Permit

Environmental Protection Act 1994

Environmental Authority EPML00932713 Isaac Plains Coal Mine

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

Environmental authority number: EPML00932713

Environmental authority takes effect on 02 March 2026.

The anniversary date of this environmental authority is 03 November each year.

Environmental authority holder(s)

Name(s)	Registered address
STANMORE IP COAL PTY LTD	Level 32 12 Creek Street BRISBANE CITY QLD 4000 Australia.

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Schedule 3 13: Mining black coal	ML70342, ML700016, ML700017, ML700018, ML700019
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML70342, ML700016, ML700017, ML700018, ML700019
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-i) more than 100 but not more than 1500EP if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme	ML70342, ML700016, ML700017, ML700018, ML700019,
Ancillary 60 - Waste disposal 1: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(a) (d) more than 200,000t	ML70342, ML700016, ML700017, ML700018, ML700019
Ancillary 38 - Surface Coating 1: Anodising, electroplating, enamelling or galvanising using, in a year, the following quantity of surface coating materials (b) more than 100t but not more than 1000t	ML70342, ML700016, ML700017, ML700018, ML700019

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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.

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.

Signature

02 March 2026

Date

Jason Dunlop

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

Enquiries:

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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).

Conditions of environmental authority

The environmental 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 and Appendices:

Schedule A	General
Schedule B	Air
Schedule C	Water
Schedule D	Noise and vibration
Schedule E	Waste
Schedule F	Land
Schedule G	Regulated Structures
Schedule H	Nature Conservation
Appendix 1	Figures 1 - 10

Schedule A: General	
Condition number	**Condition**
A1	**General** 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	**Authorised activities** In carrying out the mining activities authorised by this environmental authority, disturbance of land: a) is authorised in the areas marked 'A'; and b) is not authorised in the areas marked 'B'; and c) is only authorised in areas marked 'C' to the extent reasonably necessary for infrastructure. The areas stated in a) to c) of this condition, are shown in **Appendix 1, Figure 1A: Authorised mining activities – Isaac Plains East** and **Figure 1B: Authorised mining activities – Isaac Plains Mine** of this environmental authority.
A3	In carrying out underground mining activities authorised by this environmental authority, the environmental authority holder must comply with **Appendix 1, Figure 1C: Authorised mining activities – Isaac Plains Underground Project** of this environmental authority**.**
A4	**Maintenance of measures, plant and equipment** The environmental authority holder 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.
A5	**Monitoring records** All monitoring records or reports required by this environmental authority must be kept for a period of not less than **five (5) years**.
A6	All records, reports, plans and programs required by this environmental authority, must be made available to the administering authority within **five (5) business days** of the administering authority's request.
A7	All environmental monitoring must be conducted by a suitably qualified person(s).

A8	**Notification of emergencies, incidents and exceptions** The environmental authority holder must notify the administering authority, via the Pollution Hotline (or WaTERS where applicable) or its successor, within **twenty four (24) hours**, after becoming aware of any incident or exceedance not in accordance with, the conditions of this environmental authority.
A9	If the environmental authority holder is required to give notification to the administering authority of an event, incident or exceedance under **Condition A8**, the notification must include the following information: a) the environmental authority number; b) the environmental authority holder; c) the name and telephone number of a designated contact person who is able to talk with the administering authority on behalf of the operator in relation to the event or release; d) the location of the event, release or exceedance, including a physical address and lot on plan description (if available) and any other information necessary to identify the specific location of the event or release; e) the time of the event, release or exceedance (if known); f) the date and time the environmental authority holder became aware of the event or release; g) if the event, release or exceedance has impacted, or may impact on, a person's land — whether the person whose land has been, or may be, impacted by the event, release or exceedance has been notified; h) the suspected cause of the event, incident or exceedance; i) the environmental harm caused, threatened, or suspected to be caused by the event, incident or exceedance; and j) actions taken to prevent any further incident and mitigate any environmental harm caused by the event. Incident or exceedance.
A10	Within **ten (10) business days** following the initial notification as per C**ondition A8** of an emergency, incident or exceedance, or receipt of monitoring results, further 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, incident or exceedance.
A11	**Coal extraction** The environmental authority holder is approved for the extraction rate of up to **four (4) million tonnes per annum (Mtpa)** of run-of-mine (ROM) coal.

A12	**Complaints** The environmental authority holder must record all environmental complaints received including: a) name, address and contact number of the complainant; b) time and date of complaint; c) reasons for the complaint; d) investigations undertaken; e) conclusions formed; f) actions taken to resolve the complaint; g) any abatement measures implemented; and h) person responsible for resolving the complaint.
A13	The environmental authority holder must investigate any complaints of nuisance or environmental harm. If the complaints are validated, immediately implement abatement measures so that the environmental harm or nuisance to which the complaint relates ceases or no longer negatively impacts the sensitive place or commercial place.
A14	A register of alternative arrangements must be established and maintained by the environmental authority holder. The register must include: a) the location to which the alternative arrangement applies; b) the period of the alternate arrangement; c) details about the particular environmental nuisance impact or impacts the arrangement is for; and d) details about the mitigation measures, where relevant.
A15	The environmental authority holder must, when requested by the administering authority undertake relevant specified monitoring to investigate any complaint of environmental harm or nuisance. The environmental authority holder must: a) within a timeframe nominated or agreed to by the administering authority, commence monitoring; b) undertake the monitoring for a duration nominated or agreed to by the administering authority; and c) provide the results of the investigation (including an analysis and interpretation of the monitoring results) and abatement measures, where implemented, to the administering authority within **ten (10) business days** of completion of the investigation or monitoring, or no later than **ten (10) business days** after the end of the timeframe nominated by the administering authority to undertake the investigation.
A16	If the monitoring undertaking in accordance with **Condition A15** indicates the occurrence of environmental harm or nuisance then the environmental authority holder must: a) address any complaint including the use of appropriate dispute resolution if required; and

	b) immediately implement abatement measures so that the environmental harm or nuisance to which the complaint relates ceases or no longer negatively impacts the sensitive place.
A17	**Risk management** The environmental authority holder must develop and implement a risk management system for all stages of mining activities which mirrors the content requirement of the Standards Australia Risk management – Principles and guidelines (AS/NZS ISO 31000), or the latest edition of a Standards Australia for risk management.

Schedule B: Air	
Condition number	**Condition**
B1	The release of dust or particulate matter or both resulting from the authorised mining activities must not cause an environmental nuisance, at any sensitive place or commercial place.
B2	When requested by the administering authority or as a result of a complaint, dust and particulate monitoring must be undertaken, and the results thereof notified to the administering authority within **fourteen (14) days** following completion of the monitoring period. Dust and particulate matter emissions generated by the authorised mining activities must not exceed the following levels when measured at any sensitive place or commercial place: a) Dust deposition of 120 milligrams per square metre per day, averaged over 1 month, when monitored in accordance with the most recent version of Australian Standard AS3580.10.1 Methods for sampling and analysis of ambient air—Determination of particulate matter—Deposited matter – Gravimetric method. b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometres (PM_{10}) suspended in the atmosphere of 50 micrograms per cubic metre over a 24-hour averaging time, when monitored in accordance with the most recent version of either: i. Australian Standard AS3580.9.6 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter— PM_{10} high volume sampler with size-selective inlet – Gravimetric method; or ii. Australian Standard AS3580.9.9 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter— PM_{10} low volume sampler—Gravimetric method; or iii. Australian Standard AS3580.9.11 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter— PM_{10} beta attenuation monitors. c) A concentration of particulate matter with an aerodynamic diameter of less than 2.5 micrometres ($PM_{2.5}$) suspended in the atmosphere of 25 micrograms per cubic metre over a 24-hour averaging time, when monitored in accordance with the most recent version of either AS/NZS3580.9.10 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—$PM_{2.5}$ low volume sampler—Gravimetric method or AS/NZS3580.912 (2013): Determination of suspended particulate matter – $PM_{2.5}$ beta attenuation monitors. d) A concentration of particulate matter suspended in the atmosphere of 90 micrograms per cubic metre over a 1 year averaging time, when monitored in accordance with the most recent version of AS/NZS3580.9.3 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—Total suspended particulate matter (TSP)—High volume sampler gravimetric method.
B3	Where monitoring indicates an exceedance of the relevant limits in **Condition B2**, then the environmental authority holder must investigate whether the exceedance is due to emissions from the activity. If the authorised mining activities are found to be the cause of the exceedance then the environmental authority holder must immediately implement dust abatement measures so that emissions of dust from the activity do not result in further environmental nuisance.

B4	If during the monitoring period nominated as per **Condition B2**, there is an exceedance of the relevant limits listed in **Condition B2**, the environmental authority holder must notify the administering authority within **seven (7) days** of the exceedance occurring. The notification must also include the actions taken in accordance with **Condition B3**.
B5	**Dust Management Plan** A Dust Management Plan must be developed and implemented by a suitably qualified person for all stages of the authorised mining activities. The dust management plan must be submitted to the administering authority for review and comment as required and in accordance with **Condition B7(b)**.
B6	The Dust Management Plan required by **Condition B5** must include: a) a preventative management system for PM_{10}, $PM_{2.5}$ and TSP; b) real time monitoring program for PM_{10} and $PM_{2.5}$ between the Isaac Plains Coal Mine and the Township of Moranbah; c) Trigger Action Response Program; and d) procedures for updating the IPCM website to enable public access to the monitoring results.
B7	An annual report on the dust management plan required by **Condition B6** must be submitted to the administering authority with each annual return. The report must include: a) a review of the suitability of the preventative dust management system and the trigger action response program; b) recommendations or improvements to the dust management plan, including whether additional monitoring locations are required; and c) the results of the real time monitoring program and the actions taken to reduce potential impacts on sensitive places and commercial places from the authorised mining activities.

Schedule C: Water	
Condition number	**Condition**
C1	**Contaminant release** Contaminants 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.
C2	Unless otherwise permitted under the conditions of this environmental authority, the release of mine affected water to waters must only occur from the release points specified in **Table 1: Mine Affected Water Release Points, Sources and Receiving Waters** and depicted in **Appendix 1, Figure 2: Location of Water Release Points and Monitoring Points** attached to this environmental authority.
C3	The release of mine affected water to internal water management infrastructure that is installed and operated in accordance with a water management plan that complies with **Conditions C31 to C35** inclusive is permitted.

Table 1: Mine Affected Water Release Points, Sources and Receiving Waters

Release Point (RP)	Easting (GDA94 – Zone 55)	Northing (GDA94 – Zone 55)	Mine Affected Water Source and Location	Monitoring Point	Receiving Waters Description
RP 1	614974.040	7569713.469	Release Dam 1	Release channel	Smoky Creek
RP 2	616695.040	7567301.469	Release Dam 2	Release channel	Billy's Gully
RP 4	615114.040	7569350.469	S2 Sediment Dam	Pump intake (via bleed-off valve)	Smoky Creek
RP 5	617929.040	7567111.469	S3 pit	Pump intake (via bleed-off valve)	Billy's Gully
RP 12	617022.040	7571326.469	N1 Pit	Pump intake (via bleed-off valve)	Smoky Creek

C4	The release of mine affected water to waters in accordance with **Condition C2** must not exceed the release limits stated in **Table 2: Mine Affected Water Release Limits** when measured at the monitoring points specified in **Table 1: Mine Affected Water Release Points, Sources and Receiving Waters** for each quality characteristic.

Table 2: Mine Affected Water Release Limits

Quality Characteristic	Release Limits	Monitoring frequency
Electrical conductivity (µS/cm)	Release limits specified in **Table 4** for variable flow criteria.	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)
Total Suspended Solids (mg/L)	Release limits specified in **Table 4** for variable flow criteria.	Daily during release (first sample within 2 hours of commencement of release)
Sulphate (SO_4^{2-}) (mg/L)	Release limits specified in **Table 4** for variable flow criteria.	Daily during release (first sample within 2 hours of commencement of release)

C5	The release of mine affected water to waters from the release points must be monitored at the locations specified in **Table 1: Mine Affected Water Release Points, Sources and Receiving Waters** for each quality characteristics and at the frequency specified in **Table 2: Mine Affected Water Release Limits** and **Table 3: Release Contaminant Trigger Investigation Levels.** ***Note:*** *the administering authority will take into consideration any extenuating circumstances prior to determining an appropriate enforcement response in the event* ***Condition C5*** *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.*

Table 3: Release Contaminant Trigger Investigation Levels

Quality Characteristic	Trigger Levels (mg/L)	Comment on Trigger Level	Monitoring Frequency
Aluminium	0.055	*For aquatic ecosystem protection, based on LOR for ICPMS*	Commencement of release and thereafter weekly during release
Arsenic	0.013	*For aquatic ecosystem protection, based on SMD guideline*	
Cadmium	0.0002	*For aquatic ecosystem protection, based on SMD guideline*	
Chromium	0.001	*For aquatic ecosystem protection, based on SMD guideline*	
Copper	0.002	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Iron	0.3	*For aquatic ecosystem protection, based on low reliability guideline*	
Lead	0.01	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Mercury	0.0002	*For aquatic ecosystem protection, based on LOR for CV FIMS*	
Nickel	0.011	*For aquatic ecosystem protection, based on SMD guideline*	
Zinc	0.008	*For aquatic ecosystem protection, based on SMD guideline*	
Boron	0.37	*For aquatic ecosystem protection, based on SMD guideline*	
Cobalt	0.09	*For aquatic ecosystem protection, based on low reliability guideline*	
Manganese	1.9	*For aquatic ecosystem protection, based on SMD guideline*	
Molybdenum	0.034	*For aquatic ecosystem protection, based on low reliability guideline*	
Selenium	0.01	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Silver	0.001	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Uranium	0.001	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Vanadium	0.01	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Ammonia	0.9	*For aquatic ecosystem protection, based on SMD guideline*	
Nitrate	1.1	*For aquatic ecosystem protection, based on ambient Qld WQ Guidelines (2006) for TN*	
Petroleum hydrocarbons (C6-C9)	0.02		
Petroleum hydrocarbons (C10-C36)	0.1		
Fluoride (total)	2	*Protection of livestock and short-term irrigation guideline*	
Sodium	177 mg/L	*80th percentile of upstream receiving waterway*	

1. All metals and metalloids must be measured as total (unfiltered) and dissolved (filtered). Trigger levels for metal/metalloids apply if ***dissolved*** *results exceed trigger.*

2. SMD – slightly moderately disturbed level of protection; guideline refers ANZECC & ARMCANZ (2000).

3. LOR – typical reporting for method stated. ICPMS/CV FIMS – analytical method required to achieve LOR.

C6	If quality characteristics of the release exceed any of the trigger levels specified in **Table 3: Release Contaminant Trigger Investigation Levels** during a release event at the locations listed in **Table 1: Mine Affected Water Release Points, Sources and Receiving Waters**, the environmental authority holder must compare the downstream results recorded at the monitoring points specified in **Table 8: Receiving Water Upstream Background Sites and Down Stream Monitoring Points** to the trigger values specified in **Table 3: Release Contaminant Trigger Investigation Levels** and: a) where the downstream results do not exceed the trigger values then no action is to be taken; or b) where the downstream results exceed the trigger values specified **Table 3: Release Contaminant Trigger Investigation Levels** for any quality characteristic, compare the results of the downstream sites to the results from upstream monitoring sites listed in **Table 8: Receiving Water Upstream Background Sites and Down Stream Monitoring Points** and; i. if the downstream result is less than the upstream site data, then no action is to be taken; or ii. if the downstream result is greater than the upstream monitoring site data, complete an investigation into the potential for environmental harm and provide a written report to the administering authority in the next annual return, outlining: 1) details of the investigations carried out; 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* ***Condition C6b)(ii)****,no further reporting is required for subsequent trigger events for that quality characteristic.*
C7	If an exceedance in accordance with **Condition C6(b)(ii)** is identified, the environmental authority holder must notify the administering authority within **fourteen (14) days** of receiving the result.
C8	**Mine affected water release events** The environmental authority holder must ensure an automatic 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 4: Mine Affected Water Release During Flow Events**.
C9	The release of mine affected water to waters in accordance with **Condition C2** must only take place during periods of natural flow events in accordance with the receiving water flow criteria for discharge specified in **Table 4: Mine Affected Water Release During Flow Events** for the release point(s) specified in **Table 1: Mine Affected Water Release Points, Sources and Receiving Waters**.
C10	The release of mine affected water to waters in accordance with **Condition C2** must not exceed release limits or the maximum release rate (for all combined release point flows) for each receiving water flow criteria for discharge specified in **Table 4: Mine Affected Water Release During Flow Events** when measured at the monitoring points specified in **Table 1: Mine Affected Water Release Points, Sources and Receiving Waters**.

Table 4: Mine Affected Water Release During Flow Events

Receiving waters/ stream	Release Point (RP)	Gauging station	Gauging Station Easting (GDA94 – Zone55)	Gauging Station Northing (GDA94 – Zone 55)	Receiving Water Flow Recording Frequency	Receiving Water Flow Criteria for discharge (m^3/s)	Maximum release rate (for all combined RP flows)	Electrical Conductivity, Sulphate and TSS Release Limits
Isaac River (Via Smoky Creek & Billy's Gully)	RP1, RP2 , RP3, RP4 & RP5	130414A Isaac River at Goonyella	600500.90	7582839.20	Continuous (minimum daily)	**Very Low Flow** **<**4m^3/s for a period of 28 days after natural flow events that exceed 4 m3/s	< 2m^3/s	Electrical conductivity: 720µS/cm Sulphate (SO_4^{2-}): 250 mg/L TSS: 55mg/L
						Low Flow 4m^3/sec	0.142m^3/sec	Electrical conductivity: 3,000µS/cm Sulphate (SO_4^{2-}): 300mg/L TSS: 55mg/L
						Medium Flow 10m^3/sec	0.257m^3/sec	Electrical Conductivity 4,000(µS/cm) Sulphate (SO_4^{2-}): 300mg/L TSS: 200mg/L
						High Flow 50m^3/sec	1.09m^3/sec	Electrical conductivity 5,000µS/cm Sulphate (SO_4^{2-}): 400mg/L TSS: 200mg/L
						Very High Flow 100m^3/sec	2.02m^3/sec	Electrical conductivity: 5,000µS/cm

Receiving waters/ stream	Release Point (RP)	Gauging station	Gauging Station Easting (GDA94 – Zone55)	Gauging Station Northing (GDA94 – Zone 55)	Receiving Water Flow Recording Frequency	Receiving Water Flow Criteria for discharge (m^3/s)	Maximum release rate (for all combined RP flows)	Electrical Conductivity, Sulphate and TSS Release Limits
								Sulphate (SO_4^{2-}) 400mg/L TSS: 300mg/L
						Flood Flow 250m^3/sec	3.07m^3/sec	Electrical conductivity: 8,000µS/cm Sulphate (SO_4^{2-}) 400mg/L TSS:400mg/L

C11	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.
C12	**Notification of release event** The environmental authority holder must notify the administering authority via WaTERS within **twenty-four (24) hours** after commencing to release mine affected water in accordance with **Condition C2**. Notification must include the following information: a) release commencement date and time; b) details regarding the compliance of the release with the conditions of Schedule C: Water of this environmental authority (including contaminant limits, natural flow, discharge volume); c) release point/s; d) release rate; e) Release salinity; and f) receiving water/s including the natural flow rate.
C13	The environmental authority holder must notify the administering authority via WaTERS within **twenty-four (24) hours** after cessation of a release event, of the cessation of a release notified under **Condition C12** and within **twenty-eight (28) days** provide the following information in writing: a) release cessation date and time; b) natural flow volume in receiving water; c) the total volume of the release and the daily quantity of mine affected water released from each release point; and d) details regarding the compliance of the release with the conditions of Schedule C: Water of this environmental authority (including contamination limits, natural flow, discharge volume). ***Note:*** *Successive or intermittent releases occurring within* ***twenty-four (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 C12 and C13****, provided the relevant details of the release are included within the notification provided in accordance with* ***Conditions C12 and C13****.*
C14	**Notification of release event exceedance** If the release limits defined in **Table 2: Mine Affected Water Release Limits** are exceeded, the environmental authority holder must notify the administering authority via WaTERS within **twenty-four (24) hours** of receiving the results.

C15	The environmental authority holder must, within **twenty-eight (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 the daily quantity of mine affected water released from each release point, and which (if any) part of these releases were non-compliant; d) the total duration of the release and which (if any) part of this period was non-compliant; e) all in situ and any water quality monitoring results (including all laboratory analyses); f) identification of any environmental harm as a result of the non-compliance; and g) any other matters pertinent to the water release event.
C16	**Monitoring of water storage quality** Water storages stated in **Table 5: Water Storage Monitoring** which are associated with the release points must be monitored for: a) the water quality characteristics specified in **Table 6: Onsite Water Storage Contaminant Limits** at the monitoring locations and at the monitoring frequency specified in **Table 5: Water Storage Monitoring**; and b) the volume of water held in the each of the water storages listed in **Table 5: Water Storage Monitoring.**

Table 5: Water Storage Monitoring

Water Storage Description	Easting (GDA94 – Zone 55)	Northing (GDA94 – Zone 55)	Monitoring Location	Frequency of Monitoring
Release Dam 1	614974.040	7569713.469	Spillway	Quarterly
Release Dam 2	616695.040	7567301.469	Spillway	Quarterly
S2 Sediment Dam	615114.040	7569350.469	Pontoon pump jetty	Quarterly
S3 pit	617929.040	7567111.469	Pump intake (via bleed-off valve)	Quarterly
N1 pit	617022.040	7571326.469	Pump intake (via bleed-off valve)	Quarterly

Table 6: Onsite Water Storage Contaminant Limits

Quality Characteristic	Test Value
pH (pH unit)	Range
EC (µS/cm)	Maximum
Sulphate (mg/L)	Maximum
Fluoride (mg/L)	Maximum
Aluminium (mg/L)	Maximum
Arsenic (mg/L)	Maximum
Cadmium (mg/L)	Maximum
Cobalt (mg/L)	Maximum
Copper (mg/L)	Maximum
Lead (mg/L)	Maximum
Nickel (mg/L)	Maximum
Zinc (mg/L)	Maximum

Note: *Total measurements (unfiltered) must be taken and analysed*

C17	**Receiving environment monitoring and contaminant trigger levels** The quality of the receiving waters must be monitored at the locations specified in **Table 8: Receiving Water Upstream Background Sites and Down Stream Monitoring Points** and depicted in **Appendix 1, Figure 2: Location of Water Release Points and Monitoring Points** and **Appendix 1, Figure 3: Location of MP3** attached to this environmental authority, for each quality characteristic and at the monitoring frequency stated in **Table 7: Receiving Waters Contaminant Trigger Levels**.

Table 7: Receiving Waters Contaminant Trigger Levels

Quality Characteristic	Trigger Level	Monitoring Frequency
pH	6.5 – 8.0	Commencement of release and thereafter daily during the release
Electrical Conductivity (µS/cm)	1000	
Total Dissolved Solids (mg/L)	500mg/L	
Total Suspended Solids	1,316mg/L	
Sulphate (SO_4^{2-}) (mg/L)	1000	

Table 8: Receiving Water Upstream Background Sites and Down Stream Monitoring Points

Monitoring Points	Receiving Waters Location Description	Easting (GDA94 – Zone 55)	Northing (GDA94 – Zone 55)
Upstream Background Monitoring Points			
Monitoring Point 1	W6 – Smoky Creek upstream (u/s)	619082	7571899
Monitoring Point 2	W7 – Billy's Gully u/s	620330	7568146
Downstream Monitoring Points			
Monitoring Point 3	W2 – Isaac River downstream of Peak Downs Highway 13900 m downstream of RP 1 9500 m downstream of RP 2	616690.407	7561249.432
Monitoring Point 4	W4 - Billy's Gully 1340 meters downstream of RP2	616415.04	7566527.5
Monitoring Point 5	W5 - Smoky Creek 750 meters Downstream of RP1	614925.04	7569302.5

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

C18	If quality characteristics of the receiving water at the downstream Monitoring Point 3 **(W2 – Isaac River)** exceed any of the trigger levels specified in **Table 7: 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) where the downstream result is the same or a lower value than the upstream value for the quality characteristic then no action is to be taken; or b) where the downstream results exceed the upstream results complete an investigation into the potential for environmental harm and provide a written report to the administering authority in the next annual return, outlining: i. details of the investigations carried out; and **ii.** actions taken to prevent environmental harm.
C19	Where an exceedance of a trigger level has occurred and is being investigated, in accordance with **Condition C18(b)(ii)**, no further reporting is required for subsequent trigger events for that quality characteristic.

C20	**Receiving environment monitoring program (REMP)** The environmental authority holder must develop and implement a Receiving Environment Monitoring Program (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 Smoky Creek, Billy's Gully and connected or surrounding waterways within **ten (10) kilometres** 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.
C21	The REMP must: a) assess the condition or state of receiving waters, including upstream conditions, spatially within the REMP area, considering background water quality characteristics based on accurate and reliable monitoring data that takes into consideration temporal variation (e.g. seasonality); and b) be designed to facilitate assessment against water quality objectives for the relevant environmental values that need to be protected; and c) include monitoring from background reference sites (e.g. upstream or background) and downstream sites from the release (as a minimum, the locations specified in **Table 8: Receiving Water Upstream Background Sites and Down Stream Monitoring Points**); and d) specify the frequency and timing of sampling required in order to reliably assess ambient conditions and to provide sufficient data to derive site specific background reference values in accordance with the Queensland Water Quality Guidelines 2006. This should include monitoring during periods of natural flow irrespective of mine or other discharges; and e) include monitoring and assessment of dissolved oxygen saturation, temperature and all water quality parameters listed in **Table 2: Mine Affected Water Release Limits** and **Table 3: Release Contaminant Trigger Investigation Levels**); and f) include, where appropriate, monitoring of metals/metalloids in sediments (in accordance with ANZECC & ARMCANZ 2000, BATLEY and/or the most recent version of AS5667.1 Guidance on Sampling of Bottom Sediments); and g) include, where appropriate, monitoring of macroinvertebrates in accordance with the AusRivas methodology, and h) apply procedures and/or guidelines from ANZECC & ARMCANZ 2000 and other relevant guideline documents; and i) describe sampling and analysis methods and quality assurance and control; and j) incorporate stream flow and hydrological information in the interpretations of water quality and biological data. k) design and implement a riparian monitoring program along Billy's Gully to assess whether the squatter pigeon riparian habitat values and population are impacted by the mining activity and propose corrective or adaptive management actions to address any impacts that are detected.

C22	A report outlining the findings of the REMP, including all monitoring results and interpretations in accordance with **Conditions C20** and **C21** must be prepared annually and made available to the administrating authority. This must include an assessment of background reference water quality, the condition of downstream water quality compared against water quality objectives, and the suitability of current discharge limits to protect downstream environmental values.
C23	**Water reuse** 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 for the purpose of: a) supplying stock water subject to compliance with the quality release limits specified in **Table 9: Stock Water Release Limits**; or b) supplying irrigation water subject to compliance with quality release limits in **Table 10: Irrigation Water Release Limits**; or c) supplying water for construction and/or road maintenance in accordance with the conditions of this environmental authority.

Table 9: Stock Water Release Limits

Quality characteristic	Units	Minimum	Maximum
pH	pH units	6.5	8.5
Electrical Conductivity	µS/cm	N/A	5000

Table 10: Irrigation Water Release Limits

Quality characteristic	Units	Minimum	Maximum
pH	pH units	6.5	8.5
Electrical Conductivity	µS/cm	N/A	Site specific value to be determined in accordance with ANZECC & ARMCANZ (2000) Irrigation Guidelines and provided through an amendment to the environmental authority prior to release of irrigation water.

C24	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 dams or tanks, for the purpose of supplying water to an adjoining mine. The volume, pH and electrical conductivity of water transferred to an adjoining mine must be monitored and recorded.

C25	If the responsibility for mine affected water is given or transferred to another person in accordance with **Conditions C23** or **C24:** a) the responsibility for the mine affected water must only be given or transferred in accordance with a written agreement (the third-party agreement); and b) the third party agreement must include a commitment from the person utilising the mine affected water to use it in such a way as to prevent environmental harm or public health incidents 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; and c) the third-party agreement must be signed by both parties to the agreement.
C26	The release of any contaminants as permitted by this environmental authority, directly or indirectly to waters, other than internal water management infrastructure that is installed and operated in accordance with a water management plan that complies with **Conditions C29 to C33** inclusive: a) must not produce any visible discolouration of receiving waters; and b) must not produce any slick or other visible or odorous evidence of oil, grease or petrochemicals nor contain visible floating oil, grease, scum, litter or other objectionable matter.
C27	**Annual water monitoring reporting** The following information must be recorded in relation to all water monitoring required under the conditions of this environmental authority and submitted to the administering authority in the specified format 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; f) the results of all monitoring and details of any exceedances of the conditions of this environmental authority; and g) water quality monitoring data must be provided to the administering authority in the specified electronic format upon request.
C28	**Activities within watercourses** Destroying native vegetation, excavating, or placing fill in a watercourse, lake or spring necessary for and associated with mining operations must be undertaken in accordance with the Department of Natural Resources, Mines and Energy *Riverine Protection Permit Exemption Requirements* or in accordance with an approved permit.
C29	**Water Management Plan** A Water Management Plan must be developed and implemented by a suitably qualified person.
C30	The Water Management Plan required by **Condition C29** must:

	a) provide for effective management of actual and potential environmental impacts resulting from water management associated with the mining activity carried out under this environmental authority; and b) be developed in accordance with Department of Environment and Science guideline *Preparation of Water Management Plans for Mining Activities* and include: i. a study of the source of contaminants; ii. a water balance model for the site; iii. a water management system for the site; iv. measures to manage and prevent saline drainage; v. measures to manage and prevent acid rock drainage; vi. contingency procedures for emergencies; and vii. a program for monitoring and review of the effectiveness of the water management plan.
C31	The Water Management Plan required by **Condition C29** must be reviewed each calendar year and a report prepared by a suitably qualified person. The report must: a) assess the plan against the requirements under **Condition C30**; b) include recommended actions to ensure actual and potential environmental impacts are effectively managed for the coming year; and c) identify any amendments made to the water management plan following the review.
C32	The environmental authority holder must attach to the review report required by **Condition C31**, a written response to the report and recommended actions, detailing the actions taken or to be taken by the environmental authority holder on stated dates: a) to ensure compliance with this environmental authority; and b) to prevent a recurrence of any non-compliance issues identified.
C33	The review report required by **Condition C31** and the written response to the review report required by **Condition C32** must be submitted to the administering authority with the subsequent annual return under the signature of the appointed signatory for the annual return.
C34	**Saline drainage** The environmental authority holder must ensure proper and effective measures are taken to avoid or otherwise minimise the generation and/or release of saline drainage.
C35	**Acid rock drainage** The environmental authority holder must ensure proper and effective measures are taken to avoid or otherwise minimise the generation and/or release of acid rock drainage.
C36	**Stormwater and water sediment controls** An Erosion and Sediment Control Plan must be developed by a suitably qualified person and implemented for all stages of the authorised mining activities on the site to minimise erosion and the release of sediment to receiving waters and contamination of stormwater.

C37	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 C36**; and b) water management infrastructure that is installed and operated, in accordance with a Water Management Plan that complies with **Conditions C29 to C33** inclusive, for the purpose of ensuring water does not become mine affected water.
C38	Any spillage of wastes, contaminants or other materials must be cleaned up to minimise the release of wastes, contaminants or materials to any stormwater drainage system or receiving waters.
C39	**Groundwater** The environmental authority holder must not release contaminants to groundwater.
C40	**Monitoring and reporting** A Groundwater Management and Monitoring Program for all stages of the authorised mining activities on site must be developed, certified and implemented by a suitably qualified person; a) have all determinations of groundwater quality monitoring and groundwater biological monitoring be performed by a suitably qualified person; and b) be able to detect a change in groundwater quality values and levels due to activities that are part of the authorised mining activities.
C41	The Groundwater Management and Monitoring Program required by **Condition C40** and the data collected must be reviewed on an annual basis by a suitably qualified person. The review must: a) include the assessment of groundwater levels and quality data; b) assess the suitability of the groundwater monitoring network, including an assessment of whether groundwater parameter trigger values or compliance bores are required for all groundwater aquifers potentially impacted by the authorised mining activities; and c) be in a report submitted to the administering authority within **twenty-eight (28) days** of receiving annual groundwater data.
C42	Groundwater must be monitored at the locations and frequencies defined in **Table 11: Groundwater monitoring locations frequency** for the standing water levels and the parameters identified in **Table 12: Groundwater contaminant triggers**. Results and analysis of groundwater monitoring must be submitted annually to the administering authority with the report required by **Condition C41(c).**
C43	**Exceedance investigation** If groundwater quality characteristics in Burton Coal Bore 2 or Swap Bore 1 exceed any of the trigger levels identified in **Table 12: Groundwater contaminant triggers** the environmental authority holder must: a) notify the administering authority via WaTERS or the pollution hotline within **seven (7) days** of receiving the analysis results; and b) complete an investigation into the potential for environmental harm.

C44	If groundwater levels for the bores identified in **Table 13: Groundwater level monitoring** exceed any of the trigger level thresholds identified in **Table 13: Groundwater level monitoring** the environmental authority holder must: a) notify the administering authority via WaTERS or the pollution hotline within **seven (7) days** of receiving the analysis results; and b) complete an investigation into the potential for environmental harm.
C45	An exceedance investigation under **Condition C43** or **Condition C44** must be completed and submitted to the administering authority via WaTERS within **ninety** (**90) days** of the notification made under **Condition C43(a)** or **Condition C44(a).**
C46	If the exceedance investigation in **Condition C43** or **Condition C44** identifies environmental harm is occurring, the environmental authority holder must immediately implement appropriate abatement measures to prevent the continuation or re-occurrence of environmental harm to groundwater.
C47	**Bore construction and maintenance and decommissioning** All groundwater bores (including groundwater monitoring bores) must be constructed in accordance with the Minimum Construction Requirements for Water Bores in Australia (National Uniform Drillers Licensing Committee, 2011).
C48	All measurements of surface reduced level (RL) required by the EA must be measured from the top 5cm of the bore casing.

Table 11: Groundwater monitoring locations and frequency

Monitoring Point	Location		Surface RL	Total Depth	Screen interval (mbgl)	Hydro stratigraphic Unit	Monitoring frequency	Status
	Easting (GDA94 – Zone 55)	Northing (GDA94 – Zone 55)						
Burton Coal Bore 2	620383	7573599	240.8	37.0	30.3 – 34.6	Rewan Group	Quarterly	Existing
Swamp Bore 2	621518	7568790	245.9	55.0	24 – 55.1	Rewan Group	Quarterly	Abandoned but useable
MB1	618793	7572214	236.4	29.2	22.5 – 28.4	Rangal Coal Measures	Quarterly	To be decommissioned. Replaced by MB12
MB2	619074	7573137	242.7	51.9	48.7 – 51.6	Rangal Coal Measures	Quarterly	Existing
MB3	619047	7568473	253.00	52.6	49.7 – 52.6	Rangal Coal Measures	Quarterly	To be decommissioned. Replaced by MB9
MB4a	620351	7567479	237.6	11.0	7.8 – 10.7	Quaternary Colluvium / Tertiary Sediments	Quarterly	To be decommissioned, replaced by MB4b.
MB4b	619740	7567253	233.9	12.4	9.4 – 12.4	Rangal Coal Measures	Quarterly	To be decommissioned. Replaced by MB16
MB8	619105	7571149	245.9	126.3	117.3 – 120.3	Rangal Coal Measures	Quarterly	To be decommissioned.

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								Replaced by MB13
MB9	620368	7568049	239.5	80.5	77.5 – 80.5	Rangal Coal Measures	Quarterly	To be decommissioned. Replaced by MB15
MB10	620368	7568046	239.5	27.0	21.0 – 27.0	Tertiary basalt	Quarterly	To be decommissioned. Replaced by MB14
MB11	618832	7571924	232.3	5.0	3.0 – 4.0	Tertiary sediments	Quarterly	Existing, Dry.
MB12	619210	7572000	239.5	129	126 – 128	Rangal Coal Measures	Quarterly	Commissioned. MB1 replacement.
MB13	619367	7571035	249.7	98	95 – 97.0	Rangal Coal Measures	Quarterly	To be commissioned. MB8 replacement.
MB14	620263	7571132	257.3	24	20 – 23	Tertiary basalt	Quarterly	Commissioned. MB10 replacement.
MB15	620633	7568080	242.9	120	115 – 119	Rangal Coal Measures	Quarterly	To be commissioned. MB9 replacement.
MB16	620670	7568599	245.6	12	8 – 11	Tertiary sediments	Quarterly	To be commissioned. MB4b replacement.

Table 12: Groundwater contaminant triggers

Parameter	Unit	Trigger Values – Swamp Bore 2	Trigger Values – Burton Coal Bore 2	Limit type
Aluminium	µg/L	10	10	Maximum
Antimony	µg/L	1	1	Maximum
Arsenic	µg/L	2	4	Maximum
Calcium	mg/L	580	195	Maximum
Chloride	mg/L	3500	2050	Maximum
Carbonate	mg/L	1	7	Maximum
Total Dissolved Solids	mg/L	7585	4500	Maximum
Electrical Conductivity	µS/cm	9500	7320	Maximum
Bicarbonate	mg/L	94	820	Maximum
Iron	µg/L	1000	230	Maximum
Magnesium	mg/L	165	265	Maximum
Mercury	µg/L	0.1	0.1	Maximum
Molybdenum	µg/L	1	1.0	Maximum
Total Petroleum Hydrocarbons C6-C9	µg/L	20	20	Maximum
Total Petroleum Hydrocarbons C10-C36	µg/L	50	50	Maximum
pH	pH Units	7.1 - 7.8	7.0 - 8.3	Minimum/maximum
Potassium	mg/L	25	8	Maximum
Selenium	µg/L	10	10	Maximum
Silver	µg/L	1	1	Maximum
Sulfate	mg/L	150	130	Maximum
Sodium	mg/L	1275	990	Maximum
Suspended Solids (Total)	mg/L	37	52	Maximum

Note:
1. All metals and metalloids must be measured as total (unfiltered) and dissolved (filtered). Trigger levels for metals/metalloids apply if dissolved results exceed trigger.

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Table 13: Groundwater level monitoring

Monitoring location	Trigger level threshold (m)	Monitored unit
Burton Coal Bore 2	2	Rewan Group
Swamp Bore 2	5	Rewan Group
MB14	1	Tertiary Basalt
MB16	5	Tertiary Sediments

C49	The following information must be recorded in relation to all groundwater water sampling: 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; and d) the results of all monitoring.
C50	**Sewage Treatment** Treated sewage effluent is authorised to be released to land in accordance with the release limits stated in **Table 14: Contaminant release limits to land** at the following locations: a) within the nominated area(s) identified in **Appendix 1, Figure 5: Sewage treatment plant and effluent disposal**; and b) other land for the purpose of dust suppression and/or firefighting.

Table 14: Contaminant release limits to land

Contaminant	Unit	Release limit	Limit type	Frequency
Nitrogen	mg/L	30	Maximum	Monthly
Phosphorus	mg/L	15	Maximum	Monthly
E-coli	Organisms/100mL	1000	Maximum	Monthly
pH	pH units	6.0 – 9.0	Range	Monthly

C51	The release of treated effluent to land must be carried out in a manner such that: a) vegetation is not damaged; b) there is no surface ponding of treated sewage effluent; and c) there is no run-off of treated sewage effluent.
C52	If areas irrigated with treated sewage effluent 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.
C53	All treated sewage effluent released to land must be monitored at the frequency and for the parameters specified in **Table 14: Contaminant release limits to land**.
C54	The monthly volume of treated sewage effluent released to land must be measured and records kept of the volumes of effluent released.

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C55	A minimum area of **1428m^2** of land, excluding any necessary buffer zones, must be utilised for the irrigation and/or beneficial reuse of treated sewage effluent.
C56	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 *Environmental Protection Act 1994* whilst using the treated sewage effluent.
RR1	Conditions C20 to C22 do not apply if the environmental authority holder is a participant of the FRREMP.
RR2	The environmental authority holder must notify the administering authority in a written statement within twenty (20) business days of ceasing to be a participant of the FRREMP. The written statement must detail how the environmental authority holder is going to fulfil the requirements of conditions C20 to C22.

Schedule D: Noise and Vibration	
Condition number	**Condition**
D1	Noise, vibration and airblast overpressure resulting from the authorised mining activities must not cause a nuisance, at any sensitive place or commercial place.
D2	**Noise monitoring** When requested by the administering authority, or as a result of a complaint, noise monitoring must be undertaken and the results thereof notified to the administering authority within **fourteen (14) days** following completion of the monitoring period. Noise from the authorised mining activities must not exceed the limits specified in **Table 15: Noise limits** at any sensitive place or commercial place.
D3	Monitoring required by **Condition D2** must include: a) $L_{A\ 10,\ adj,\ 10\ mins}$; b) $L_{A\ 1,\ adj,\ 10\ mins}$; c) the level and frequency of occurrence of impulsive or tonal noise and any adjustment and penalties to statistical levels; d) atmospheric conditions including temperature, relative humidity and wind speed and direction; e) location date and time of recording; and, f) where a complaint concerns low frequency noise, Max $_{LpLIN,T}$ and one third octave band measures in dB(LIN) for centre frequencies in the 10 – 200 Hz range.
D4	Where an exceedance, following monitoring required by D2, of relevant limits in **Table 15: Noise limits** is identified and attributed to the authorised mining activity, the environmental authority holder must: a) immediately implement noise abatement measures so that noise from the activity does not result in further environmental nuisance; and,

	b) report the exceedance in accordance with **Condition A8**.
D5	If during monitoring as required by **Condition D2**, there is an exceedance of the relevant limits listed in **Table 15: Noise limits**, the environmental authority holder must notify the administering authority within **seven (7) days** of the exceedance occurring. The notification must also include the actions taken in accordance with **Condition D4**.

Table 15: Noise limits

Noise level dB(A)	**Monday to Sunday (including public holidays)**		
	7am - 6pm	**6pm - 10pm**	**10pm - 7am**
	Noise measured at a 'Sensitive Place'		
$L_{A10, adj, 10 mins}$	B/g + 5	B/g + 5	B/g + 3
$L_{A1, adj, 10 mins}$	B/g + 10	B/g + 10	B/g + 8
	Noise measured at a 'Commercial place'		
$L_{A10, adj, 10 mins}$	B/g + 10	B/g + 10	B/g + 5
$L_{A1, adj, 10 mins}$	B/g + 15	B/g + 15	B/g + 10

D6	The method of measurement and reporting of noise monitoring must comply with the current edition of the administering authority's *Noise Measurement Manual*.
D7	**Vibration and airblast overpressure nuisance** When requested by the administering authority, or as a result of a complaint, vibration monitoring and / or airblast overpressure monitoring must be undertaken, and the results thereof notified to the administering authority within **fourteen (14) days** following completion of the monitoring period. Vibration from the authorised mining activities must not exceed the limits specified in **Table 16: Blasting Limits**, at any sensitive place or commercial place
D8	Monitoring required by **Condition D7** must include: a) peak particle velocity (mm/s); b) air blast overpressure level (dB linear peak); c) location of the blast/s within the mining area (including which bench level); d) atmospheric conditions including temperature, relative humidity and wind speed and direction; and e) location, date and time of recording.

Table 16: Blasting limits

Blasting limits	Sensitive or commercial place	
	Monday to Sunday 9am - 7pm	**Other times and public holidays**
Air blast overpressure level (dB [Lin] Peak)	115dB (linear) Peak for 4 out of 5 consecutive blasts initiated and not greater that 120dB (linear) Peak at any time.	No blasting
Ground vibration peak particle velocity	5mm/second peak particle velocity for 9 out of 10 consecutive blasts and not greater than 10mm/second peak particle velocity at any time.	No blasting

D9	Where an exceedance, following monitoring required by D7, of relevant limits in **Table 16: Blast limits** is identified and attributed to the authorised mining activity at Isaac Plains Coal Mine, the environmental authority holder must: a) immediately implement abatement measures so that the activity does not result in further environmental nuisance; and, b) report the exceedance in accordance with **Condition A8**.
D10	If during monitoring as required by **Condition D7**, there is an exceedance of the relevant limits listed in **Table 16: Blasting limits**, the environmental authority holder must notify the administering authority within **seven (7) days** of the exceedance occurring. The notification must also include the actions taken in accordance with **Condition D9**.
D11	The method of measurement and reporting of airblast overpressure levels must comply with the current edition of the administering authority's *Noise Measurement Manual*.

Schedule E: Waste	
Condition number	**Condition**
E1	**Storage and disposal of tyres** Scrap tyres stored awaiting disposal or transport for take-back and recycling, or waste-to-energy options must be stored in stable stacks and at least **ten (10) metres** from any other scrap tyre storage area, or combustible or flammable material, including vegetation.
E2	Where no feasible recycling or waste-to-energy options are available, disposing of scrap tyres resulting from the authorised mining activities in spoil emplacements is acceptable, provided tyres are placed as deep in the spoil as reasonably practicable. A record must be kept of the number and location for tyres disposed.
E3	Scrap tyres resulting from the authorised mining activities disposed within the operational land must not impede saturated aquifers or compromise the stability of the consolidated landform.
E4	**Waste management** Unless otherwise permitted by a condition 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.
E5	**Waste disposal** Waste, other than any tyres, spoil, tailings or overburden removed as part of the authorised mining activity or permitted by another condition of the environmental authority, must not be disposed of within any void created by this activity.

E6	**Mine waste** A Mining Waste Management Plan must be developed and implemented by a suitably qualified person for every stage of the mining activities. The Mining Waste Management Plan must be submitted to the administering authority by **31 December 2021** for review and comment. The Mining Waste Management Plan must at a minimum include: a) characterisation programs to ensure that all mining waste is progressively characterised during disposal for net acid producing potential, salinity and the following contaminants: pH, Electrical Conductivity (EC), Acid Neutralising Capacity (ANC), Net Acid Generation (NAG) (reporting NAG capacity and NAG pH after oxidation), Total Sulphur (S), Chromium Reducible Sulphur (Scr), Boron (B) Cadmium (Cd), Iron (Fe), Aluminium (Al), Copper (Cu), Magnesium (Mg), Manganese (Mn), Calcium (Ca), Sodium (Na), Zinc (Zn) and Sulphate (SO_4); b) characterisation programs to ensure that the physical properties of the mining waste is progressively characterised during disposal; c) the availability or leachability of metals from the mining waste; d) quantification of PAF from mining waste present; e) review impacts of the PAF mining waste on the rehabilitation; f) management actions for mining waste that has been identified as having a high availability or leachability of metals; g) management actions for mining waste that has been defined as PAF; h) identification of environmental impacts and potential environmental impacts; i) control measures for routine operations to minimise likelihood of environmental harm; j) contingency plans and emergency procedures for non-routine situations; k) periodic review of environmental performance and continual improvement. l) containment of tailings; m) records to indicate locations and characteristics of tailings stored within the tailings storage facility; n) the management of seepage and leachates from tailings storages both during operation and the foreseeable future; o) the control of fugitive emissions to air; and p) a program for progressive sampling and characterisation to identify acid producing potential and metal concentrations of tailings.
E7	Within **twenty (20) business days** of receiving comments from the administering authority as per **Condition E6**, the Mining Waste Management Plan must be updated to address the comments, amended to adopt any recommendations and submitted to the administering authority for approval.

Schedule F: Land	
Condition number	**Condition**
F1	**Preventing contaminant release to land** Contaminants must not be released to land unless otherwise authorised by a condition of this environmental authority.
F2	**Topsoil** Topsoil must be strategically stripped ahead of mining in accordance with a topsoil management plan.
F3	A topsoil inventory which identifies the topsoil requirements for the authorised mining activities and availability of suitable topsoil on site must be maintained.
F4	**PRCP schedule** Progressive rehabilitation of the disturbed land must be carried out in accordance with the approved Progressive Rehabilitation and Closure Plan (PRCP) schedule P-PRCP-100919410 for this environmental authority
F5	**Surrender** The holder must meet the conditions and the rehabilitation milestones under the PRCP schedule P-PRCP-100919410 prior to the surrender of the environmental authority.
F6	**Vegetation management** Cleared vegetation from the site must be managed in accordance with the following hierarchy: a) recycle, e.g. mulching of vegetation and use in rehabilitation on the site; and b) other alternative management options implemented in a way that causes the least amount of environmental harm.
F7	**Chemical Storage** Chemicals and fuels stored, must be effectively contained and where relevant, meet Australian Standards, where such a standard is applicable.
F8	**Subsidence** Subsidence resulting from the Isaac Plains Underground Project, described in Figure 1C: Authorised mining activities – Isaac Plains Underground Project, must not result in significant residual impact to vegetation.
F9	**Overland flow** Subsided areas, resulting from Isaac Plains Underground Project, must not result in the capture of overland flow and surface runoff must be allowed to drain from the subsidence area. Residual ponding due to subsidence must not occur over the underground mining area.

Schedule G: Regulated Structures	
Condition number	**Condition**
G1	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)* or its successor 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.
G2	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.
G3	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)* or its successor.
G4	**Design and Construction[1] of a Regulated Structure** **Conditions G5** to **G9** inclusive do not apply to existing structures
G5	All regulated structures must be designed by, and constructed[2] 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)* or its successor. ***Note:*** *[1] construction of a dam includes modification of an existing dam – refer to the definitions.* *[2] certification of design and construction may be undertaken by different persons*
G6	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 for the design, design plan, and the associated operating procedures has been certified by a suitably qualified and experienced person in compliance with the relevant condition of this authority.
G7	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)* or its successor, and must be recorded in the Register of Regulated Structures.

G8	Regulated Structures must: a) be designed and constructed in accordance with the *Manual for Assessing Consequence Categories and Hydraulic Performance of structures (ESR/2016/1933)* or its successor; b) be designed and constructed with due consideration given to ensuring that the design integrity would not be compromised on account of: i. floodwaters from entering the regulated dam from any watercourse or drainage line; and ii. wall failure due to erosion by floodwaters arising from any watercourse or drainage line.
G9	Certification by a 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.
G10	**Notification of affected persons** All affected persons must be provided with a copy of the emergency action plan in place for each regulated structure: a) for existing structures that are regulated structures, within **ten (10) business days** of this condition taking effect; b) prior to the operation of the new regulated structure; and c) if the emergency action plan is amended, within **five (5) business days** of it being amended.
G11	**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 in respect of regulated structure, all of the following: i. one paper copy and one electronic copy of the design plan and certification of the design plan in accordance with **Condition G6**, and ii. a set of 'as constructed' drawings and specifications, and iii. certification of the 'as constructed drawings and specifications' in accordance with **Condition G9**; iv. where the regulated structure is to be managed as part of an integrated containment system for the purposes of sharing the DSA volume across the system, a copy of the certified system design plan; v. the requirements of this authority relating to the construction of the regulated structure have been met; and vi. the holder has entered the details required under this authority, into a Register of Regulated Structures; and vii. there is a current operational plan for the regulated structures.
G12	For existing structures that are regulated structures: a) where the existing structure that is a regulated structure is to be managed as part of an integrated containment system for the purposes of sharing DSA volumes across the system, the

	holder must submit to the administering authority within **twelve (12) months** of the commencement of this condition a copy of the certified system design plan including that structure; and b) there must be a current operational plan for the existing structures.
G13	Each regulated structure must be maintained and operated, for the duration of its operational life until decommissioned and rehabilitate, in a manner that is consistent with the current design plan and, if applicable, and the associated certified 'as constructed' drawings.
G14	**Mandatory Reporting Level** **Conditions G15** to **G18** inclusive only apply to Regulated Structures which have not been certified as low consequence category for 'failure to contain – overtopping'.
G15	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.
G16	The holder must, as soon as practical and within **forty-eight (48) hours** of becoming aware, notify the administering authority when the level of the contents of a regulated dam reaches the MRL.
G17	The holder must immediately on becoming aware that the MRL has been reached, act to prevent occurrence of any unauthorised discharge from the regulated dam.
G18	The holder must record any changes to the MRL in the Register of Regulated Structures.
G19	**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** each year.
G20	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 Design Storage Allowance (DSA) volume for the dam (or network of linked containment systems).
G21	The holder must, as soon as practicable but within **forty-eight (48) hours** of becoming aware that the regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on **1 November** of any year, notify the administering authority.
G22	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 system.
G23	**Annual Inspection Report** Each regulated structure must be inspected each calendar year by a suitably qualified and experienced person.
G24	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 a recommendations section, with

	any recommended actions to ensure the integrity of the regulated structure or a positive statement that no recommendations are required.
G25	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)* or its successor.
G26	The holder must within **twenty (20) business days** of receipt of the annual inspection report, provide the administering authority: a) the recommendations section of the inspection report; and b) if applicable, any actions being taken in response to those recommendation; and. **c)** if, following receipt of the recommendations and (if applicable) action, the administering authority requests a full copy of the annual inspection report from the holder, provide this to the administering authority within **ten (10) business days** of receipt of the request.
G27	**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.
G28	**Register of Regulated Structures** A Register of Regulated Structures must be established and maintained by the holder for each regulated structure.
G29	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.
G30	The holder must make a final entry of the required information in the Register of Regulated Structures once compliance with **Condition G11** and **G12** has been achieved.
G31	The holder must ensure that the information contained in the Register of Regulated Structures is current and complete on any given day.
G32	All entries in the Register of Regulated Structures must be approved by the chief executive officer for the environmental authority holder or their delegate, as being accurate and correct.
G33	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.
G34	**Transitional arrangements** All existing structures, that have not been assessed in accordance with either the Manual or the former Manual for Assessing Hazard Categories and Hydraulic Performance of Dams must be assessed and certified in accordance with the Manual within **six (6) months** of amendment of the environmental authority adopting this schedule.

G35	All existing structures must subsequently comply with the timetable for any further assessments in accordance with the Manual specified in **Table 19: Transitional hydraulic performance requirements for existing structures**, depending on the consequence category for each existing structure assessed in the most recent previous certification for that structure.

Table 19: Transitional hydraulic performance requirements for existing structures

Transition period required for existing structures to achieve the requirements of the *Manual for Assessing Consequence Categories and Hydraulic Performance of Dams*			
Compliance with criteria	**High consequence**	**Significant consequence**	**Low consequence**
>90% and a history of good compliance performance in last 5 years	No transition required	No transition required	No transitional conditions apply. Review consequence assessment every 7 years.
>70%-≤90%	Within 7 years, unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Within 10 years, unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	No transitional conditions apply. Review consequence assessment every 7 years.
>50-≤70%	Within 5 years unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Within 7 years unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Review consequence assessment every 7 years.
≤50%	Within 5 years or as per compliance requirements (e.g. TEP timing)	Within 5 years or as per compliance requirements (e.g. TEP timing)	Review consequence assessment every 5 years.
Regulated levee designed to prevent the ingress of clean flood water <100% compliant[7]	Within 5 years unless otherwise agreed with the administering authority.		

G36	**Table 19: Transitional hydraulic performance requirements for existing structures** ceases to apply for a structure once any of the following events has occurred: a) It has been brought into compliance with the hydraulic performance criteria applicable to the structure under the Manual; or b) It has been decommissioned; or c) It has been certified as no longer being assessed as a regulated structure.
G37	Certification of the transitional assessment required by **Conditions G34** and **G35** (as applicable) must be provided to the administering authority within **six (6) months** of amendment of the authority adopting this schedule.

Schedule H: Nature Conservation	
Condition number	**Condition**
H1	**Impacts of Prescribed Environmental Matters** Significant residual impacts to prescribed environmental matters are not authorised under this environmental authority or the *Environmental Offsets Act 2014* unless the impact(s) is specified in **Table 20: Significant residual impacts to prescribed environmental matters** and as per **Appendix 1: Figures 6 to 10.**
H2	An environmental offset made in accordance with the *Environmental Offsets Act 2014* and Queensland Environmental Offsets Policy, as amended from time to time, must be undertaken for the maximum extent of impact to each prescribed environmental matter authorised in **Table 20: Significant residual impacts to prescribed environmental matters**, for which an offset is required**.**

Table 20: Significant residual impacts to prescribed environmental matters

Prescribed environmental matter	**Location of impact**	**Maximum extent of impact**	**Offset Required**
REGULATED VEGETATION			
Of concern regional ecosystem (not within an urban area) – 11.9.7a	As per Figure 6	8.2 ha	Yes
Regional ecosystems (not within an urban area) within the defined distance from the defining banks of a relevant watercourse on the vegetation management watercourse map – 11.3.25	As per Figure 6	4.75 ha	Yes
PROTECTED WILDLIFE HABITAT			
Habitat for an animal that is vulnerable wildlife – Squatter pigeon – *Geophaps scripta scripta*	As per Figure 7	161.1 ha*	No
Habitat for an animal that is vulnerable wildlife – Koala – *Phascolarctos cinereus*	As per Figure 8	338.7 ha*	No
Habitat for an animal that special least concern wildlife – Short-beaked echidna	As per Figure 9	307.7 ha*	No
Habitat for an animal that is vulnerable wildlife – Greater Glider - *Petauroides volans*	As per Figure 10	213.9 ha*	No

*offsets for these values are to be determined by the *Environmental Protection and Biodiversity Conservation Act 1999* approvals 2016/7827 and 2019/8548 conditions.

H3	Prior to the commencement of any impacts to a prescribed environmental matter for which an environmental offset is required by **Condition H2**, an analysis of the estimated maximum extent of impact to each prescribed environmental matter must be provided to the administering authority.
H4	The analysis required by **Condition H3** must be approved by the administering authority before the notice of election, if applicable, is given to the administering authority.
H5	The notice of election for the environmental offset required by **Condition H4** must be provided to the administering authority no less than **three (3) months** before the proposed commencement of the significant residual impacts for which the environmental offset is required.

Definitions

20th percentile flow means the 20th percentile of all daily flow measurements (or estimations) of daily flow over a 10-year period for a particular site. The 20th percentile calculation should only include days where flow has been measured (or estimated), i.e. not dry weather days.

accepted engineering standards in relation to dams, means those standards of design, construction, operation and maintenance that are broadly accepted within the profession of engineering as being good practice for the purpose and application being considered. In the case of dams, the most relevant documents would be publications of the Australian National Committee on Large Dams (ANCOLD), guidelines published by Queensland government departments, and relevant Australian and New Zealand Standards.

acceptance criteria means the measures by which the actions implemented to rehabilitate the land are deemed to be complete. The acceptance criteria indicate the success of the rehabilitation outcome or remediation of areas which have been significantly disturbed by the mining activities. Acceptance criteria may include information regarding:

a) vegetation establishment, survival and succession;
b) vegetation productivity, sustained growth and structure development;
c) fauna colonisation and habitat development;
d) ecosystem processes such as soil development and nutrient cycling, and the recolonisation of specific fauna groups such as collembola, mites and termites which are involved in these processes;
e) microbiological studies including recolonisation by mycorrhizal fungi, microbial biomass and respiration;
f) effects of various establishment treatments such as deep ripping, topsoil handling, seeding and fertiliser application on vegetation growth and development;
g) resilience of vegetation to disease, insect attack, drought and fire; and
h) vegetation water use and effects on ground water levels and catchment yields.

acid rock 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 as a result of mining activity.

administering authority means the Department of Environment and Heritage protection or its successor within the Queensland Government.

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

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 in relation to a sensitive place or a commercial place, means:

a) A written agreement:

i. between the environmental authority holder and a third party;
ii. that identifies a particular type(s) of environmental nuisance;
iii. about the way in which the particular environmental nuisance impact(s) will be dealt with;
iv. at a particular location; and
v. for a defined period of time.

b) An alternative arrangement must make clear to the third party that by entering into the agreement that:
i. their place will be excluded as a sensitive place or commercial place; and
ii. the consequences of exclusion as a sensitive place or commercial place.

Note: An alternative arrangement may include, but is not limited to, details of the nuisance abatement measures to be implemented, provision of alternative accommodation, or agreement between the parties that the location will not be considered a sensitive place or commercial place for the purposes of the Environmental Authority, for the duration of the alternative arrangement. The written agreement may be in any form, with some examples being a lease, or an agistment, or a conduct and compensation agreement under the *Mineral Resources Act 1989*.

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

annual 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);
g) for evidence of conformance with the current operational plan.

ANZECC means the *Australian and New Zealand Guidelines for Fresh Marine Water Quality 2000*

approved place means the mining project that consists of the mining leases listed on the title page of this environmental authority.

assess or **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 of the following aspects are addressed and are sufficient to allow an independent audit at any time:

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

associated works in relation to a dam, means:

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

authority means an environmental authority granted under the *Environmental Protection Act 1994*.

bed and banks for a waters, river, creek, stream, lake, lagoon, pond, swamp, wetland or dam means land over which the water of the waters, lake, lagoon, pond, swamp, wetland or dam normally flows or that is normally covered by the water, whether permanently or intermittently; but does not include land adjoining or adjacent to the bed and banks that is from time to time covered by floodwater.

beneficial use in respect of dams means that the current or proposed owner of the land on which a dam stands, has found a use for that dam that is:

a) of benefit to that owner in that it adds real value to their business or to the general community,
b) in accordance with relevant provisions of the Environmental Protection Act 1994,
c) sustainable by virtue of written undertakings given by that owner to maintain that dam, and
d) the transfer and use have been approved or authorised under any relevant legislation.

biosolids means the treated and stabilised solids from sewage.

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.

bunded means within bunding consistent with *Australian Standard 1940*.

certify or certification or certified or certifying means assessment and approval must be undertaken by a suitably qualified and experienced person in relation to any assessment or documentation required by this environmental authority, 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)).

chemical means –

a) an agricultural chemical product or veterinary chemical product within the meaning of the *Agricultural and Veterinary Chemicals Code Act 1994 (Commonwealth)*; or
b) a dangerous good under the dangerous goods code; or
c) a lead consequenceous substance within the meaning of the Workplace Health and Safety Regulation 1997; or
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, nematocide, miticide, fumigant or related product; or
    ii. a surface active agent, including, for example, soap or related detergent; or
    iii. a paint solvent, pigment, dye, printing ink, industrial polish, adhesive, sealant, food additive, bleach, sanitiser, disinfectant, or biocide; or
    iv. a fertiliser for agricultural, horticultural or garden use; or
f) a substance used for, or intended for use for –
    i. mineral processing or treatment of metal, pulp and paper, textile, timber, water or wastewater; or
    ii. manufacture of plastic or synthetic rubber.

competent person means a person with the demonstrated skill and knowledge required to carry out the task to a standard necessary for the reliance upon collected data or protection of the environment.

commercial place means:

a) A workplace that is used as:
   i. an office; or
   ii. a place of business; or
   iii. a place used for commercial purposes.
b) Despite paragraph (a), the following places are not commercial places:
   i. subject to paragraph (c), a place that is the subject of an alternative arrangement; or
   ii. places that are part of the mining activity; or
   iii. employee's accommodation or public roads; or
   iv. a property owned or leased by one or more of the environmental authority holders, or a related company, whether or not it is subject to an alternative arrangement.
c) A place that is the subject of a current alternative arrangement in relation to a particular type(s) of environmental nuisance, is not a commercial place for the purposes of that type(s) of environmental nuisance, however, remains a commercial place for the purposes of other types of environmental nuisance.

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).*

consequenceous waste means any substance, whether liquid, solid or gaseous, derived by or resulting from, the processing of minerals that tends to destroy life or impair or endanger health.

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

contaminate means to render impure by contact or mixture.

contaminated means the substance has come into contact with a contaminant.

contaminant A contaminant can be –

a) a gas, liquid or solid; or
b) an odour; or
c) an organism (whether alive or dead), including a virus; or
d) energy, including noise, heat, radioactivity and electromagnetic radiation; or
e) a combination of contaminants.

control measure means any action or activity that can be used to prevent or eliminate a consequence or reduce it to an acceptable level.

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 the documentation required to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, and the criteria to be used for operating the dam. The documents must include design and investigation reports, specifications and certifications, together with the planned decommissioning and rehabilitation works and outcomes. A design plan may include 'as constructed' drawings.

design storage allowance or "**DSA**" means the minimum storage required in a dam at the first of November each year in order to meet the hydraulic performance requirements.

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

domestic waste means waste, other than domestic clean-up waste, green waste, recyclable waste, interceptor waste or waste discharged to a sewer, produced as a result of the ordinary use or occupation of domestic premises.

dwelling means any of the following structures or vehicles that is principally used as a residence –

a) a house, unit, motel, nursing home or other building or part of a building; or
b) a caravan, mobile home or other vehicle or structure on land; or
c) a water craft in a marina.

effluent treated waste water discharged from sewage treatment plants.

end of pipe means the location at which water is released to waters or land.

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

environmental authority holder means the holder of this environmental authority.

e**nvironmental offset** has the meaning in section 7 of the *Environmental Offsets Act 2014*.

environmentally relevant activity means an environmentally relevant activity as defined in the *Environmental Protection Act 1994* and listed in the *Environmental Protection Regulation 2008.*

existing structure means a structure that was in existence prior to the adoption of this schedule of conditions under the authority.

extreme Storm Storage – means a storm storage allowance 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

floodwater means water overflowing, or that has overflowed, from waters, river, creek, stream, lake, pond, wetland or dam onto or over riparian land that is not submerged when the watercourse or lake flows between or is contained within its bed and banks.

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

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

FRREMP means a Fitzroy Basin Receiving Environment Monitoring Program for the region in which the EA is located, that has been endorsed in writing by the administering authority.

general waste means waste other than regulated waste.

hydraulic performance means the capacity of a regulated dam to contain or safely pass flowable substances based on a probability (AEP) of performance failure specified for the relevant consequence category in the *Site Water Management Technical Guideline for Environmental Management of Exploration and Mining in Queensland (DME 1995)*.

infrastructure means water storage dams, sediment dams, powerlines, pipelines, haul roads and bitumen roads and light vehicle tracks, buildings and other structures built for the purpose of mining activities but does not include other facilities required for the long term management of mining impacts or the protection of potential resources.

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

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

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

lake includes –

a) lagoon, swamp or other natural collection of water, whether permanent or intermittent; and
b) the bed and banks and any other element confining or containing the water.

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

levee means a dam, dyke or bund that is designed only to provide for the containment and diversion of stormwater or flood flows from a contributing catchment, or containment and diversion of flowable materials resulting from unplanned

releases from other works of infrastructure, during the progress of those stormwater or flood flows or those unplanned 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)*;

mandatory reporting level means the volume below the spillway crest, equivalent to the lower of the AEP, 72-hour storm or the AEP wave allowance (AEP is the natural exceedance probability).

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

maximum extent of impact means the total, cumulative, residual extent and duration of impact to a prescribed environmental matter that will occur over a project's life after all reasonable avoidance and reasonable on-site mitigation measures have been, or will be, undertaken.

mine affected water means the following types of 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. 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:
      a. areas that are been capped and have monitoring data demonstrating hazardous material adequately contained with the site;
      b. 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 means a substance which normally occurs naturally as part of the earth's crust or is dissolved or suspended in water within or upon the earth's crust and includes a substance which may be extracted from such a substance, and includes—

a) clay if mined for use for its ceramic properties, kaolin and bentonite;
b) foundry sand;
c) hydrocarbons and other substances or matter occurring in association with shale or coal and necessarily mined, extracted, produced or released by or in connection with mining for shale or coal or for the purpose of enhancing the safety of current or future mining operations for coal or the extraction or production of mineral oil there from;
d) limestone if mined for use for its chemical properties;
e) marble;
f) mineral oil or gas extracted or produced from shale or coal by in situ processes;
g) peat;
h) salt including brine;
i) shale from which mineral oil may be extracted or produced;
j) silica, including silica sand, if mined for use for its chemical properties;
k) rock mined in block or slab form for building or monumental purposes;
l) But does not include—
m) living matter;
n) petroleum within the meaning of the Petroleum Act 1923;
o) soil, sand, gravel or rock (other than rock mined in block or slab form for building or monumental purposes) to be used or to be supplied for use as such, whether intact or in broken form;
p) water.

modification or modifying (see definition of 'construction')

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

nature includes:

a) ecosystems and their constituent parts; and
b) all natural and physical resources; and
c) natural dynamic processes.

notice of election has the meaning in section 18(2) *Environmental Offsets Act 2014*.

noxious means harmful or injurious to health or physical well-being, other than trivial harm.

offensive means causing reasonable offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive, other than trivial harm.

operational land means the land associated with the project for which this environmental authority has been issued.

operational plan includes:

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

palletised means stored on a movable platform on which batteries are placed for storage or transportation.

participant of the FRREMP means an environmental authority holder that is identified as a current participant by the organisation carrying out the Regional REMP.

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

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

process water means water used or produced during the mineral development activities.

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.

progressive rehabilitation means rehabilitation (defined below) undertaken progressively or a staged approach to rehabilitation as mining operations are ongoing.

receiving environment means all groundwater, surface water, land, and sediments that are not disturbed areas authorised by this environmental authority.

receiving waters means all groundwater and surface water that are not disturbed areas authorised by this environmental authority.

recycled water means appropriately treated effluent and urban stormwater suitable for further use.

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

register of regulated structures includes**:**

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

v. Maximum operating level (metres AHD);
vi. Storage rating table of stored volume versus level (metres AHD);
vii. Design storage allowance (megalitres) and associated level of the dam (metres AHD);
viii. Mandatory reporting level (metres AHD);

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

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

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

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

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.

resource activity is an activity that involves:

a) a geothermal activity; or
b) a GHG storage activity; or
c) a mining activity; or
d) a petroleum activity.

saline drainage means the movement of waters, contaminated with salt(s), as a result of the mining activity.

scheme fund means the scheme fund established under section 24 of the *Mineral and Energy Resources (Financial Provisioning) Act 2018*.

seasonal variation means groundwater level fluctuation that is a direct result of seasonal conditions. For example, above average rainfall over an extended period, resulting in aquifer recharge and subsequent rises in groundwater

levels. Conversely, below average rainfall periods may result in groundwater level decline due to the lack of recharge over this period. Seasonal variation is most readily observed in shallow unconfined aquifers where a direct connection to surface waters exists, however variations in water levels due to seasonal conditions can occur in other aquifer types where hydraulic linkages to surface waters and other aquifers are more complex.

Sensitive place means:

a) Any of the following:
i. a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
ii. a motel, hotel or hostel; or
iii. an educational institution; or
iv. a medical centre or hospital; or
v. a protected area; or
vi. a public park or gardens.

b) Despite paragraph (a), the following places are not sensitive places:
i. subject to paragraph (c), a place that is the subject of an alternative arrangement; or
ii. 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), 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 environmental authority holders for the mining project, or a related company; or
iii. a property owned or leased by one or more of the environmental authority holders, or a related company, whether or not it is subject to an alternative arrangement.

c) A place that is the subject of a current alternative arrangement in relation to a particular type(s) of environmental nuisance, is not a sensitive place for the purposes of that type(s) of environmental nuisance, however, remains a sensitive place for the purpose of other types of environmental nuisances.

sewage means the used water of person's to be treated at a sewage treatment plant.

significant disturbance – includes land

a) if it is contaminated land; or
b) it has been disturbed and human intervention is needed to rehabilitate it

i. to a state required under the relevant environmental authority; or
ii. if the environmental authority does not require the land to be rehabilitated to a particular state, to a state immediately before its disturbance.

Some examples of disturbed land include:

- areas where soil has been compacted, removed, covered, exposed or stockpiled;
- areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation & topsoil)
- areas where land use suitability or capability has been diminished;
- areas within a watercourse, waterway, wetland or lake where mining activities occur;
- areas submerged by tailings or consequenceous contaminant storage and dam walls in all cases;
- areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after mining activities have ceased; or
- areas where land has been contaminated and a suitability statement has not been issued.

significant residual impacts has the meaning in section 8 *Environmental Offsets Act 2014*.

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

stable means geotechnical stability of the rehabilitated landform where instability related to the excessive settlement and subsidence caused by consolidation / settlement of the wastes deposited, and sliding / slumping instability has ceased.

storm water means all surface water runoff from rainfall.

structure means dam or levee.

'suitably qualified person' means a person who;

a) is a member of an organisation listed in Schedule 14 of the *EP Regulations 2019;* and holds certification as an environmental practitioner (i.e. Certified Environmental Practitioner, (CEnvP) under the CEnvP Scheme) or,

b) has professional qualifications, training, skills and 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.

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*.

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.

trackable waste means a waste or combination of waste stated in Schedule 1 of the *Environmental Protection (Waste Management) Regulation 2000.*

trivial harm means environmental harm which is not material or serious environmental harm and will not cause actual or potential loss or damage to property of an amount of, or amounts totalling more than $5,000.

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

void means any man-made, open excavation in the ground.

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

waste management principles has the meaning given by the *Waste Reduction and Recycling Act 2011.*

water means –

a) water in waters or spring;
b) underground water;
c) overland flow water; or
d) water that has been collected in a dam.

waste water means used water from the activity, process water or contaminated storm water.

watercourse has the meaning in Schedule 4 of the *Environmental Protection Act 1994* and means

1. a river, creek or stream in which water flows permanently or intermittently—
   a)in a natural channel, whether artificially improved or not; or
   b)in an artificial channel that has changed the course of the watercourse.
2. Watercourse includes the bed and banks and any other element of a river, creek or stream confining or containing water.

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

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

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

µg/L means micrograms per litre

µS/cm means microsiemens per centimetre

END OF DEFINITIONS

Appendix 1 - Figure 1A: Authorised mining activities – Isaac Plains East

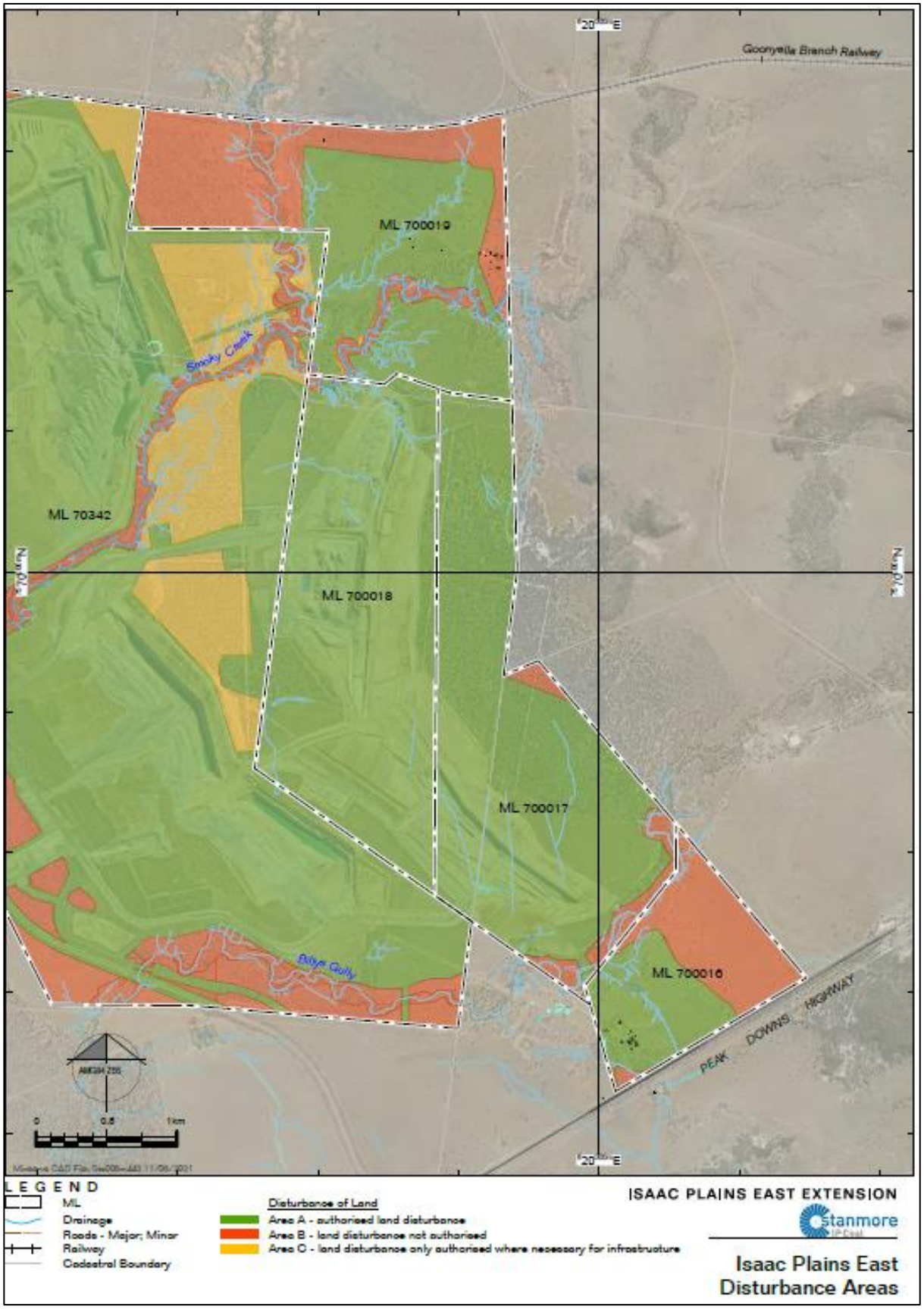


Figure 1B: Authorised mining activities – Isaac Plains Mine

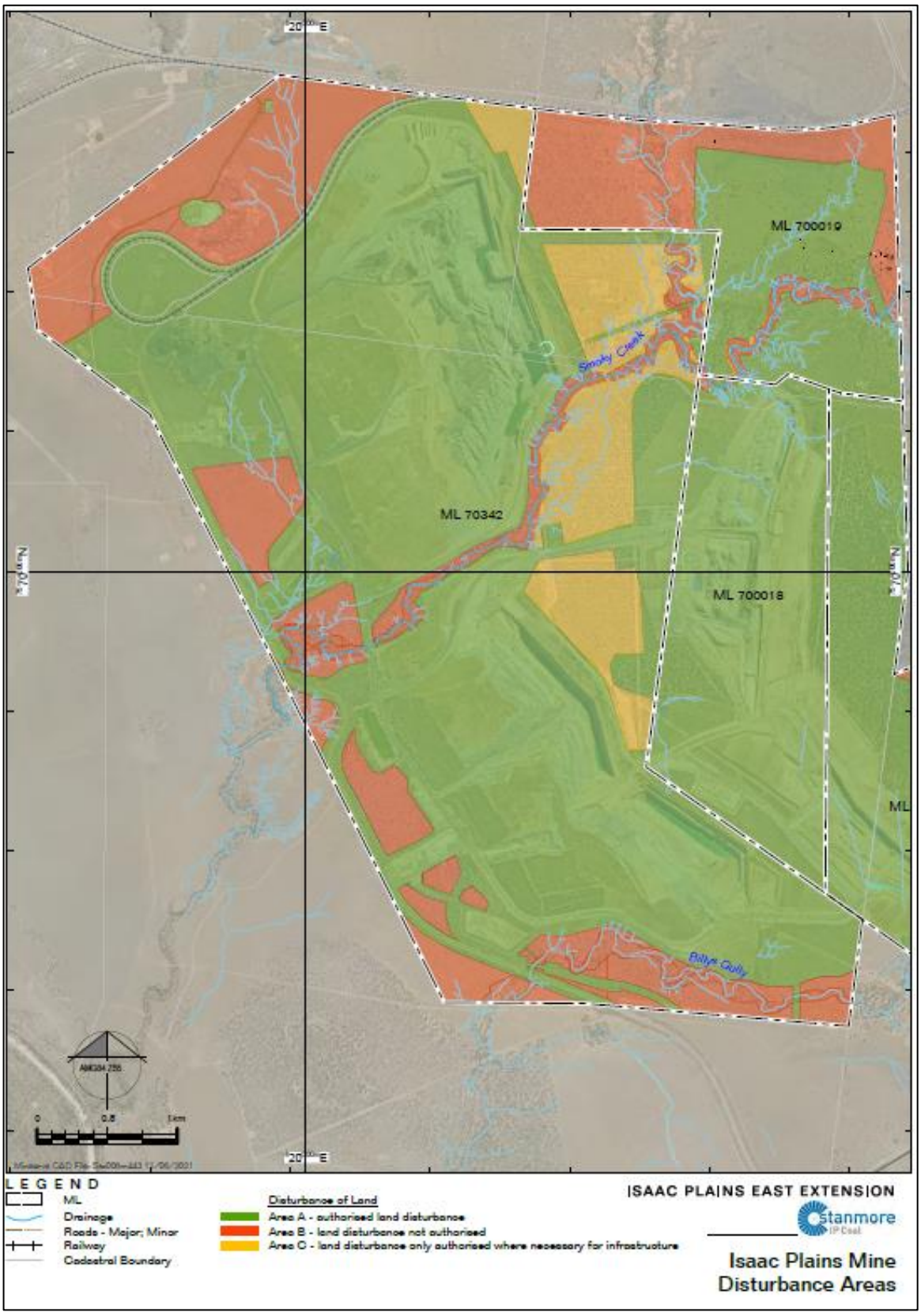


Figure 1C: Authorised mining activities – Isaac Plains Underground Project

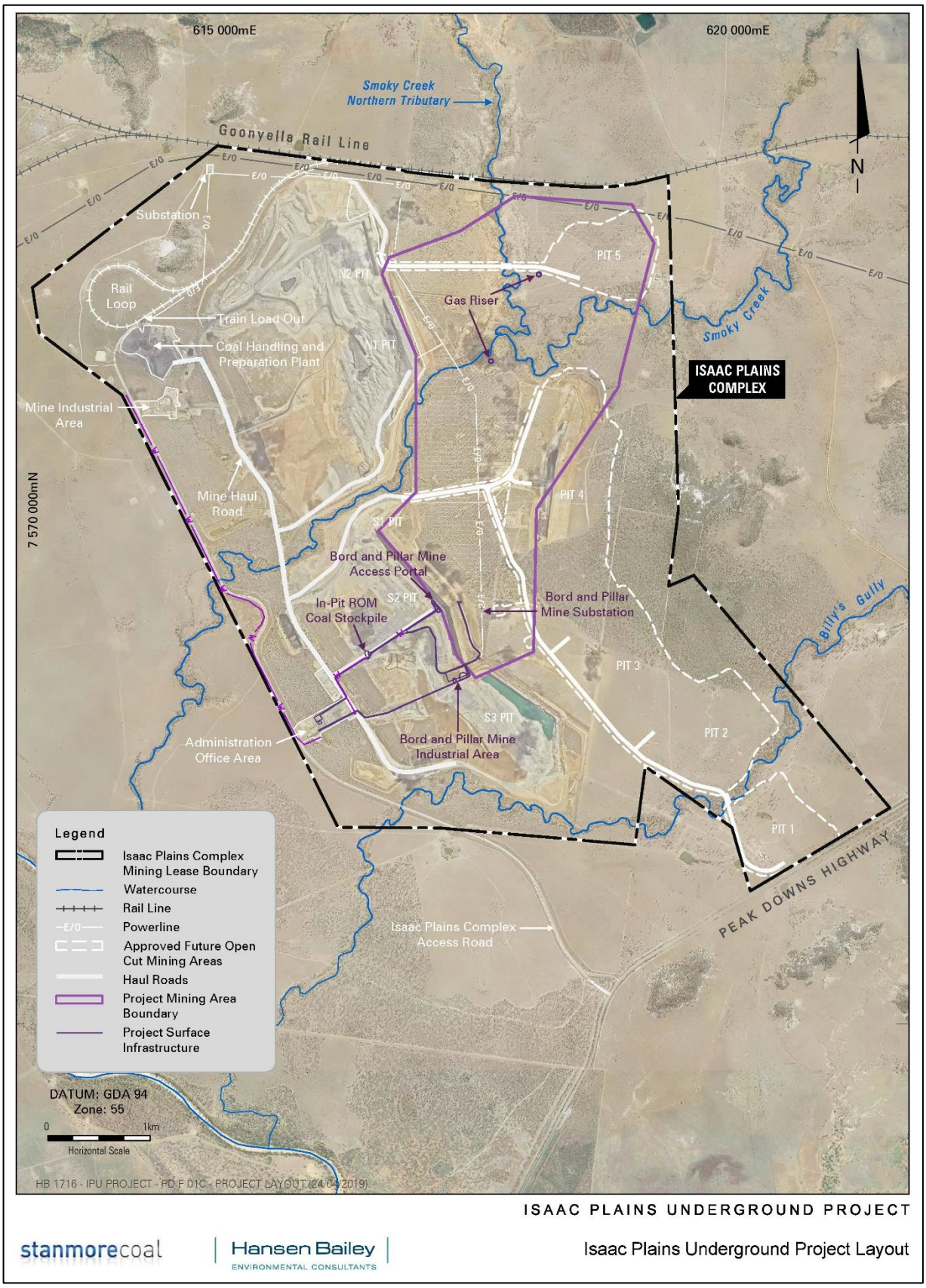


Figure 2: Location of water release points and monitoring points

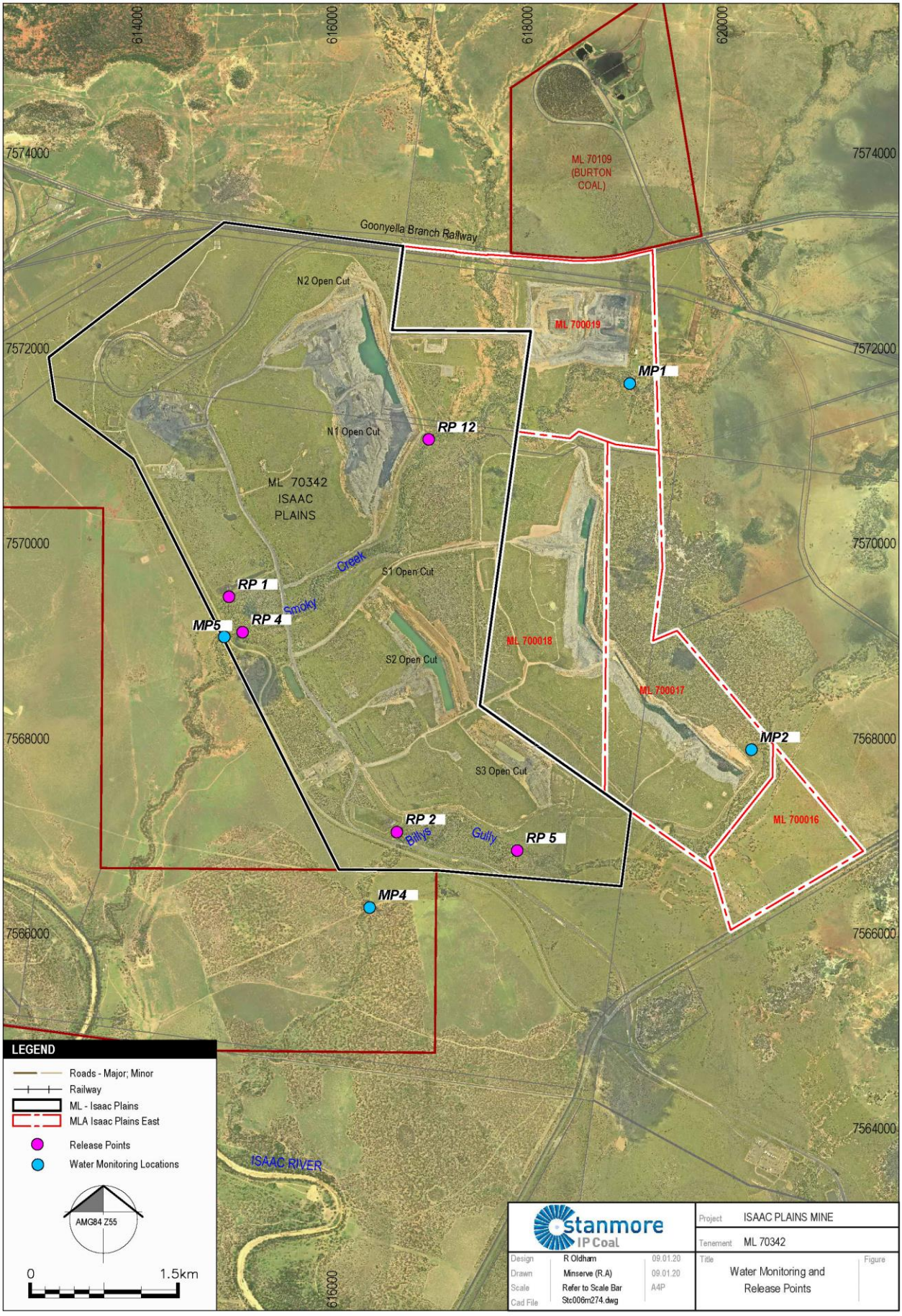


Figure 3: Location of MP3

Figure 4: Groundwater monitoring bore locations.

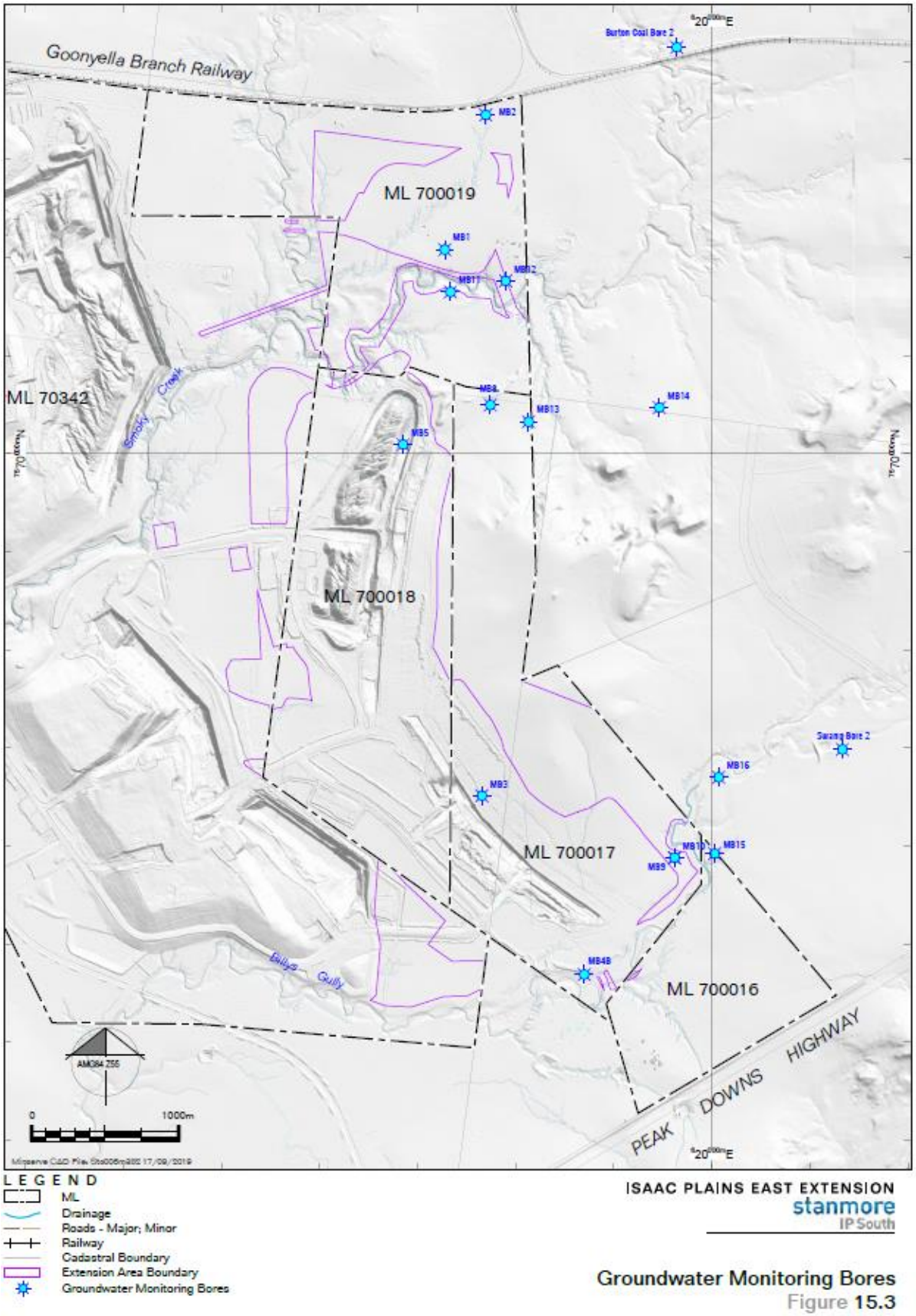


Figure 5: Location of IPCM sewage system and respective irrigation area.

Figure 6: Authorised impacts to regulated vegetation.

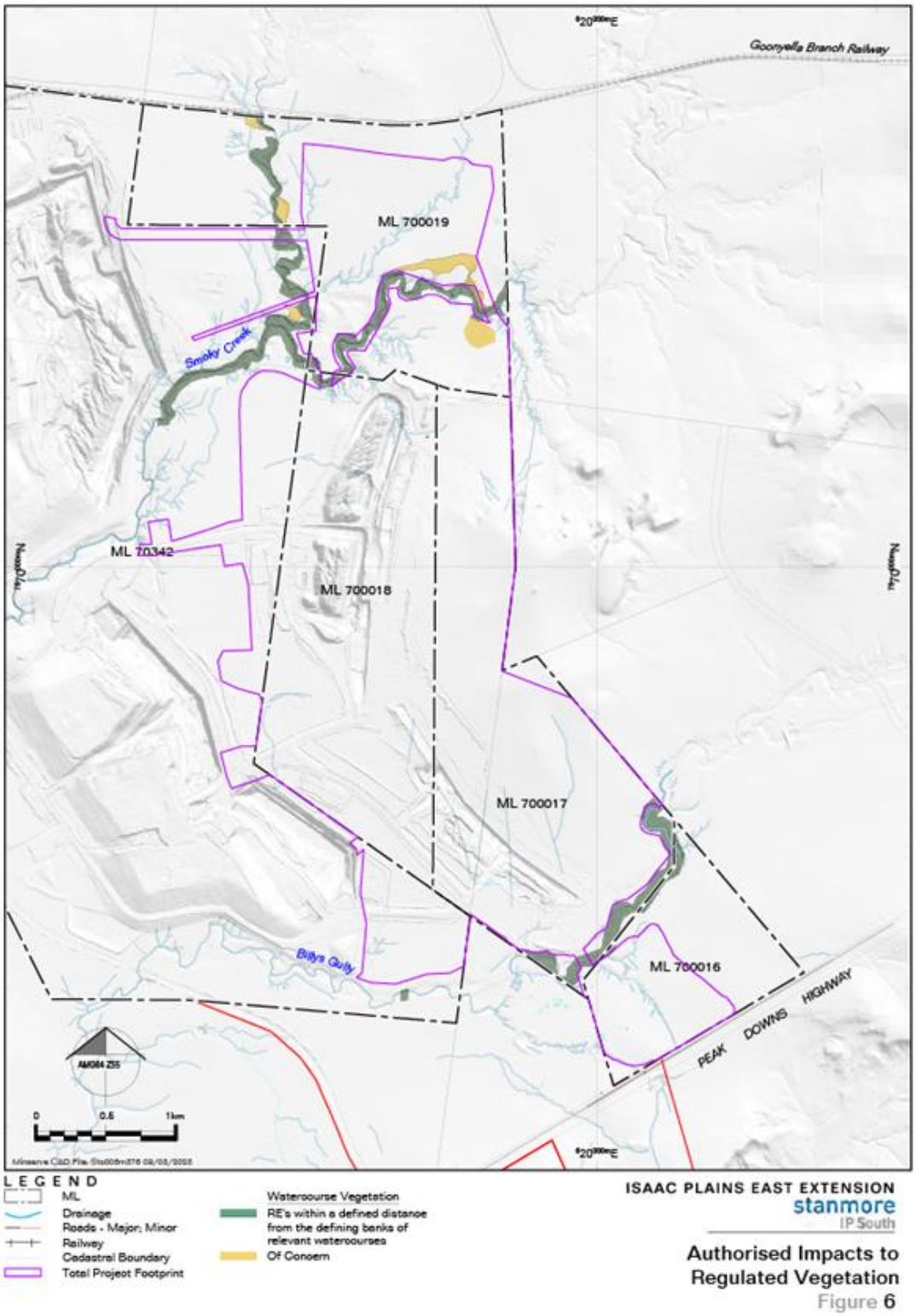


Figure 7: Authorised impacts to protected wildlife habitat, Squatter pigeon – *Geophaps scripta scripta.*

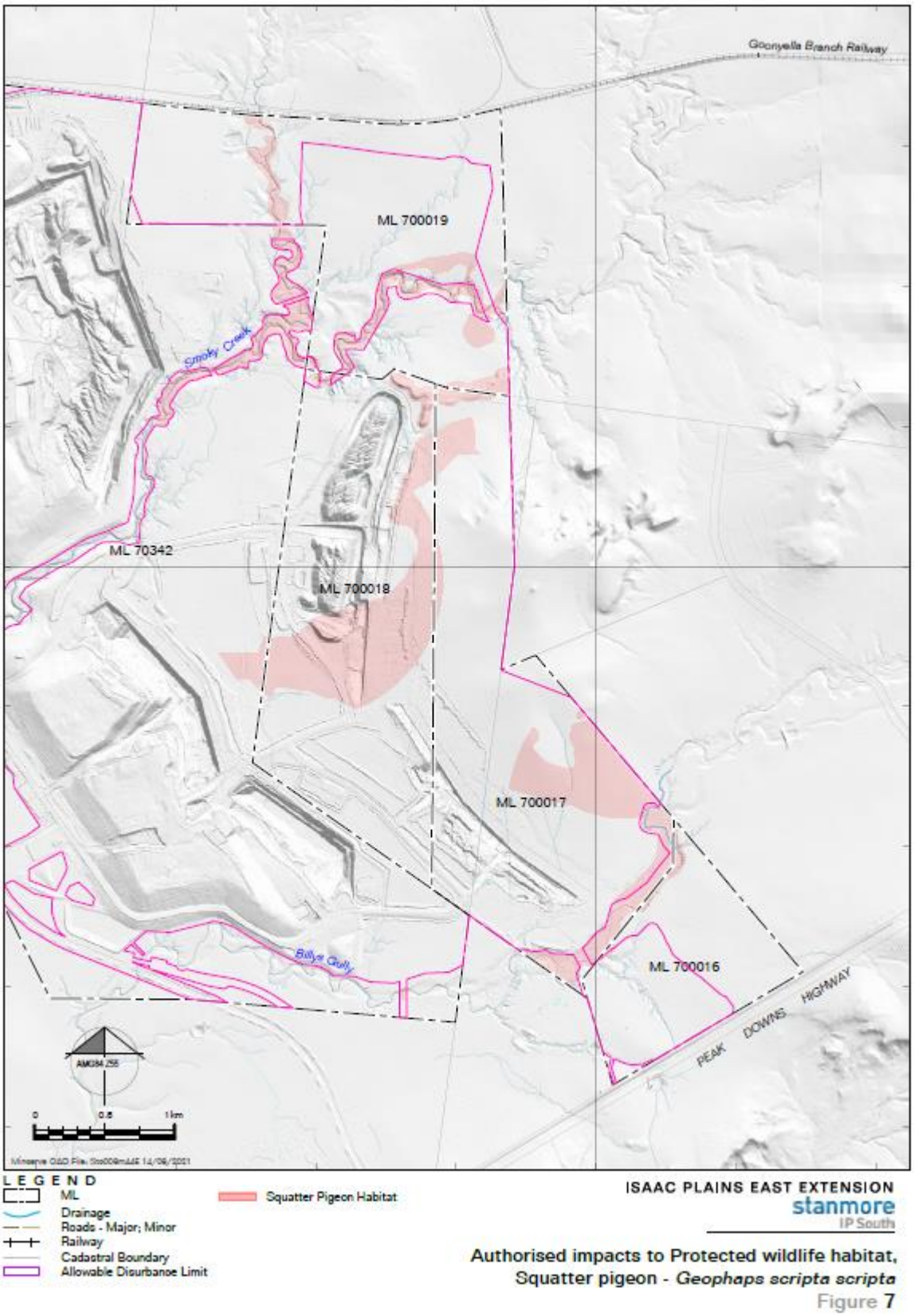


Figure 8: Authorised impacts to protected wildlife habitat, Koala – *Phascolarctos cinereus.*

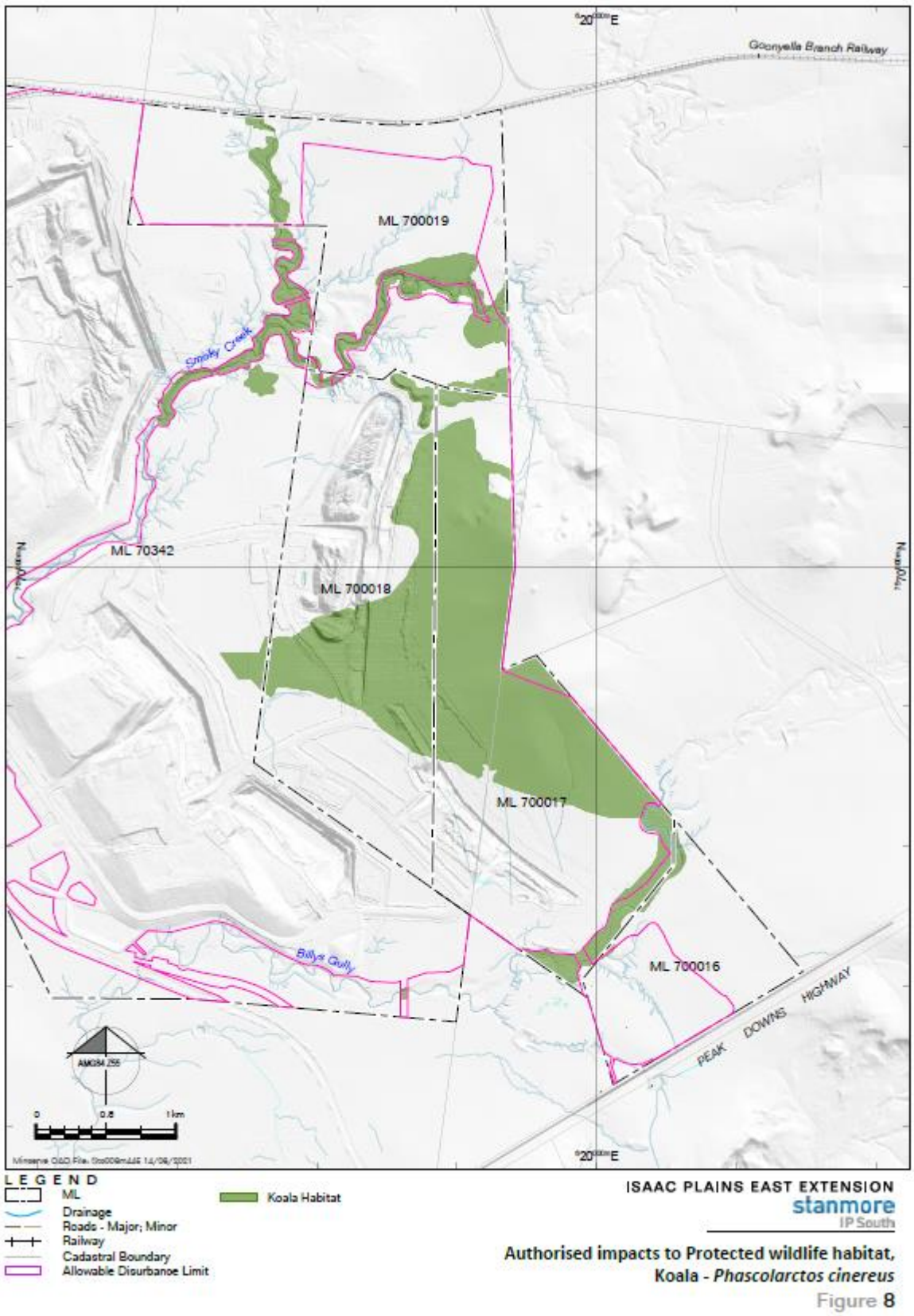


Figure 9: Authorised impacts to protected wildlife habitat - Short-beaked echidna.

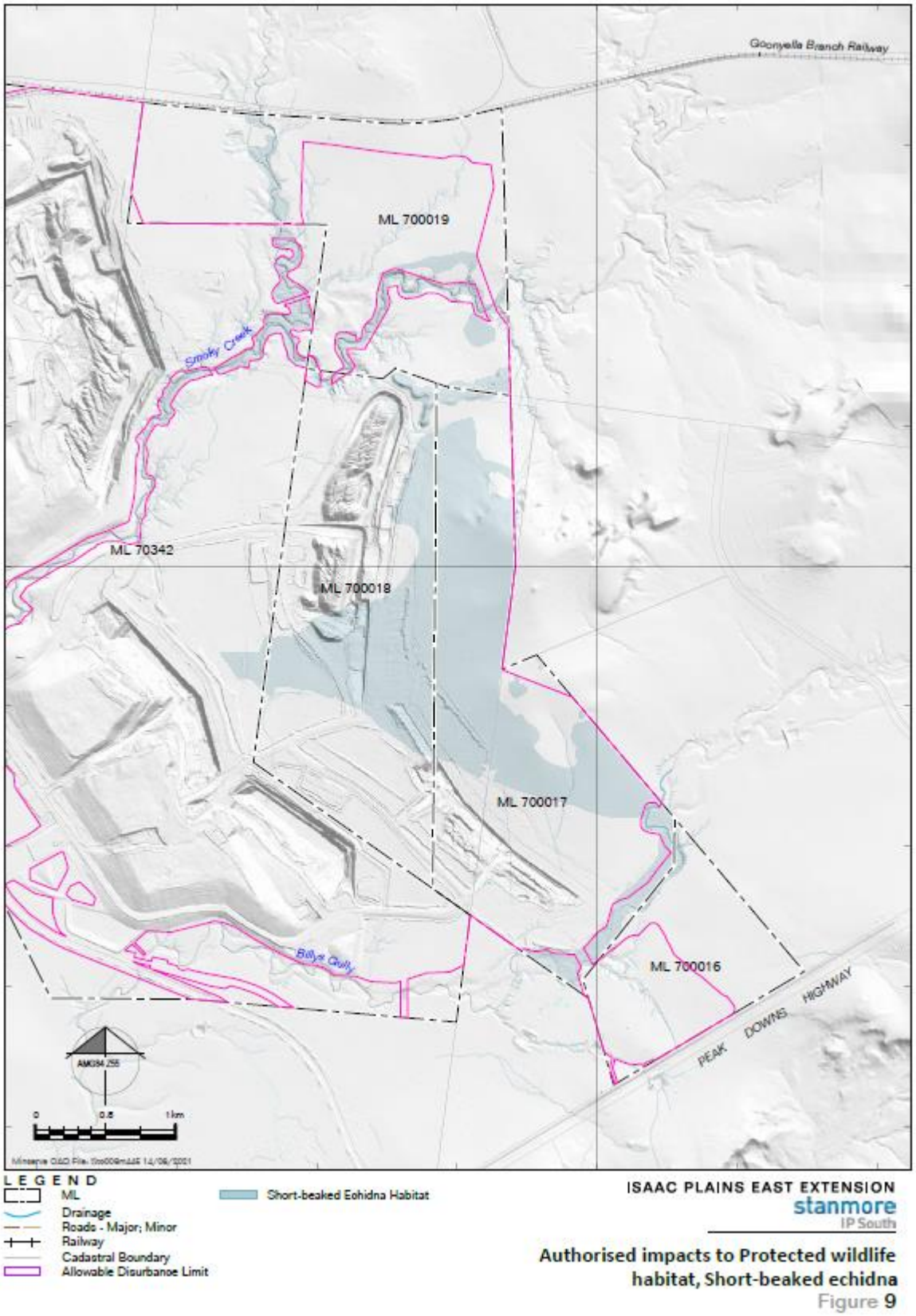
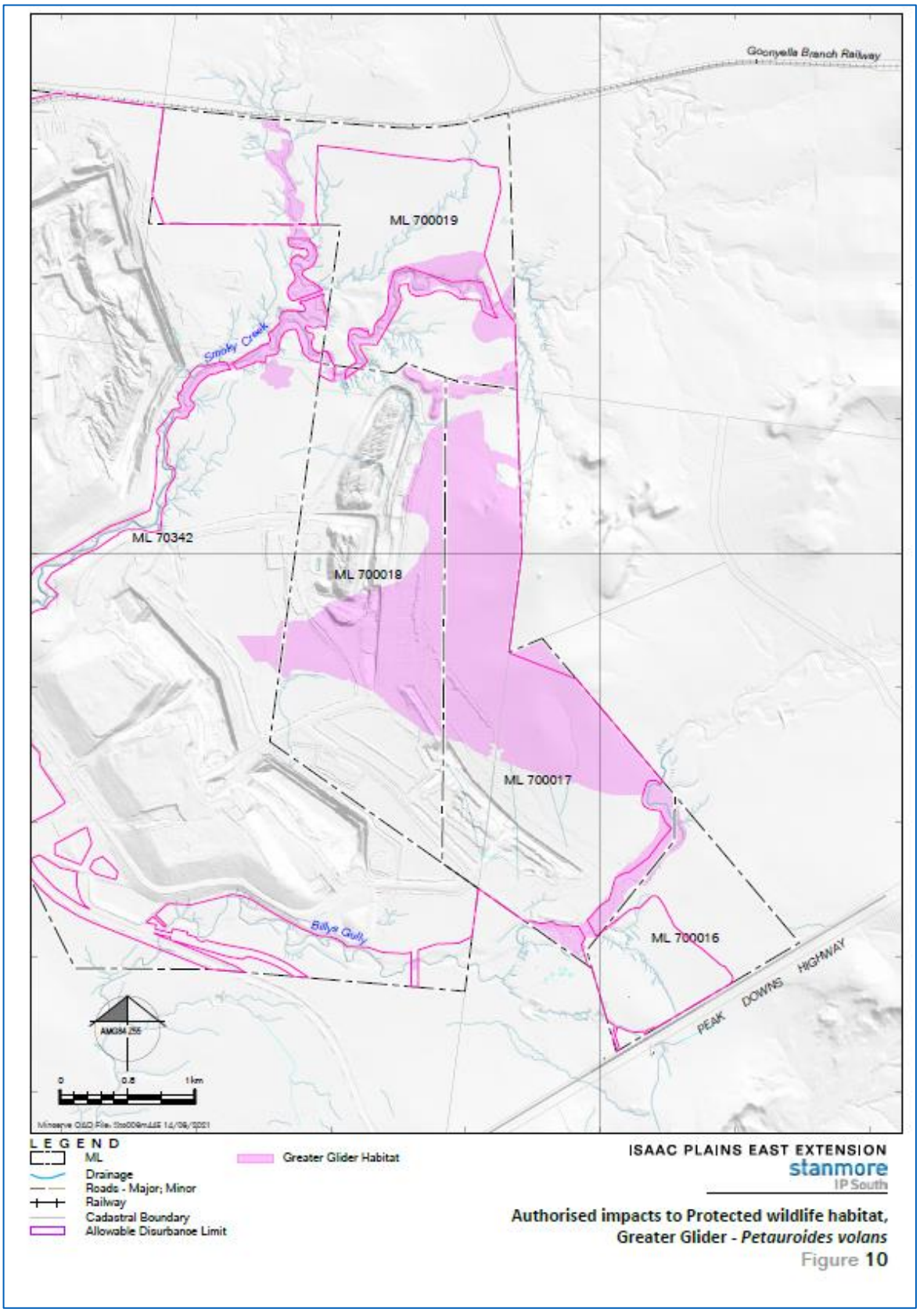


Figure 10: Authorised impacts to protected wildlife habitat, Greater Glider - *Petauroides Volans*



END OF ENVIRONMENTAL AUTHORITY

ABN 46 640 294 485

DELIVERING FOR QUEENSLAND
Queensland Government