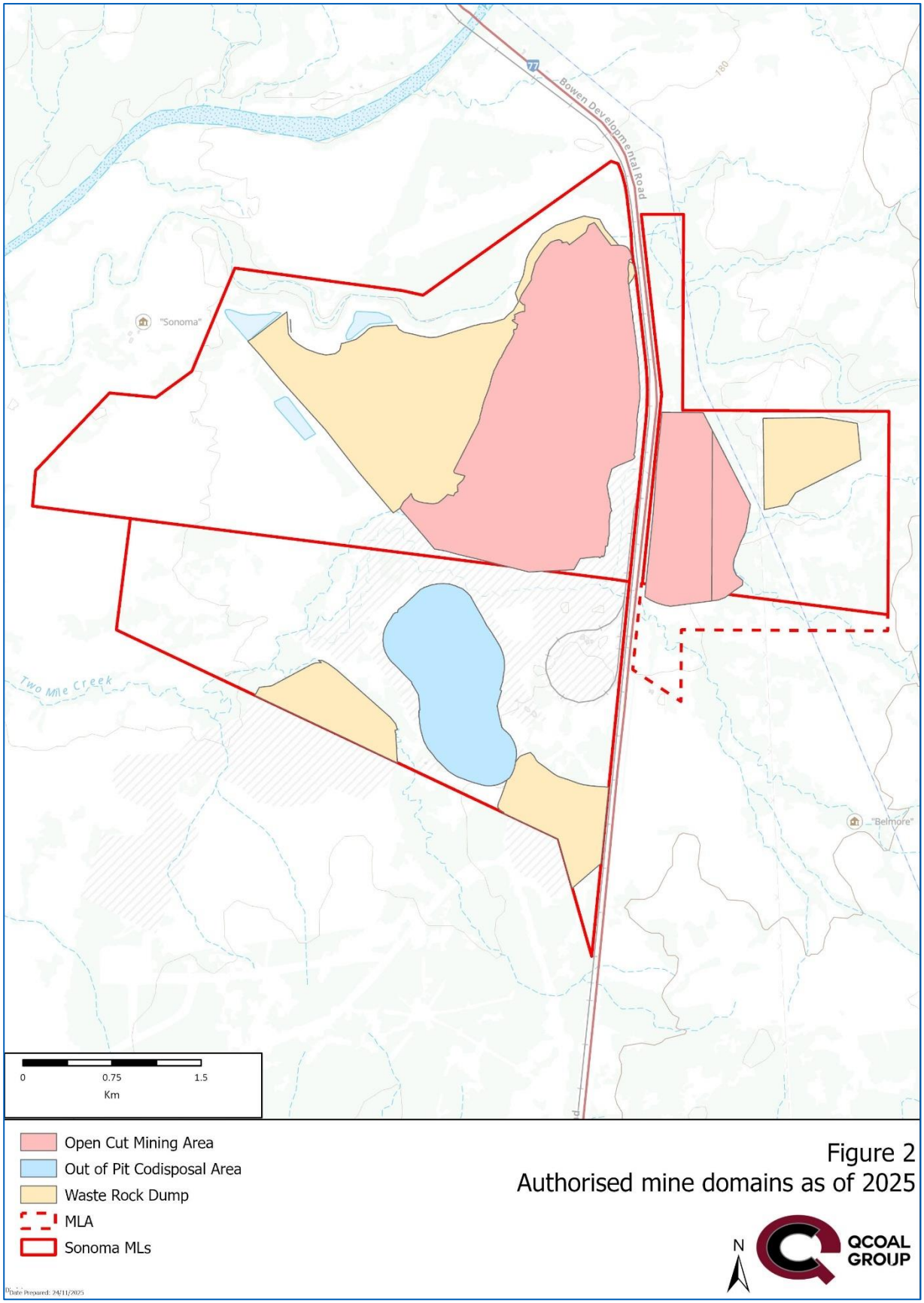

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Figure 3 – Mine affected water release points, sources and receiving waters

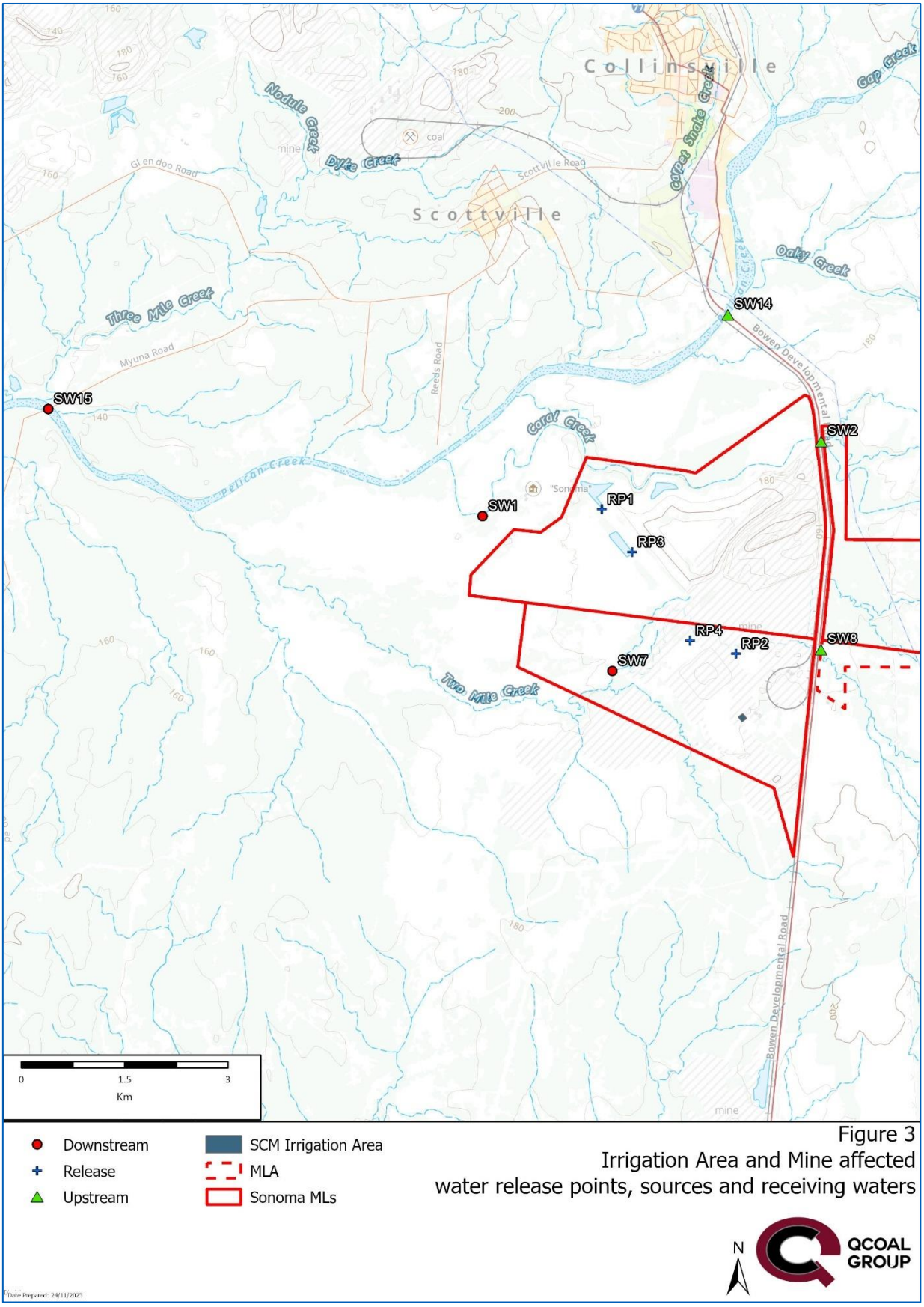

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Figure 4 (a) – Location of Pre-mining Matters of State Environmental Significance (ML10327, ML700075)

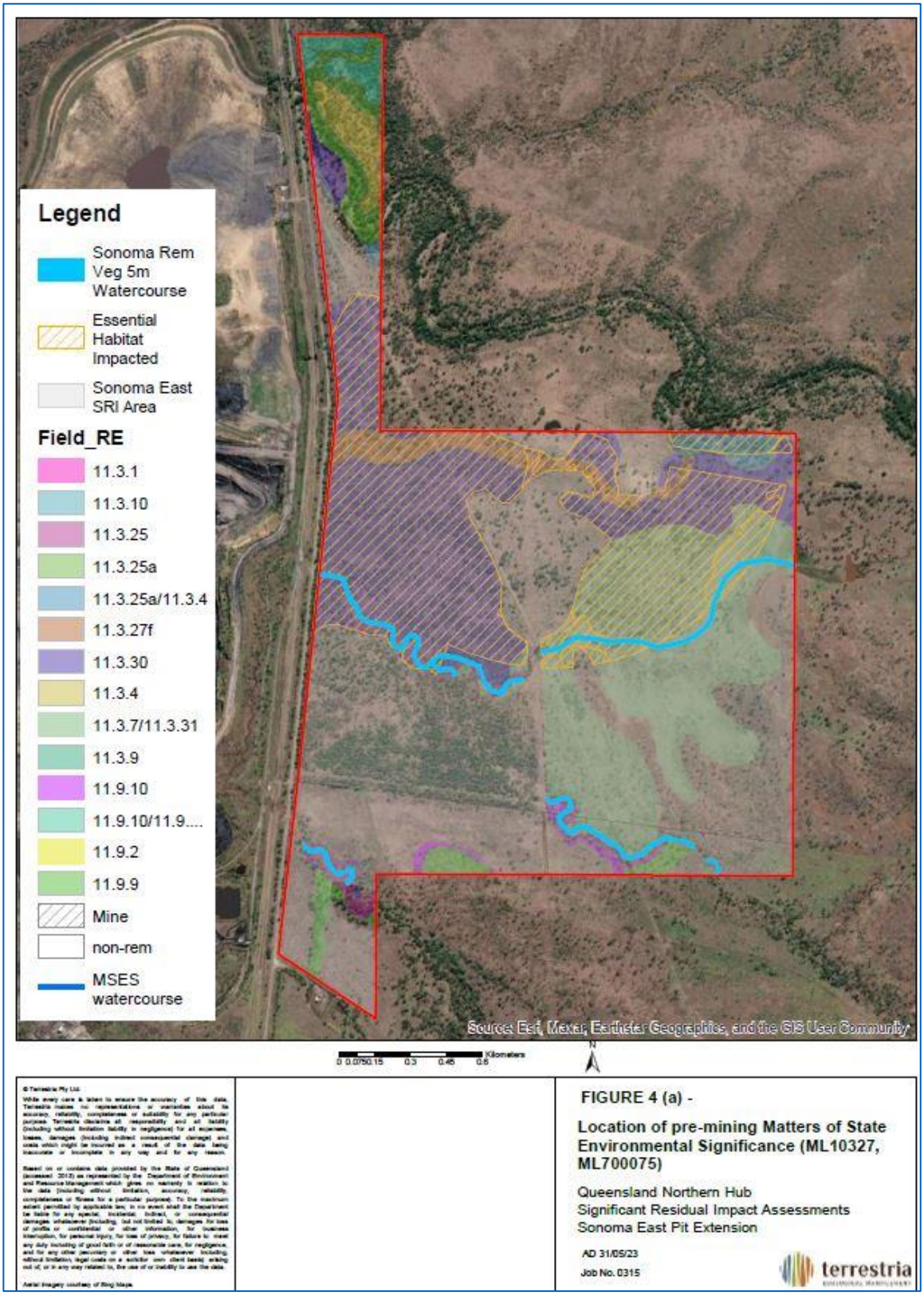

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Figure 4 (b) – Pre-mining potential habitat for Koala (ML10327, ML700075)

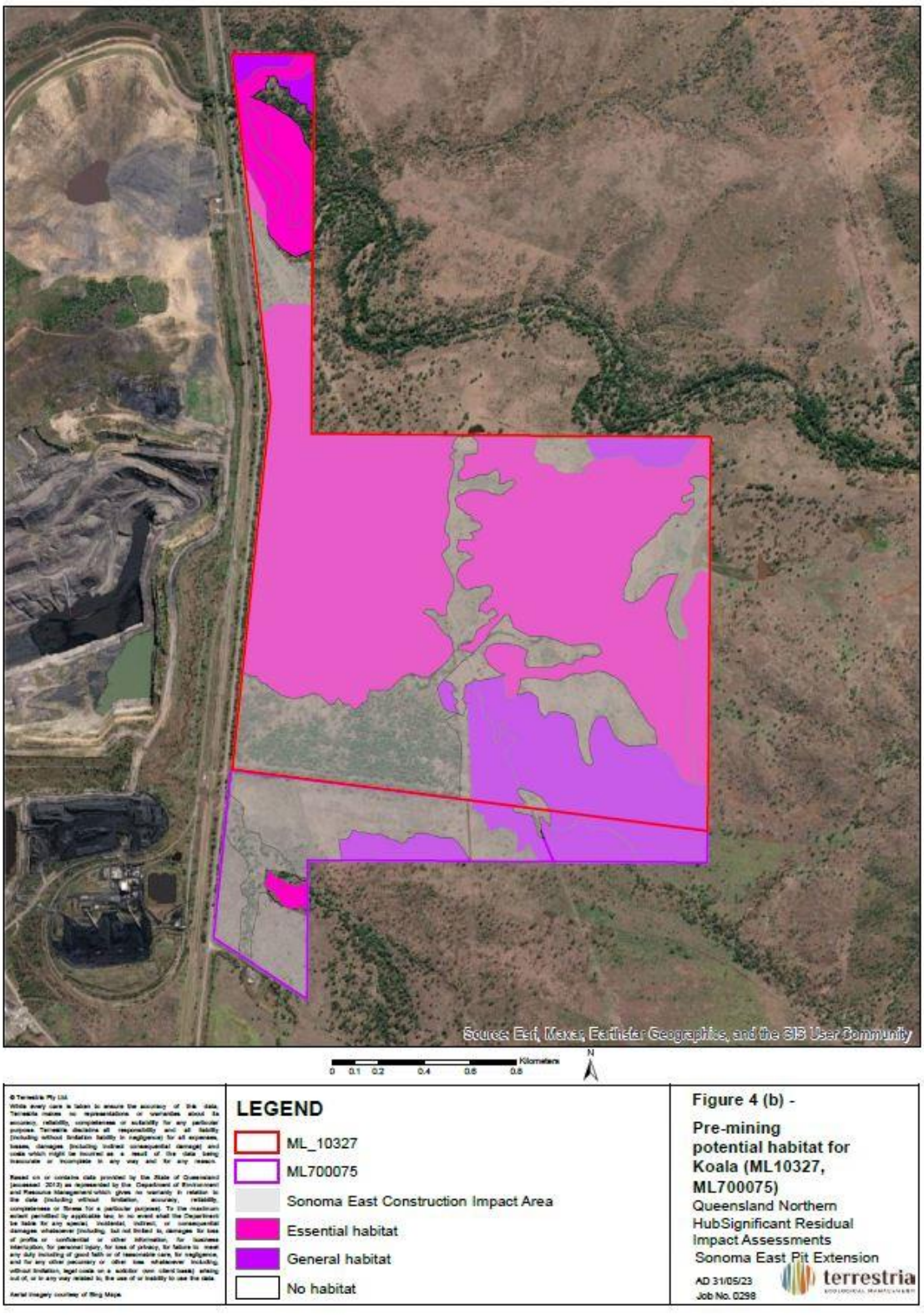
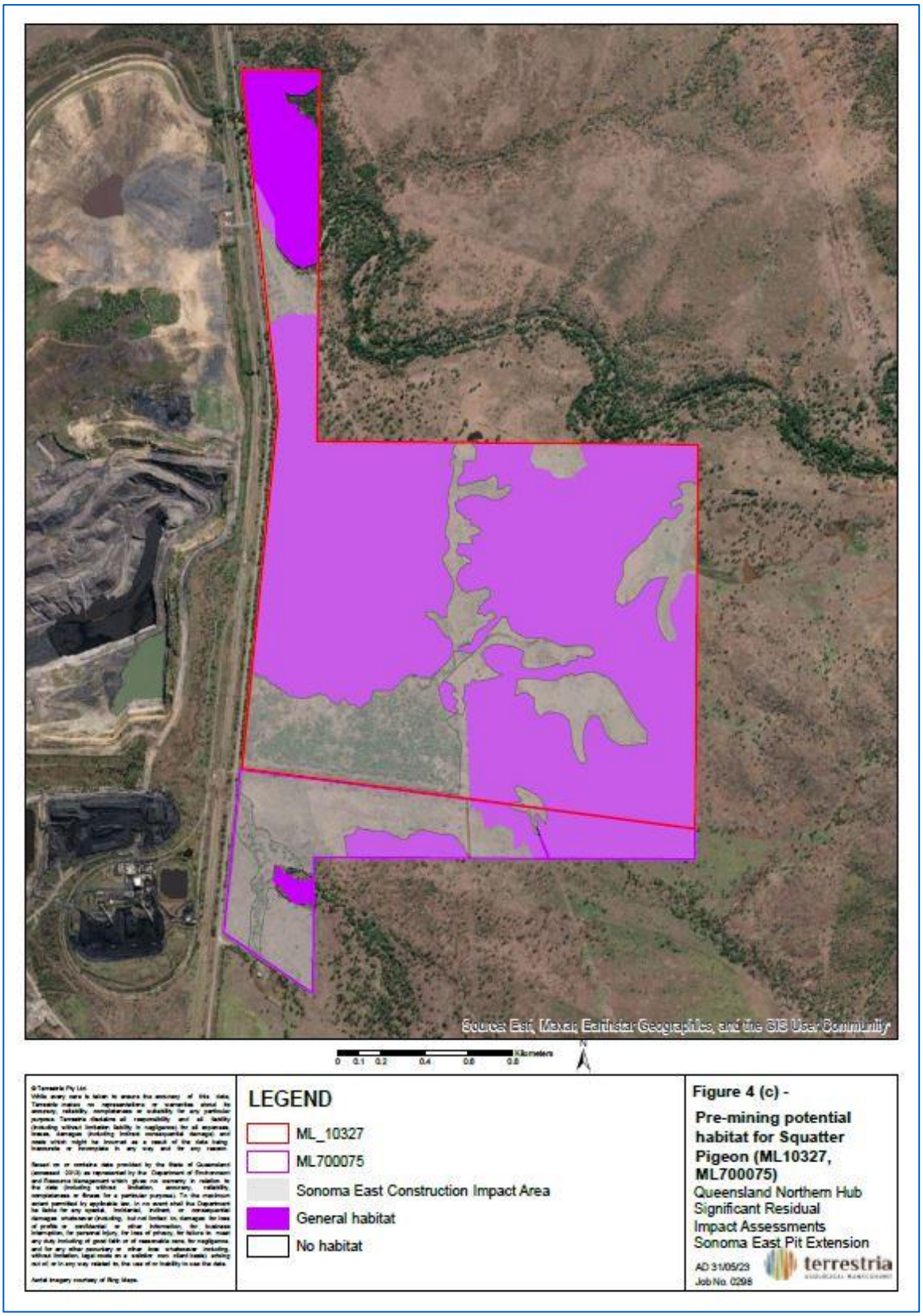


Figure 4 (c) – Pre-mining potential habitat for Squatter Pigeon (ML10327, ML700075)



END OF ENVIRONMENTAL AUTHORITY