Permit

Environmental Protection Act 1994

Environmental Authority EPPR03277115

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

Environmental authority number: EPPR03277115

Environmental authority takes effect on 8 April 2026.

The anniversary date of this environmental authority is 29 June. The payment of the annual fee is due each year on this day.

An annual return will be due each year on 01 April.

Environmental authority holder(s)

Name(s)	Registered address
QUEENSLAND COKING COAL PTY LTD	Level 34, 45 Queen Street BRISBANE CITY QLD 4000

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Resource Activity, Schedule 3, 09: A mining activity involving drilling, costeaning, pitting or carrying out geological surveys causing significant disturbance	EPC 1233
Resource Activity, Schedule 3, 10: Investigating the potential development of a mineral resource by large bulk sampling or constructing an exploratory shaft, adit or open pit	EPC 1233

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).

Mobile and temporary activities

If you operate a mobile and temporary environmentally relevant activity (ERA), other than regulated waste transport, you are required to maintain a work diary. You must:

1. use the approved form for a work diary (ESR/2015/1696);
2. keep the work diary records for 2 years after the last entry;
3. inform the administering authority within 7 days of the work diary being lost or stolen;
4. record the information required in the work diary for each location within 1 day of leaving the location.

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 of the EP Act, an EA has effect:

1. 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
2. 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
3. otherwise – on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Planning Act 2016* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

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

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

Signature	Date
	8 April 2026

Ben Byrd

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

Enquiries:

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

Obligations under the *Environmental Protection Act 1994*

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

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

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department, and other State and Federal Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access State controlled roads), the Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development (to clear vegetation), and the Department of Primary Industries (to clear marine plants or to obtain a quarry material allocation).

Conditions of environmental authority

Agency interest: General	
Condition number	**Condition**
A1	All reasonable and practicable measures must be taken to prevent or minimise environmental harm caused by the activities authorised by this environmental authority.
A2	This environmental authority does not authorise environmental harm unless a condition contained within the authority explicitly authorises the harm. Where there is no condition or the authority is silent on a matter, the lack of condition or silence does not authorise environmental harm.
A3	Activities authorised by this environmental authority must not cause environmental nuisance at a nuisance sensitive place.
A4	Costeaning is not authorised by this environmental authority.
A5	Contaminants must not be directly or indirectly released to land, water, groundwater or air except for those releases authorised by the conditions of this environmental authority.
A6	**Maintenance of measures, plant and equipment** The environmental authority holder must: (1) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; (2) maintain such measures, plant and equipment in a proper and efficient condition; (3) operate such measure, plant and equipment in a proper and efficient condition; and (4) ensure all instruments and devices used for the measurement and monitoring of any parameter under any condition of this environmental authority are properly calibrated.
A7	Records of installation, calibration and maintenance carried out under condition **A6** must be kept.
A8	**Authorised activities** The bulk sample activities conducted under this environmental authority must not exceed the total maximum disturbance areas listed in **Table A1 - Maximum disturbance area for each bulk sample disturbance domain**[1] and must not extend beyond the disturbance footprint depicted in **Figure A1 – Project Layout**. [1]The total disturbance footprint does not include exploration and groundwater monitoring activities that are authorised outside of **Figure A1 – Project Layout**.

Table A1 – Maximum disturbance area for each bulk sample disturbance domain

Disturbance Domain	Maximum disturbance area (ha)
Haul Road	3.9
Total Maximum Disturbance Footprint	**3.9**

A9	Disturbance activities (and the monitoring requirements and the rehabilitation liability associated with those activities) undertaken prior to 10 January 2025 under this environmental authority, where such activities overlap with approved activities on ML700073 under environmental authority P-EA-100265081, are subject to the conditions of P-EA-100265081 such that the conditions of this environmental authority no longer apply for those activities. *Note:* *For reference, the activities referred to by this condition are illustrated in **Figure A2 – Disturbance liability transferred from environmental authority EPPR03277115 to environmental authority P-EA-100265081**.*
A10	**Notification of commencement of authorised activities** The holder of this environmental authority must provide the administering authority with a date in writing for when activities authorised under condition **A8** commence under this environmental authority no later than **fourteen (14) days** after the commencement of activities.
A11	**Monitoring, Reporting and Emergency Response Procedures** Except where specified otherwise in another condition of this environmental authority, all monitoring records or reports required by this environmental authority must be kept for a period of not less than **five (5) years**.
A12	The holder of this environmental authority must notify the administering authority by written notification within **twenty-four (24) hours**, after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with, the conditions of this environmental authority.
A13	The notification in condition **A12** must include the following: a) the location of the emergency or incident; b) the date and time of the emergency or incident; c) the estimated quantity and type of any substances involved in the emergency or incident; d) the potential impacts to environmental values caused by the emergency or incident; and e) where there is potential impact on livestock or human health, precautionary measures that should be taken.

A14	Within **ten (10) business days** following a notification under condition **A12** or receipt of monitoring results, whichever occurs later, further written advice must be provided to the administering authority, including the following: a) results and interpretation of any samples taken and analysed; b) outcomes of actions taken at the time to prevent or minimise unlawful environmental harm; and c) proposed actions to prevent a recurrence of the emergency or incident.
A15	**Plans, reports and programs** Any plans, reports or programs required by a condition of this environmental authority must be developed and reviewed by an appropriately qualified person.
A16	Upon request from the administering authority, copies of all records, plans, and other documentation required by the conditions of this environmental authority must be made available and provided to the administering authority within: a) **ten (10) business days**; or b) an alternative timeframe agreed between the administering authority and the environmental authority holder.
A17	Within **twenty (20) business days**; or an alternative timeframe agreed between the administering authority and the environmental authority holder, of receiving comments from the administering authority on any document, the document must: a) be updated by an appropriately qualified person having regard to the comments; and b) re-submitted to the administering authority.
A18	**Monitoring and sampling** All monitoring and sampling required by the conditions of this environmental authority must be carried out, interpreted, and recorded by an appropriately qualified person.
A19	Where a condition of this environmental authority requires compliance with a standard, policy or guideline published externally to this environmental authority and the standard is amended or changed subsequent to the issue of this environmental authority, the holder of this environmental authority must: a) comply with the amended or changed standard, policy or guideline within **two (2) years** of the amendment or change being made, unless a different period is specified in the amended standard or relevant legislation; and b) until compliance with the amended or changed standard, policy or guideline is achieved, continue to remain in compliance with the corresponding provision that was current immediately prior to the relevant amendment or change.
A20	Unless otherwise authorised in writing by the administering authority, all laboratory analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities accreditation for such analyses, with the exception of in situ monitoring of dissolved oxygen, temperature, pH, electrical conductivity and turbidity.

A21	**Complaints** The holder of this environmental authority must record all environmental complaints received about the activities 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.
A22	The holder of this environmental authority must, when requested by the administering authority and within a reasonable timeframe agreed to by the administering authority: a) investigate any complaint of environmental harm; b) undertake the relevant specified monitoring; and c) within **ten (10) business days** of completion of the investigation, or no later than **ten (10) business days** after the end of the timeframe nominated by the administering authority to undertake the investigation, provide to the administering authority the results of the investigation (including an analysis and interpretation of the monitoring results) and details of the abatement measures implemented.
A23	**Annual reporting** An annual report must be prepared and submitted to the administering authority by 31 March each year.
A24	The report required by condition **A23** must include the following information: a) The location, coordinates and area (hectares) of all areas currently disturbed by the activities carried out under this environmental authority, distinguished by whether the area has been disturbed, is currently under rehabilitation or has been fully rehabilitated in accordance with the conditions of this environmental authority; b) The date each area was disturbed; c) The date each area was rehabilitated; d) The date each drill hole was constructed; e) The date each drill hole was decommissioned; f) A map distinguishing the areas of existing disturbance, proposed disturbance for the subsequent year and existing and proposed rehabilitation; and, g) Details of the rehabilitation activities conducted for areas identified in **A24(a)** including whether additional maintenance and monitoring is required to assure achievement of the conditions in **Agency interest: Rehabilitation**.

Agency interest: Air	
Condition number	**Condition**
B1	**Dust and particulate matter monitoring** The environmental authority holder must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the dust and particulate matter emissions generated by the activities do not cause exceedances of the following levels when measured at any sensitive or commercial place: a) Dust deposition of 120 milligrams per square metre per day, averaged over **one (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 **twenty-four (24)-hour** averaging time when monitored in accordance with the most recent version of either: i) 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 ii) Any alternative method of monitoring PM_{10} which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority. c) A concentration of particulate matter suspended in the atmosphere of 90 micrograms per cubic metre over a **one (1) year** averaging time, when monitored in accordance with the most recent version of AS/NZS3580.9.3:2003 *Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—Total suspended particulate matter (TSP)—High volume sampler gravimetric method*.
B2	When requested by the administering authority, or as a result of a complaint (which in the opinion of the authorised officer is neither frivolous nor vexatious nor based on mistaken belief), dust and/or particulate monitoring must be undertaken: a) at a place or places relevant to the potentially affected sensitive or commercial place as agreed upon with the administering authority; b) for a monitoring period as agreed upon with the administering authority; c) for the relevant contaminant limits, averaging periods and in accordance with the methods specified in condition **B1**; and d) the results of the monitoring undertaken are to be notified to the administering authority within **ten (10) days** following completion of monitoring.

Agency interest: Noise	
Condition number	**Condition**
C1	**Noise nuisance** Noise from the authorised activities must not cause an environmental nuisance at any sensitive place or commercial place.
C2	**Noise limits** Noise from the activity must not exceed the levels identified in **Table C1 – Noise limits – Sensitive place.**

Table C1 – Noise limits – Sensitive place

Noise level measured in dB(A)	Monday to Saturday			Sunday and Public Holidays		
	7am–6pm	6pm–10pm	10pm–7am	9am–6pm	6pm–10pm	10pm–9am
	Noise measured at sensitive place					
$L_{Aeq\ adj,\ 1\ hr}$	40 dB(A)	40 dB(A)	35 dB(A)	35	35	35
$L_{Amax,\ 1\ hr}$	N/A	N/A	45dB(A)	N/A	N/A	45 dB(A)

C3	All monitoring of noise emissions from the activity must be undertaken in accordance with the most recent version of Queensland Government's '*Noise Measurement Manual*' (ESR/2016/2195), the relevant Australian Standard and the *Environmental Protection Regulation 2019* (Chapter 5, Part 4) and must include the following descriptors, characteristics and conditions: a) $L_{A10,\ adj,\ 10\ mins}$; b) $L_{A\ 1,\ adj,\ 10\ mins}$; c) the level and frequency of occurrence of impulsive or tonal noise; d) atmospheric conditions including wind speed and direction; e) effects due to extraneous factors such as traffic noise; and f) location, date and time of recording.
C4	**Noise monitoring exceedance** If noise monitoring indicates an exceedance of any relevant limit in **Table C1 – Noise limits – Sensitive place**, noise abatement measures must be immediately implemented to minimise any adverse impacts to the sensitive place and to prevent any further exceedances.

C5	A report must be provided to the administering authority within **ten (10) business days** of an exceedance of noise limits in **Table C1 – Noise limits – Sensitive place**. The report must detail: a) the noise emission data at the sensitive place; b) a description of atmospheric conditions including wind speed and direction occurring at the time; c) the air quality data upwind of the authorised activities (if known); d) measures taken to reduce noise generated by the authorised activities including those undertaken under condition **C4**; and e) the contribution of the authorised activities to the noise level experienced at the sensitive place.
C6	When requested by the administering authority, noise and/or vibration monitoring must be undertaken at sensitive receptors and within a timeframe nominated by the administering authority.
C7	**Blasting** Blasting must not cause the limits prescribed in **Table C2 – Blasting noise and vibration limits** to be exceeded at a sensitive place.
C8	**Blast monitoring program** The environmental authority holder must develop and implement a blast monitoring program to monitor compliance with **Table C2 – Blasting noise and vibration limits** for all blasts conducted at the nearest and most affected sensitive place(s).
C9	Blast monitoring must include the following descriptors, characteristics, and conditions: a) location of the blast(s) within the mining area (including which bench level); b) atmospheric conditions including temperature, relative humidity, wind speed and wind direction; and c) location, date and time of recording.
C10	If monitoring indicates exceedance of the limits in **Table C2 – Blasting noise and vibration limits,** then the environmental authority holder must immediately implement airblast overpressure abatement measures so that airblast overpressure from the activity does not result in further environmental nuisance.

Table C2 – Blasting noise and vibration limits

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

Agency interest: Surface Water	
Condition number	**Condition**
D1	With the exception of disturbance authorised in condition **A8**, the exploration activities must not be carried out: a) in standing waters, wetlands or lakes; b) in a watercourse; c) within three (3) metres of the top of the bank of any waters, wetlands, lakes or watercourses; or d) within or on the levee banks of the normal flow channel.
D2	**Release to receiving waters** Contaminants must not be released to any waters or the bed and banks of any waters unless otherwise permitted by this environmental authority.
D3	Mine affected water must not be released directly or indirectly to the receiving environment.
D4	Surface water runoff is permitted to be released to waters for the purpose of ensuring stormwater does not become mine affected water from erosion and sediment control (ESC) structures operated in accordance with the Erosion and Sediment Control Plan required by condition **D8**.
D5	Releases from ESC structures must not cause erosion of the bed and banks of the receiving environment or cause a material build-up of sediment in such waters.
D6	The holder of the environmental authority must design, install and maintain adequate stormwater management infrastructure to prevent stormwater from entering disturbed areas.
D7	**Erosion and Sediment Control** The holder of the environmental authority must design, install and maintain adequate erosion and sediment control structures wherever necessary to prevent or minimise erosion of disturbed areas and the release of sediment to any waters.
D8	On or before the commencement of the bulk sample activities authorised under condition **A8**, an Erosion and Sediment Control Plan must be developed and implemented for the authorised activity.

D9	The Erosion and Sediment Control Plan must demonstrate how erosion and sediment control measures detailed in the plan adequately minimise the release of sediment to receiving waters and must include at least the following: a) an assessment of the size and characteristics of all catchment areas; and b) an assessment of relevant properties of soils and waste materials; and c) identification of receiving waters environmental values, water quality objectives and management intent; and d) specification of minimum design criteria for erosion and sediment control structures to achieve the management intent of receiving waters; and e) locations and descriptions of all erosion and sediment control measures; and f) an audit schedule to ensure erosion and sediment control measures are maintained.
D10	The Erosion and Sediment Control Plan must be reviewed by **1 August** for each calendar year. The review must be documented and must: a) include a statement that the Erosion and Sediment Control Plan has been reviewed by an appropriately qualified person; and b) assess the plan against the requirements of condition **D9;** and c) include recommended actions to ensure actual and potential environmental impacts are effectively managed; and d) provide details and timelines of the actions to be taken; and e) identify any amendments made to the Erosion and Sediment Control Plan.
D11	Any amendment to the Erosion and Sediment Control Plan identified by condition **D10(e)** must be made and the plan implemented by **1 September** each year.

Agency interest: Groundwater	
Condition number	**Condition**
E1	Contaminants must not be released to groundwater.
E2	**Groundwater Dependent Ecosystems** The activities authorised under this environmental authority must not cause environmental harm to any groundwater dependant ecosystems located within EPC 1233.

Agency interest: Land	
Condition number	**Condition**
F1	When carrying out the authorised activities, the environmental authority holder must ensure that the area and duration of disturbance to land and vegetation is minimised.
F2	**Exploration activities disturbance** For all exploration activities, the environmental authority holder must implement the following measures: a) Existing access and fence line tracks must be used wherever possible and any new tracks are to be constructed by linking naturally cleared or disturbed areas; b) Use Global Positioning Systems, or other techniques, to reduce the need for line of sight clearing; c) Limit the width of all lines / tracks to no more than five (5) metres; d) Retain fallen timber and cleared vegetation and leave in-situ to create micro-habitat; e) Drill holes are to be located as far as practicable in previously cleared areas; f) Minimise clearing of mature trees and standing dead trees and avoid clearing large trees that have a trunk with a circumference of more than 95cm at 1.3m above the ground; g) All lines / tracks are constructed and maintained with adequate drainage to avoid accelerated erosion; and, h) All vehicles and equipment must be used in a manner which prevents the spread of weeds.
F3	The operational area of each individual exploration drill pad must not exceed 1,000 m^2.
F4	Exploration drill holes are limited to less than 250 mm in diameter.
F5	The construction of sumps associated with the drilling activities must not exceed 10 m^2.
F6	All exploration drill holes must be constructed to prevent the ingress of any contaminant.
F7	**Topsoil** The holder of the environmental authority must ensure that: a) topsoil is removed from areas to be disturbed by the authorised activities and stockpiled to a maximum height of 2m in a manner that will minimise erosion; b) measures are implemented to ensure that the mixing and erosion of topsoil and overburden stockpiles is prevented; and c) a topsoil inventory is maintained and provided to the administering authority on request.

F8	Topsoil stockpiles must: a) be located away from drainage areas, roads, machinery, transport corridors, and stock grazing areas; and b) seeded or covered with a water-shedding lining to prevent unnecessary erosion of topsoil.
F9	Measures to prevent fauna being harmed from entrapment must be implemented during the construction and operation of the authorised activities.
F10	**Campsites** This environmental authority does not authorise a camp on EPC1233.
F11	**Acid forming material** The holder of the environmental authority must take all reasonable and practicable measures to leave potentially acid-forming rock, soil and sediments undisturbed.
F12	The holder of the environmental authority must ensure that actual acid-forming rock, soil and sediments are managed in such a way that: a) the material is not exposed to air or water, wherever possible; b) leachate does not contaminate the receiving environment; c) if acid-forming rock, soil or sediments are disposed of, the disposal method implemented must prevent leachate or acid drainage.
F13	**Hazardous contaminants** The holder of the environmental authority must plan and conduct activities on site to prevent any potential or actual release of a hazardous contaminant.
F14	The holder of the environmental authority must ensure that spills of hazardous contaminants are cleaned up as quickly as practicable. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such contaminants to any watercourse, waterway, groundwater, wetland or lake.
F15	All flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm and maintained in accordance with the current edition of AS1940 – Storage and Handling of Flammable and Combustible Liquids.
F16	All chemicals and flammable or combustible liquids stored on site that have the potential to cause environmental harm must be stored in or serviced by an effective containment system that is impervious to the materials stored and managed to prevent the release of liquids to waters or land. Where no relevant Australian standard exists, store such materials within an effective on-site containment system. The environmental authority holder must minimise the potential for contamination of land and water by diverting stormwater around contaminated areas and facilities used for the storage of chemicals and flammable or combustible liquids.

F17	**Weed Management** A weed management plan must be developed prior to the commencement of the bulk sample activities authorised under condition **A8**, and implemented for the duration of authorised activities and must outline: a) areas of control priority and the methods used to determine such areas; and b) strategies to promote dense pasture cover (to decrease weeds establishment) through reduced disturbance; and c) monitoring methodologies that document the spread of weeds and any new outbreaks; and d) methods for the control of weeds that include best practice management; and e) stringent wash-down and inspection procedures for both machinery involved in clearing/construction activities and those operating outside of designated roads during mine operation; and f) truck wash procedure to reduce weed infestations; and g) protocol for an annual weed inspection; and h) promotion of the awareness of weed management issues at the site.

Agency Interest: Biodiversity	
Condition number	**Condition**
G1	**Impacts to Prescribed Environmental Matters** 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 G1 - Significant residual impacts to prescribed environmental matters**.
G2	From **22 March 2024**, records demonstrating that each impact to a prescribed environmental matter listed in **Table G1 – Significant residual impacts to prescribed environmental matters** did not, or is not likely to, result in a significant residual impact to that matter must be: a) completed by an appropriately qualified person; and b) kept for the life of the environmental authority.
G3	Pre-clearing surveys must be undertaken by an appropriately qualified person prior to any disturbance to ensure the area to be disturbed is minimised and avoids any impacts to prescribed environmental matters unless the impact(s) are specified in **Table G1 - Significant residual impacts to prescribed environmental matters**.
G4	**Koala management** The environmental authority holder must identify and implement management measures with consideration of the *Koala-sensitive design guideline* (DES 2022) in high-risk areas for koala movement throughout the duration of authorised activities. Management measures must include, but are not limited to, the following: a) the identification of high-risk management areas for koala movement on site, in particular vehicle corridors; and b) establish vehicle management protocols on site that reduce the likelihood of vehicles intercepting koalas; and c) the design and construction of koala exclusion fencing, which includes a fauna detection system, around higher risk areas such as heavy vehicle routes that cross riparian vegetation with high value koala habitat and where these intersect with operational mining areas.

Table G1 - Significant residual impacts to prescribed environmental matters

Prescribed Environmental Matter (PEM)	Maximum extent of impact (ha)[1]	Significant residual impact (Yes/No)[2]	Location
Vegetation Management Watercourse REs[3]			
RE 11.5.9b *E. crebra* and other Eucalyptus spp. and Corymbia spp. woodland on Cainozoic sand plains and/or remnant surfaces	0.25	No	**Figure G1.1 - Vegetation Management Watercourse Regional Ecosystems**
RE 11.10.1 *Corymbia citriodora* woodland on coarse-grained sedimentary rocks	0.005	No	
RE 11.10.3 *A. shirleyi* or *A. catenulata* open forest on coarse-grained sedimentary rocks. Crests and scarps	0.07	No	
RE 11.3.2 *E. populnea* woodland on alluvial plains	0.03	No	
RE 11.3.25 *E. tereticornis* or *E. camaldulensis* woodland fringing drainage lines	0.06	No	
RE 11.5.3 – *E. populnea* +/- *E. melanophloia* +/- *Corymbia clarksoniana* woodland on Cainozoic sand plains and/or remnant surfaces	0.05	No	
Threatened and Special Least Concern Species			
Koala (*Phascolarctos cinereus*)	0.03 (high-quality habitat) 6.08 (moderate-quality habitat) 1.48 (low-quality habitat)	No	**Figure G2.1 - Location of Koala habitat**
Greater Glider (*Petauroides Volans sensu lato*)	0.17	No	**Figure G3.1 - Location of Greater Glider habitat**
Squatter Pigeon (southern) (*Geophaps scripta scripta*)	4.09 (foraging habitat) 3.24 (dispersal habitat) 0.42 (breeding and foraging habitat)	No	**Figure G4.1 - Location of Squatter Pigeon habitat**
Common Death Adder (*Acanthophis antarticus*)	2.19	No	**Figure G5.1 – Location of Common Death Adder habitat**
Short-beaked Echidna (*Tachyglossus aculeatus*)	8.08	No	**Figure G6.1 - Location of Short-Beaked Echidna habitat**
Rufous Fantail (*Rhipidura rufifrons*)	1.79	No	**Figure G7.1 - Location of Rufous Fantail habitat**
Northern Quoll (*Dasyurus hallucatus*)	2.64	No	**Figure G8.1 - Location of Northern Quoll habitat**
Connectivity areas			
Connectivity areas	7.11	No	**Figure G9.1 - Locations of Regional Ecosystems**

[1] Total impact areas should not be combined, as impact areas may overlap for different PEMs.
[2] Where there is 'No' significant residual impact, an environmental offset is not required.
[3] Regional ecosystem within a defined distance from the defining banks of a watercourse.

Agency interest: Rehabilitation	
Condition number	**Condition**
H1	Land disturbed by the bulk sample activities authorised under condition **A8** must be rehabilitated in accordance with **Appendix 1 - Rehabilitation requirements**.
H2	Rehabilitation required under condition **H1** must commence progressively on all areas disturbed by activities authorised under condition **A8**, as soon as practicable.
H3	Rehabilitation must be completed no later than **twenty (20) months**, or as otherwise agreed by the administering authority, following completion of bulk sample activities in each disturbance domain identified in **Table A1 – Maximum disturbance area for each bulk sample disturbance domain**.
H4	For any infrastructure to remain after the authorised activity has ceased, the environmental authority holder must obtain the written agreement of the landowner stating they will take over responsibility for that infrastructure.
H5	**Exploration rehabilitation** Unless otherwise stated by a condition of this environmental authority, rehabilitation of exploration activities within the maximum extent of areas identified in **Table G1 - Significant residual impacts to prescribed environmental matters** must be completed as soon as practicable but no longer than **three (3) months** after completion of the activity.
H6	Rehabilitation processes on all other areas disturbed by the exploration activities must be completed as soon as practical but no longer than **six (6) months** after completion of the exploration activities.
H7	Rehabilitation of riverine areas disturbed by exploration activities must be completed as soon as practical after completion of exploration activities and prior to the onset of the wet season.
H8	The environmental authority holder must backfill all excavations, drill holes and sampling sites as soon as practical following the completion of the exploration activities.
H9	The environmental authority holder must rehabilitate areas disturbed by the exploration activity to a safe, stable, non-polluting and self-sustaining land use similar to that of surrounding undisturbed areas.
H10	The environmental authority holder must spread seeds or plant tubestock consistent with the pre-disturbance Regional Ecosystem species that will promote same vegetation type and density of cover to that of the surrounding undisturbed vegetation category.

Agency interest: Waste	
Condition number	**Condition**
I1	The holder of the environmental authority must not directly or indirectly release wastewater from the project area to any watercourse, waterway, groundwater, wetland or lake.
I2	All waste generated by activities must be removed to a licenced waste facility that is lawfully able to accept the waste under the *Environmental Protection Act 1994.*
I3	Unless otherwise permitted by the conditions of this environmental authority or with prior approval from the administering authority and in accordance with a relevant standard operating procedure, waste must not be burnt.
I4	The holder of this environmental authority must not burn vegetation cleared in the course of carrying out the authorised activities.
I5	Waste must not be released directly or indirectly to waters.
I6	**Non-mineral waste management program** The holder of this environmental authority must develop, document and implement a non-mineral waste management program for all authorised activities.

I7	The program required under condition **I6** must include: a) a description of each waste stream generated by the authorised activity; and b) a description of the authorised activity that may generate waste; and c) waste management control strategies including: i. recording of the types and amounts of wastes generated by the authorised activity; ii. segregation of the wastes; iii. storage of the wastes; iv. transport of the wastes; v. disposal of waste including leachate management; and vi. monitoring and reporting matters concerning the waste; and d) the hazard characteristics of the wastes generated including disposal procedures for regulated wastes; and e) a program for reusing, recycling or disposing of all wastes; and f) how the waste will be dealt with in accordance with the waste and resource management hierarchy, including a description of the types and amounts of waste that will be dealt with under each of the waste management practices in the waste management hierarchy (i.e. avoidance, reuse, recycling, energy recovery, disposal); and g) how the waste will be stored, handled and transferred in a proper and effective manner; and h) procedures for identifying and implementing opportunities to minimise the amount of waste generated, promote efficiency in the use of resources and improve the waste management practices employed; and i) procedures for dealing with accidents, spills, and other incidents that may impact on waste management; and j) details of any accredited management system employed, or planned to be employed, to deal with the waste; and k) how often the performance of the waste management practices will be assessed; and l) indicators or other criteria on which the performance of the waste management practices will be assessed; and m) staff training and induction to the waste management program; and n) a system for regular review.
I8	The program required under condition **I6** must be regularly reviewed and updated at intervals of no greater than **five (5) years**.

Definitions

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

"Administering authority" means the Department of the Environment, Tourism, Science and Innovation or its successor.

"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).

"Appropriately qualified person" or "AQP" means a person who:

a) has qualifications and experience relevant to performing the function, including but not limited to:
   i. a bachelor's degree in science or engineering; and
   ii. at least 3 years' experience relevant to evaluating compliance with the requirements of the environmental authority conditions being audited; and
b) has an ability to give authoritative assessment, advice and analysis on performance relating to the subject matter using the relevant protocols, standards, methods, or literature; and
c) is a member of at least one organisation prescribed in Schedule 14 of the Environmental Protection Regulation 2019; and
d) is not an employee of, nor have a financial interest in, the holder(s), or person acting under the environmental authority, or any involvement with the holder(s) of the environmental authority which could lead to a conflict of interest.

"Authority" means environmental authority under the *Environmental Protection Act 1994*.

"Authorised activities" means the activities conducted under this environmental authority including but not limited to:

a) authorised as per the definition in section 110 of the Environmental Protection Act 1994;
b) all environmentally relevant activities authorised under this environmental authority;
c) all mining disturbance including land clearing, construction of infrastructure, overburden removal and active bulk sampling, and the ancillary activities that support these activities, for example, but no limited to access and use of tracks and roads within the mining lease a.
d) all activities referenced in a condition of the environmental authority.
e) all care and maintenance activities; and
f) rehabilitation.

"Banks" means the feature which confines major flows within a watercourse.

"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.

"Campsite" the area encompassing any dwelling, amenities (e.g. toilet block, power generator), sewage or general waste disposal facility and includes the office area and vehicle parking areas associated with a temporary or permanent camp.

"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 Australian Code for the Transport of Dangerous Goods by Road and Rail approved by the Australian Transport Council, or

c) a lead hazardous 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
   v. a substance used for, or intended for use for mineral processing or treatment of metal, pulp and paper, textile, timber, water or wastewater, or
   vi. manufacture of plastic or synthetic rubber.

"**Contaminant**" the *Environmental Protection Act 1994* defines, under Section 11, a contaminant as:

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.

"Contamination" Section 10 of the *Environmental Protection Act 1994* defines contamination of the environment as the release (whether by act or omission) of a contaminant into the environment.

"Costeaning" means the digging of a trench or pit across the seam or ore body for exposing, sampling and mapping of the ore body.

"Density of cover" in reference to trees and/or shrubs, it means the number of trees or shrubs in a specified area (e.g. 50 trees per square kilometre). With reference to understorey plant species (e.g. grasses and forbs), it means the percentage of surface area covered by a particular species.

"Disturbance" of land includes:

a) bulk sample activities including disturbance domain Haul Road authorised under condition **A8** of this environmental authority.

b) roads, tracks, lines, drilling, excavating, sampling, seismic activities, gridlines, geophysical surveys;

c) compacting, removing, covering, exposing, or stockpiling of earth;

d) removal or destruction of vegetation or topsoil or both to an extent where the land has been made susceptible to erosion;

e) the submersion of areas by tailings or hazardous contaminant storage and dam/structure walls;

f) permanent and temporary infrastructure, including any infrastructure (roads, tracks, bridges, culverts, dams/structures, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc.);

g) releasing of contaminants into the soil or underlying geological strata; or,

h) any area that has had its natural state altered by the action or interference of carrying out an activity associated with the project

"Disturbed" means any area that has had its natural state altered by the action or interference of carrying out an activity associated with the resource project.

"EC" means electrical conductivity.

"Environmental authority" means an environmental authority (resource activity) issued by the administering authority under the *Environmental Protection Act 1994*.

"Environmental nuisance" section 15 of the *Environmental Protection Act 1994* defines environmental nuisance as "unreasonable interference or likely interference with an environmental value" caused by:

a) aerosols, fumes, light, noise, odour, particles or smoke; or

b) an unhealthy, offensive or unsightly condition because of contamination; or

c) another way prescribed by regulation.

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

"**Exploration activity**" means tracks, lines, drill holes, drilling and sampling inclusive of Limit of Oxidation (LOX) drilling for the purposes of exploring the coal resource or conducting geological surveying;

"Holder", for a mining tenement, means a holder of the tenement under the *Mineral Resources Act 1989*, and the holder of the associated environmental authority under the *Environmental Protection Act 1994*.

"Hazardous contaminant" means hazardous contaminant means a contaminant, other than an item of explosive ordnance, that, if improperly treated, stored, disposed of or otherwise managed, is likely to cause serious or material environmental harm because of—

a) its quantity, concentration, acute or chronic toxic effects, carcinogenicity, teratogenicity, mutagenicity, corrosiveness, explosiveness, radioactivity or flammability; or

b) its physical, chemical or infectious characteristics.

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

"Lake" means a natural or artificial body of water, either permanent or intermittent.

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

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

"Mature trees" means any tree that is:

a) is more than 4m high; or

b) has a trunk with a circumference of more than 31.5cm at 1.3m above the ground.

"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”:

a) means the following types of water:

   i. bulk sample pit water.

   ii. water contaminated by a mining activity which would have been an environmentally relevant activity under Schedule 2 of the *Environmental Protection Regulation 2008* if it had not formed part of the mining activity

   iii. rainfall runoff which has been in contact with any areas disturbed by authorised 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 authorised activities which have not yet been rehabilitated

   v. a mix of mine affected water (under any of paragraphs i)-iv) and other water.

b) does not include surface water runoff which, to the extent that it has been in contact with areas disturbed by authorised 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

      c. both.

“**Mineral waste**” means waste materials resulting from the extraction of coal including overburden, interburden, waste rock and rejects (including course and fine).

“Minimise” is to reduce to the smallest possible amount or degree.

“Non-mineral waste” all other waste generated by the authorised activities not identified in the definition for ‘mineral waste’

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

"Nuisance sensitive place" includes:

a) within or outside of a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises;

b) within or outside of a motel, hotel or hostel;

c) within or outside of a kindergarten, school, university or other educational institution;

d) within or outside of a medical centre or hospital;

e) within a protected area under the *Nature Conservation Act 1992*, within a marine park under the *Marine Parks Act 1992* or a World Heritage Area;

f) within a public thoroughfare, park or gardens; and

g) within or outside of a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

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

"PMLU" means Post-Mining Land Use.

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

"Receiving environment" in relation to an activity that causes or may cause environmental harm, means the part of the environment to which the harm is, or may be, caused. The receiving environment includes (but is not limited to):

a) a watercourse

b) groundwater.

c) an area of land that is not specified in **Figure A1 – Project Layout** of this environmental authority.

"Regional ecosystem" the *Vegetation Management Act 1999* defines a regional ecosystem as a vegetation community in a bioregion that is consistently associated with a particular combination of geology, landform and soil.

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

"Self-sustaining" means not requiring on-going intervention and maintenance to maintain functional riverine processes and characteristics.

"Sensitive place" includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or

b) a motel, hotel or hostel; or

c) a kindergarten, school, university or other educational institution; or

d) a medical centre or hospital; or

e) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or

f) a public park or garden; or

g) for noise, a place defined as a sensitive receptor for the purposes of the *Environmental Protection (Noise) Policy 2019*, with the exception of commercial and retail activity areas.

"Significant residual impact" has the meaning in section 8 *Environmental Offsets Act 2014*.

"**Topsoil**" means the surface layer of a soil profile, which is usually more fertile, darker in colour, better structured and supports greater biological activity than underlying layers. The surface layer may vary in depth depending on soil forming factors, including parent material, location and slope, but generally is not greater than about 300mm in depth from natural.

"μS/cm" means micro siemens per centimetre.

"**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.

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

"**Waterway**" means a naturally occurring feature where surface water runoff normally collects, such as a clearly defined swale or gully, but only flows in response to a local rainfall event.

"**Wetland**" means areas of permanent or periodic/intermittent inundation, whether natural or artificial, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed 6m. Wetlands typically include areas such as lakes, swamps, marshes, estuaries or mudflats.

"Water Quality objective (WQO)" - A numerical concentration limit or narrative statement that has been established to support and protect the designated uses of water at a specified site. It is based on scientific criteria or water quality guidelines but may be modified by other inputs such as social, cultural or economic constraints. WQOs are specified in the EPP Water and Wetland Biodiversity (Part 4, Section 11).

Appendices

Appendix 1 – Rehabilitation Requirements

Domain	Post-Mining Land Use	Rehabilitation Objectives	Completion Criteria	
Haul Road	Native Ecosystem	Safe for humans and animals and stable on decommissioning and into the foreseeable future.	HR1	All hardstand, concrete areas and road materials (bitumen, gravel) removed with the exception of any infrastructure to remain as part of the PMLU[1] or where infrastructure is agreed to be retained by the landholder as evidenced by a signed landholder agreement.
			HR2	All erosion and sediment control systems have been installed as per the design and are functioning properly as verified by an AQP[2].
			HR3	Areas of surface ponding are re-profiled and ripped to be free draining.
			HR4	Any erosion classified as 'moderate' or 'severe' as defined in **Appendix 2 - Erosion classification framework** has been remediated.
			HR5	Erosion monitoring has been completed and the average erosion rate is <5 t/ha/year.
		Not a source of environmental harm to the surrounding environment. Native communities endemic to the surrounding area established (similar to RE11.5.9, 11.5.3, 11.9.2)	HR6	Detailed site investigation report, as required under the EP Act, completed.
			HR7	All contamination is remediated or removed from site.
			HR8	Any contamination removed from site has been removed in accordance with relevant regulations.
			HR9	A contaminated land investigation document has been prepared by an approved auditor, containing a site suitability statement that states that land is not contaminated and is suitable to achieve the PMLU.
			HR10	Soil health and suitability is assessed and documented by an AQP to confirm topsoil is suitable for the PMLU and target vegetation establishment.
			HR11	The need for soil amelioration has been investigated and soil ameliorants such as fertiliser, gypsum and/or organic matter have been applied at rates determined by an AQP.
			HR12	Topsoil is applied to a minimum depth of 0.25m.
			HR13	Organic mulch is applied at a rate of at least 5t/ha of hay or organic material on all slopes.
			HR14	Topsoil to meet the following suitability targets: a. pH in the range of 5.5 - 8.5 (average); b. Electrical Conductivity (EC) ≤1.5 dS/m (1,500 µS/cm); and c. Exchangeable sodium percentage (ESP) <6%.
			HR15	Seeding is completed at an average rate of 2-3 kg/ha for trees and shrubs, 9-11 kg/ha for grasses and 8-10 kg/ha for sterile cover crops.

Domain	Post-Mining Land Use	Rehabilitation Objectives	Completion Criteria	
			HR16	With the exception of a non-permanent cover crop species, the seed mix contains only those species listed in **Appendix 3 – Seed Mix Species List** for the relevant PMLU and reflect the pre-disturbance regional ecosystem distribution.
			HR17	Supplementary seeding and tubestock planting are completed within one year of sites failing to achieve vegetation establishment.
			HR18	Vegetation groundcover >80% on all slopes with gradient >10% and groundcover >50% on slopes with gradient <10% is achieved.
			HR19	An assessment of rehabilitation performance is undertaken by an AQP using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual'.
			HR20	A rehabilitation performance assessment completed achieves a score of 40/60 based on the benchmark criteria in **Appendix 4 – BioCondition Benchmark Criteria** for the relevant PMLU.
			HR21	Rehabilitated areas have less than 0.2% cover of *Parthenium hysterophorus* AND rehabilitated areas are to have less than 0.1% cover of *Harrisia martinii* AND any invasive plants listed under the *Biosecurity Act 2014* are not to exceed densities of 1 individual per hectare, as confirmed by an AQP from annual monitoring.
			HR22	At least 60% of established target tree species show natural recruitment.

[1] 'PMLU' means Post-Mining Land Use.

[2] 'AQP (Appropriately Qualified Person)' means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relating to the subject matter using the relevant protocols, standards, methods or literature

Appendix 2 - Erosion classification framework

Erosion classification	Minor	Moderate	Severe
Sheet erosion	Shallow soil deposits downslope.	Partial exposure of roots; moderate soil deposits downslope.	Loss of surface horizon; subsoil exposure; root exposure; substantial soil deposits downslope.
Rill/gully erosion	<15 rills and <0.3m deep	15-30 rills and <0.3m deep	>30 rills and/or any >0.3m deep
Tunnel erosion	Absent	Absent	Present
Mass movement	Absent	Absent	Present

Source: NCST (2009) *Australian Soil and Land Survey Field Handbook, 3rd edition*. The National Committee on Soil and Terrain. CSIRO Publishing, Collingwood, Australia

Appendix 3 – Seed Mix Species List

This attachment articulates the list of species which are permitted to be included in the seed mix for the PMLU to be achieved.

The seed mix should be selected and apportioned with appreciation for the BioCondition benchmarks at later milestones. Hence, the proportion of each species (kg/ha) within the seed mix should reflect the relative cover and frequency of the relevant Regional Ecosystems (REs) Technical Description

(https://publications.qld.gov.au/dataset/re-technical-descriptions).

Despite introduced species occurring in the RE Technical Descriptions (due to data being collected at disturbed sites or poor condition sites), introduced species must not be included in the seed mix. Finally, the seed mix must not include Indian Couch *Bothriochloa pertusa* or *Seca Stylosanthes* spp, both of which have significant impacts on surrounding native remnant vegetation.

Table 1. Seed Mix Species List

Native Ecosystem
11.5.3 - Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces
Trees *Dominant: Eucalyptus populnea, Eucalyptus melanophloia* *Frequent: Eucalyptus populnea Eucalyptus melanophloia Eucalyptus brownii, Corymbia clarksoniana, Eucalyptus crebra, Ventilago viminalis, Eremophila mitchellii* **Shrubs** *Dominant: Eremophila mitchellii Erythroxylum australe, Grewia latifolia* *Frequent: Eremophila mitchellii, Erythroxylum australe, Grewia latifolia, Acacia excelsa, Atalaya hemiglauca, Carissa ovata, Eucalyptus populnea, Acacia sericophylla, Archidendropsis basaltica, Capparis lasiantha, Cassia brewsteri, Denhamia cunninghamii, Eucalyptus brownii, Eucalyptus melanophloia, Flindersia dissosperma, Lysiphyllum carronii, Psydrax oleifolia, Carissa lanceolata* **Ground** *Dominant: Themeda triandra, Aristida calycina, Chrysopogon fallax, Fimbristylis dichotoma* *Frequent Grasses: Chrysopogon fallax, Fimbristylis dichotoma, Heteropogon contortus, Aristida calycina, Digitaria brownii, Panicum effusum, Themeda triandra, Cyperus fulvus, Dichanthium sericeum, Eragrostis lacunaria, Eragrostis sororia, Aristida jerichoensis, Bothriochloa decipiens, Bothriochloa decipiens var. decipiens, Cymbopogon bombycinus, Cyperus gracilis, Digitaria ammophila, Enneapogon lindleyanus, Enneapogon virens, Eragrostis brownii, Eragrostis leptostachya, Eulalia aurea, Sporobolus caroli, Tragus australianus, Triodia pungens*

11.5.9 - Eucalyptus crebra and other Eucalyptus spp. and Corymbia spp. woodland on Cainozoic sand plains and/or remnant surfaces
Trees *Dominant: Eucalyptus crebra, Corymbia clarksoniana, Acacia leptostachya, Bursaria incana, Petalostigma banksii* *Frequent: Eucalyptus crebra, Corymbia clarksoniana, Casuarina cristata*[1]*, Petalostigma pubescens, Acacia cowleana, Acacia leptostachya, Alphitonia pomaderroides Antidesma parvifolium, Bursaria incana, Gardenia indet., Geijera salicifolia Grevillea glauca, Larsenaikia ochreata, Petalostigma banksii Siphonodon indet.* **Shrubs** *Dominant: Acacia conferta, Acacia disparrima subsp. Calidestris, Acacia cowleana, Gardenia indet., Petalostigma pubescens, Grewia retusifolia Petalostigma banksia, Eucalyptus crebra, Persoonia falcata* *Frequent: Erythroxylum austral, Acacia conferta, Acacia cowleana, Acacia disparrima subsp. calidestris, Acacia holosericea, Alphitonia pomaderroides, Breynia oblongifolia, Coelospermum reticulatum, Gardenia indet., Grevillea parallela, Petalostigma pubescens, Eucalyptus crebra, Grewia retusifolia, Acacia leptostachya, Corymbia clarksoniana, Indigofera australis, Persoonia falcata, Petalostigma banksia* **Ground** *Dominant: Eremochloa bimaculate, Brunoniella acaulis, Desmodium brachypodum, Aristida holathera var. holathera* *Frequent Grasses: Alloteropsis semialata Aristida calycina var. calycina, Chrysopogon fallax, Eragrostis spartinoides, Eremochloa bimaculata Panicum effusum, Ancistrachne uncinulata, Aristida holathera var. holathera, Calyptochloa cylindrosperma, Ectrosia indet., Heteropogon contortus, Mnesithea Formosa, Paspalidium indet., Scleria brownii, Themeda triandra*
11.9.2 - Eucalyptus melanophloia +/- E. orgadophila woodland on fine-grained sedimentary rocks
Trees *Dominant: Eucalyptus orgadophila, Eucalyptus melanophloia* *Frequent: Eucalyptus melanophloia Eucalyptus orgadophila, Acacia excelsa, Angophora subvelutina, Brachychiton populneus, Brachychiton populneus subsp. Populneus, Corymbia citriodora, Corymbia erythrophloia, Corymbia trachyphloia, Eremophila mitchellii, Eucalyptus populnea, Lysiphyllum carronii* **Shrubs** *Dominant: Carissa ovata Archidendropsis basaltica, Alectryon diversifolius, Ehretia membranifolia* *Frequent: Alectryon diversifolius, Archidendropsis basaltica, Carissa ovata, Ehretia membranifolia, Atalaya hemiglauca, Breynia oblongifolia, Denhamia cunninghamii, Dodonaea filifolia, Eremophila mitchellii, Erythroxylum austral, Eucalyptus melanophloia, Geijera parviflora, Hovea longipes, Petalostigma pubescens, Senna indet., Xanthorrhoea glauca subsp. glauca* **Ground** *Dominant: Aristida calycina var. calycina, Enneapogon lindleyanus, Bothriochloa bladhii, Aristida indet.* *Frequent Grasses: Enneapogon lindleyanus, Heteropogon contortus, Cymbopogon refractus, Themeda triandra, Ancistrachne uncinulata, Aristida calycina var. calycina, Aristida indet., Bothriochloa bladhii,*

[1] *Casuarina cristata* is not listed in the technical description for 11.5.9; however, it has been included as it occurs locally and is an important species for the Glossy Black-cockatoo.

Bothriochloa decipiens var. decipiens, Chloris ventricose, Cyperus indet., Enneapogon virens, Eragrostis lacunaria, Eulalia aurea, Panicum effusum, Paspalidium indet., Abildgaardia ovata, Aristida acuta, Aristida caput-medusae, Aristida holathera var. holathera, Aristida latifolia, Aristida leptopoda, Aristida personata, Bothriochloa bladhii subsp. bladhii, Bothriochloa ewartiana, Bulbostylis barbata, Chloris divaricate, Cyperus bifax, Cyperus gilesii, Cyperus gracilis, Dactyloctenium radulans Dichanthium sericeum subsp. sericeum, Digitaria indet., Enneapogon indet., Enneapogon polyphyllus, Enteropogon acicularis, Eragrostis indet., Eragrostis sororia, Eriochloa crebra, Eriochloa pseudoacrotricha, Heteropogon indet., Imperata cylindrica, Microlaena stipoides, Panicum decompositum, Paspalidium criniforme, Paspalidium distans, Paspalidium globoideum, Paspalidium gracile, Sarga leiocladum, Scleria brownii, Sporobolus caroli, Sporobolus creber, Themeda avenacea, Tragus australianus, Urochloa foliosa, Urochloa indet.
Low-intensity cattle grazing
Grasses *Ancistrachne uncinate* *Bothriochloa ewartiana* *Chloris divaricate* *Chloris ventricose* *Cymbopogon refractus* *Dichanthium sericeum* *Themeda triandra* Japanese Millet - sterile hybrid Silk Sorghum

Appendix 4 – BioCondition Benchmark Criteria – Rehabilitated Regional Ecosystem RE11.5.3 Eucalyptus woodland.

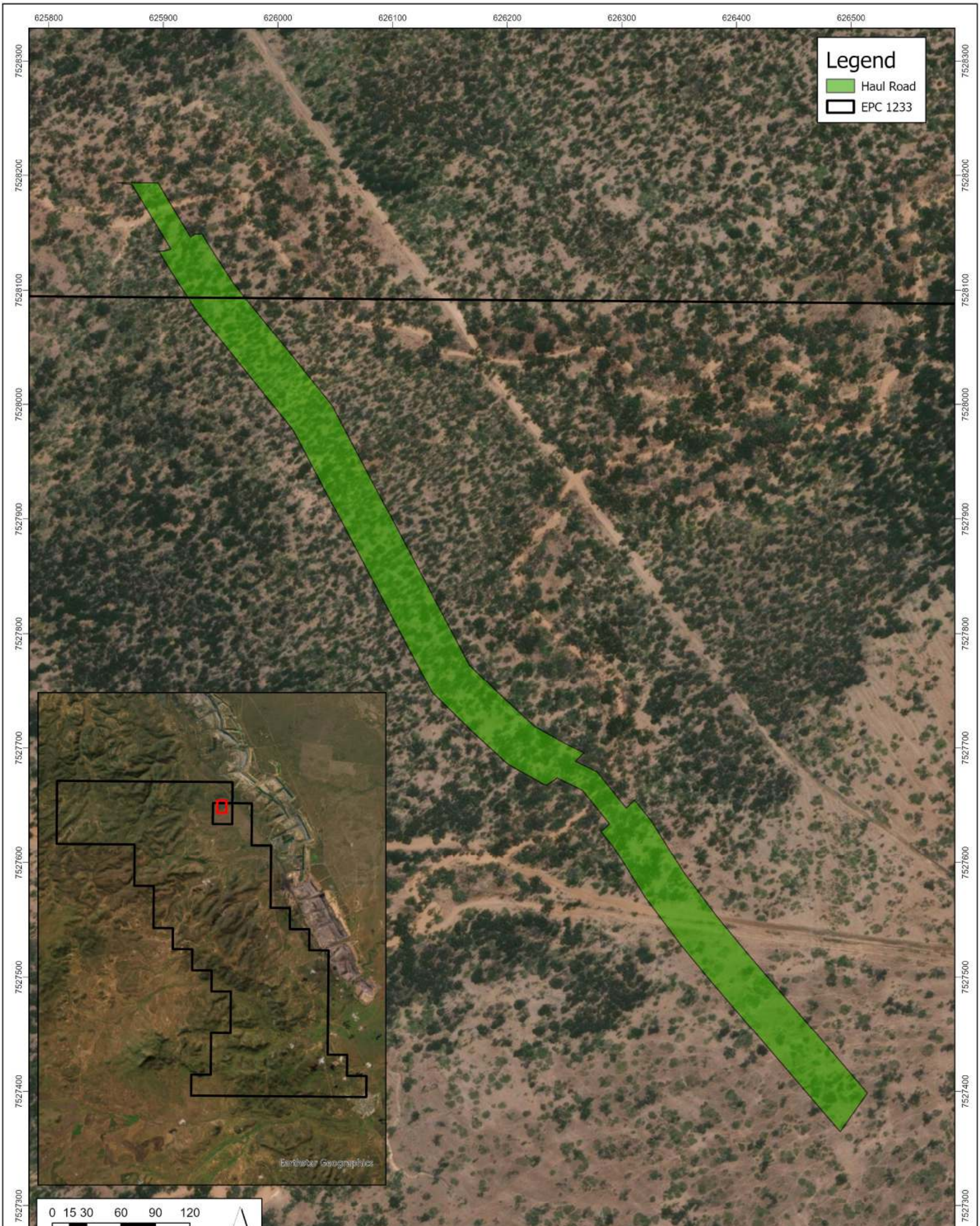
This appendix articulates the overall BioCondition score to be achieved at the former Haul Road. BioCondition benchmarks and assessable attributes are derived from the BioCondition manual (Eyre *et al.* 2015)[1] and Queensland Government's BioCondition benchmark database[2].

Table 1. Pre-mining Regional ecosystems references – Native ecosystem

BioCondition Assessable Attributes	Attribute Weighting	BioCondition Benchmark	Indicative measure at Haul Road	BioCondition Score
Recruitment (canopy species)	5	100%	≥20% of canopy species	3
Non-native plant cover (%)	10	0	<5%	10
Tree (native) species richness*	5	6	≥5 (≥90% of benchmark)	5
Shrub (native) species richness*	5	6	≥5 (≥90% of benchmark)	5
Grass (native) species richness*	5	6	≥5 (≥90% of benchmark)	5
Forb/other (native) species richness	5	10	≥3 (≥25% of benchmark)	2.5
Tree canopy height (m)	5	16	≥4m (≥25% of benchmark)	3
Tree canopy cover (%)	5	20	>10% (≥50% of benchmark)	3
Shrub canopy cover (%)	5	3	>1.5 % (≥50% of benchmark)	3
Native perennial grass cover (%)	5	19	≥9.5 % (≥50 of benchmark)	3
Litter cover (%)	5	20	>2 % (≥10 % of benchmark	3
Total Assessable Score	60			
Overall BioCondition Score	>40 (Total above = 45.5)			

* Native species that occur in the RE 11.5.3 Technical Description, or analogue reference sites on or adjacent to the Mining Lease(s).

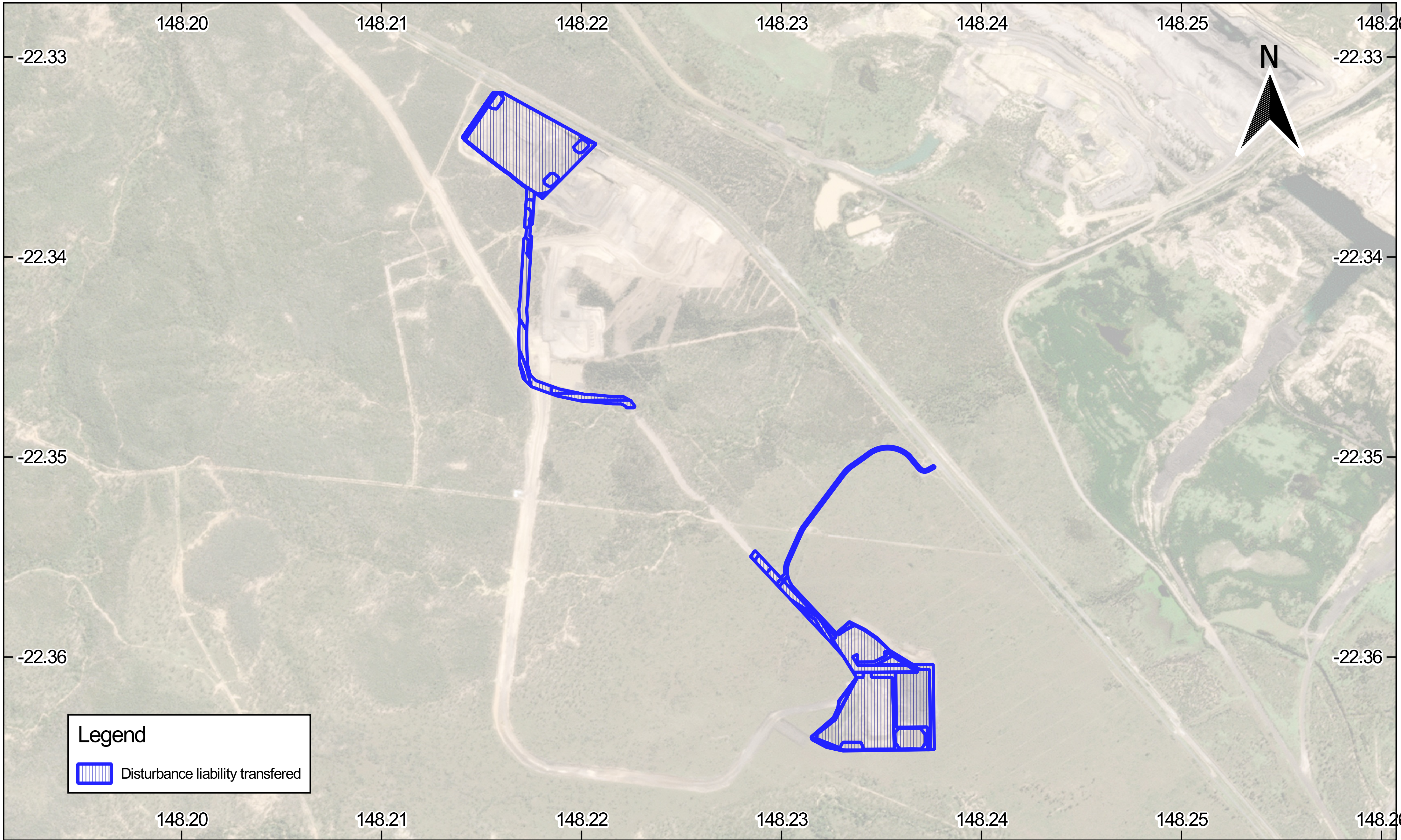
[1] Eyre, T.J., Kelly, A.L, Neldner, V.J., Wilson, B.A., Ferguson, D.J., Laidlaw, M.J. & Franks, A.J. (2015). *BioCondition: A Condition Assessment Framework for Terrestrial Biodiversity in Queensland. Assessment Manual*. Version 2.2. Queensland Herbarium, Department of Science, Information Technology, Innovation and Arts, Brisbane.
[2] Source: https://www.qld.gov.au/environment/plants-animals/biodiversity/benchmarks



VITRINITE
BRIGHTER COAL

Figure A1 - Project Layout

Prepared by: R.P.
Date Exported: 31/07/2025 9:33 AM



0 0.3 0.6 0.9 1.2 km

Scale 1:20000

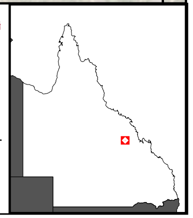
Figure A2:

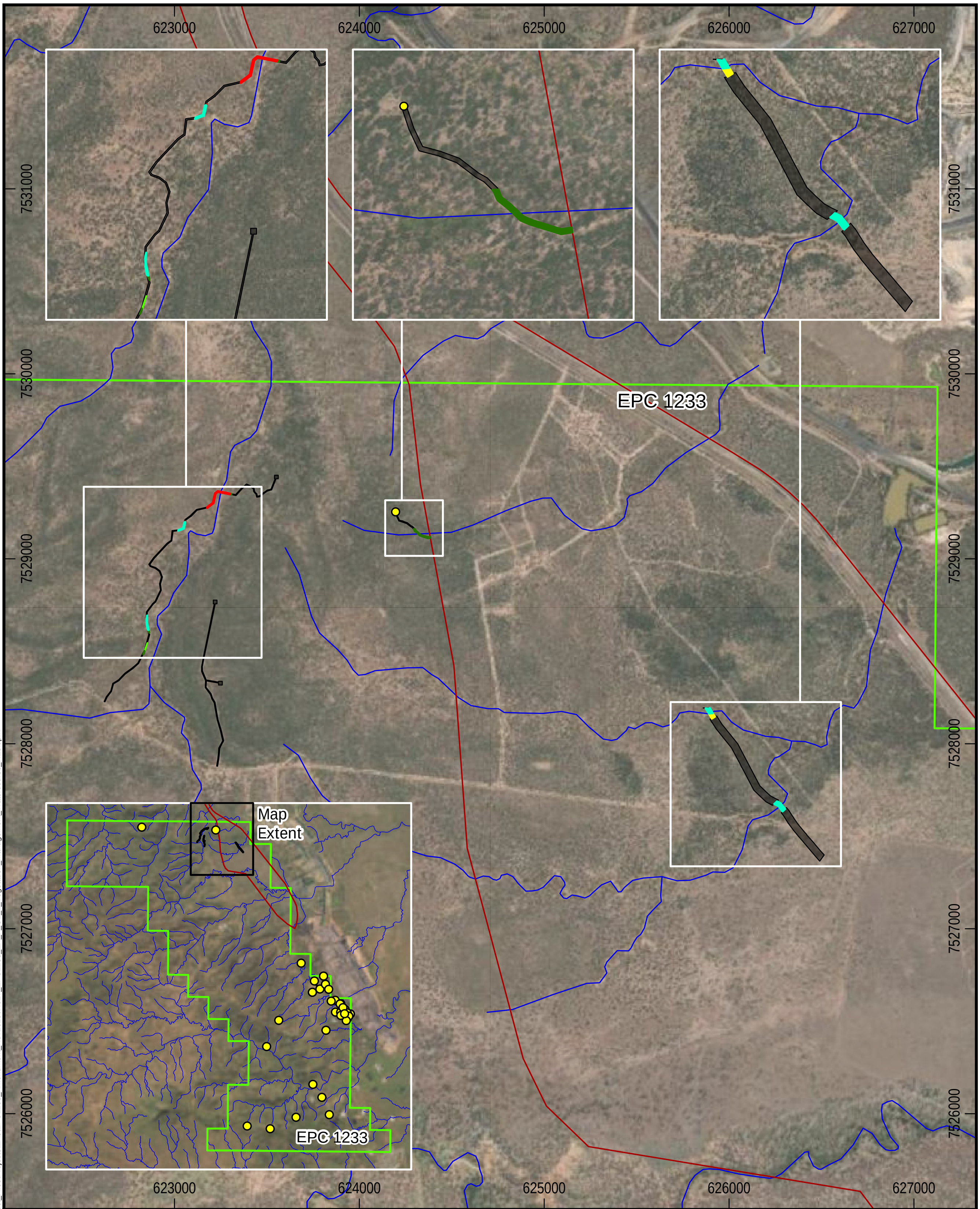
Disturbance liability transferred from environmental authority EPPR03277115 to environmental authority P-EA-100265081

Prepared by
Department of the Environment, Tourism, Science and Innovation

Queensland Government

This product is displayed in GDA2020 + AHD height
Product created 2025-06-06





Legend

- Rehabilitated Drill Holes
- Drainage Line
- EPC 1233
- ML 700073
- Cumulative Disturbance Footprint

Vegetation Management Watercourse Regional Ecosystems

- 11.10.1/11.5.9b
- 11.10.3
- 11.3.25/11.3.2
- 11.5.3
- 11.5.9b

Source: State of Queensland (Department of Resources) 2024, Vitrinite 2025, MEC 2025, Vantor, Earthstar Geographics. *Insets at different scale.*

EPPR03277115

Vegetation Management Watercourse Regional Ecosystems

0 0.25 0.5 1

Kilometers

Scale: 1:30,000 (A4)

30/03/2026

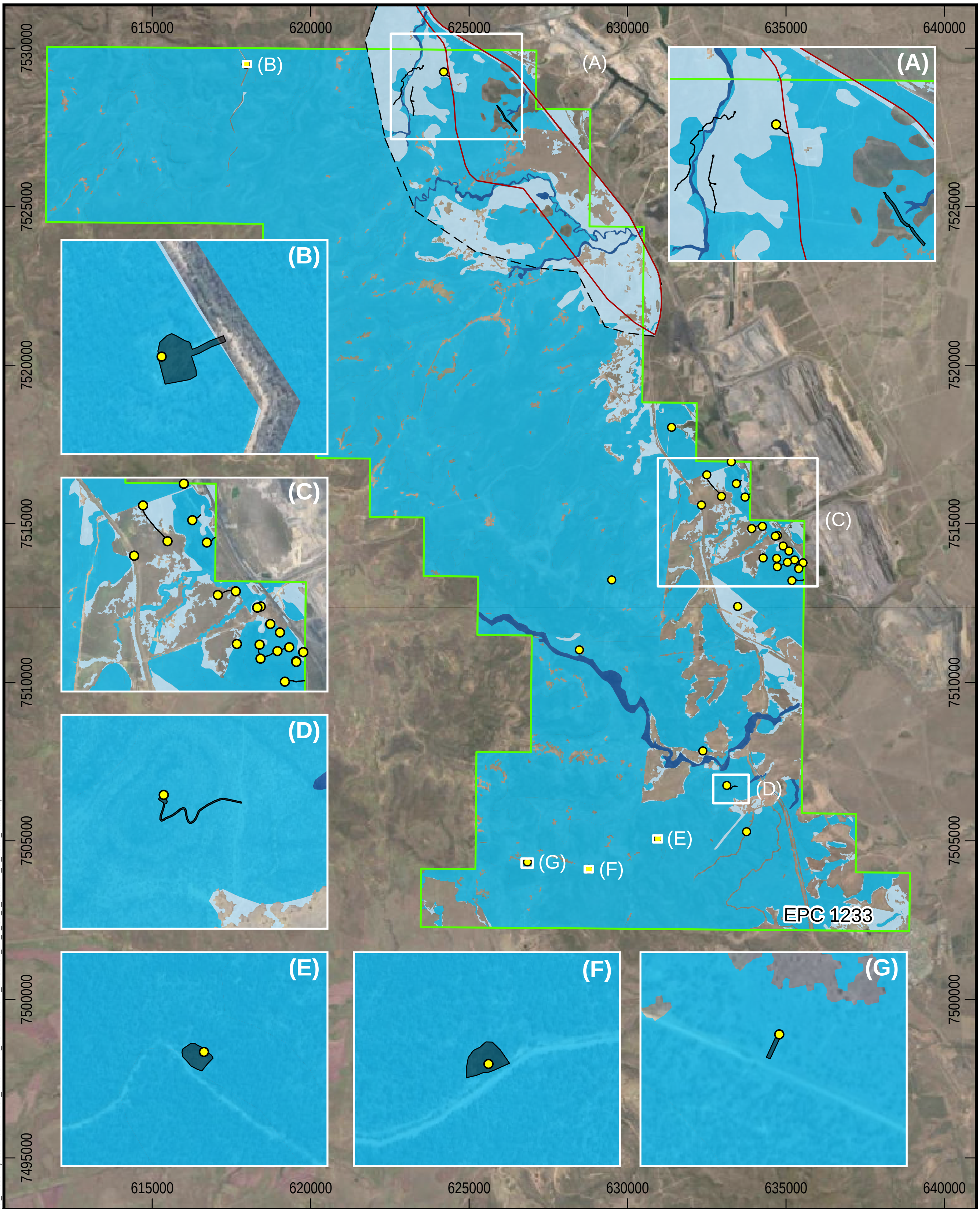
Datum: GDA2020
Projection: MGA55

FIGURE G1.1

VITRINITE BRIGHTER COAL

MEC

Path: S:\Projects\VI017_Vulcan_South_EXP_and_BSP\GIS\ArcGIS\Project_Files\Projects\EAs\EPC1233_Amendment_Nov2025\VI017_EPC1233_EA_F_G1_1_Vegetation_Management_Watercourse_REs.aprx



Legend

- Rehabilitated Drill Holes
- EPC 1233
- ML 700073
- Field Survey Area
- Cumulative Disturbance Footprint

Koala Habitat

- High value
- Moderate value
- Low value

Source: State of Queensland (Department of Resources) 2024, Vitrinite 2025, MEC 2025. Imagery - Earthstar Geographics, © OpenStreetMap and contributors.

EPPR03277115

Location of Koala Habitat

0 2 4 6

Kilometers

Scale: 1:175,000 (A4)

30/03/2026

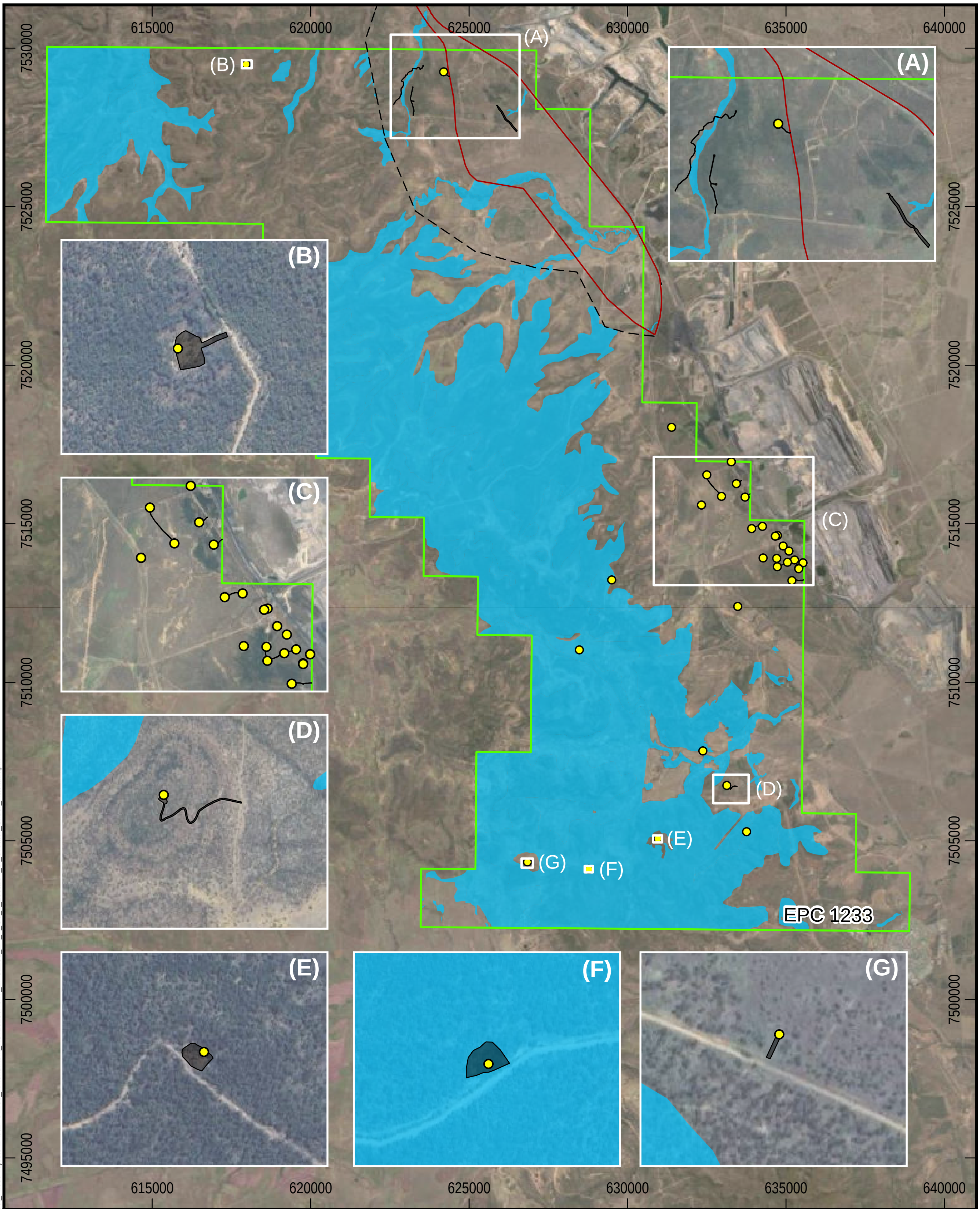
Datum: GDA2020
Projection: MGA55

FIGURE G2.1

VITRINITE BRIGHTER COAL

MEC

Path: S:\Projects\VI017_Vulcan_South_EXP_and_BSP\GIS\ArcGIS\Project_Files\Projects\EAs\EPC1233_Amendment_Nov2025\VI017_EPC1233_EA_F_G2_1_Location_of_Koala_Habitat.aprx



Path: S:\Projects\VI017_Vulcan_South_EXP_and_BSP\GIS\ArcGIS\Project_Files\Projects\EAs\EPC1233_Amendment_Nov2025\VI017_EPC1233_EA_F_G3_1_Location_of_Greater_Glider_Habitat.aprx

Legend

- Rehabilitated Drill Holes
- EPC 1233
- ML 700073
- Field Survey Area
- Greater Glider Habitat
- Cumulative Disturbance Footprint

Source: State of Queensland (Department of Resources) 2024, Vitrinite 2025, MEC 2025. Imagery - Earthstar Geographics, © OpenStreetMap and contributors.

EPPR03277115

Location of Greater Glider Habitat

0 2 4 6

Kilometers

Scale: 1:175,000 (A4)

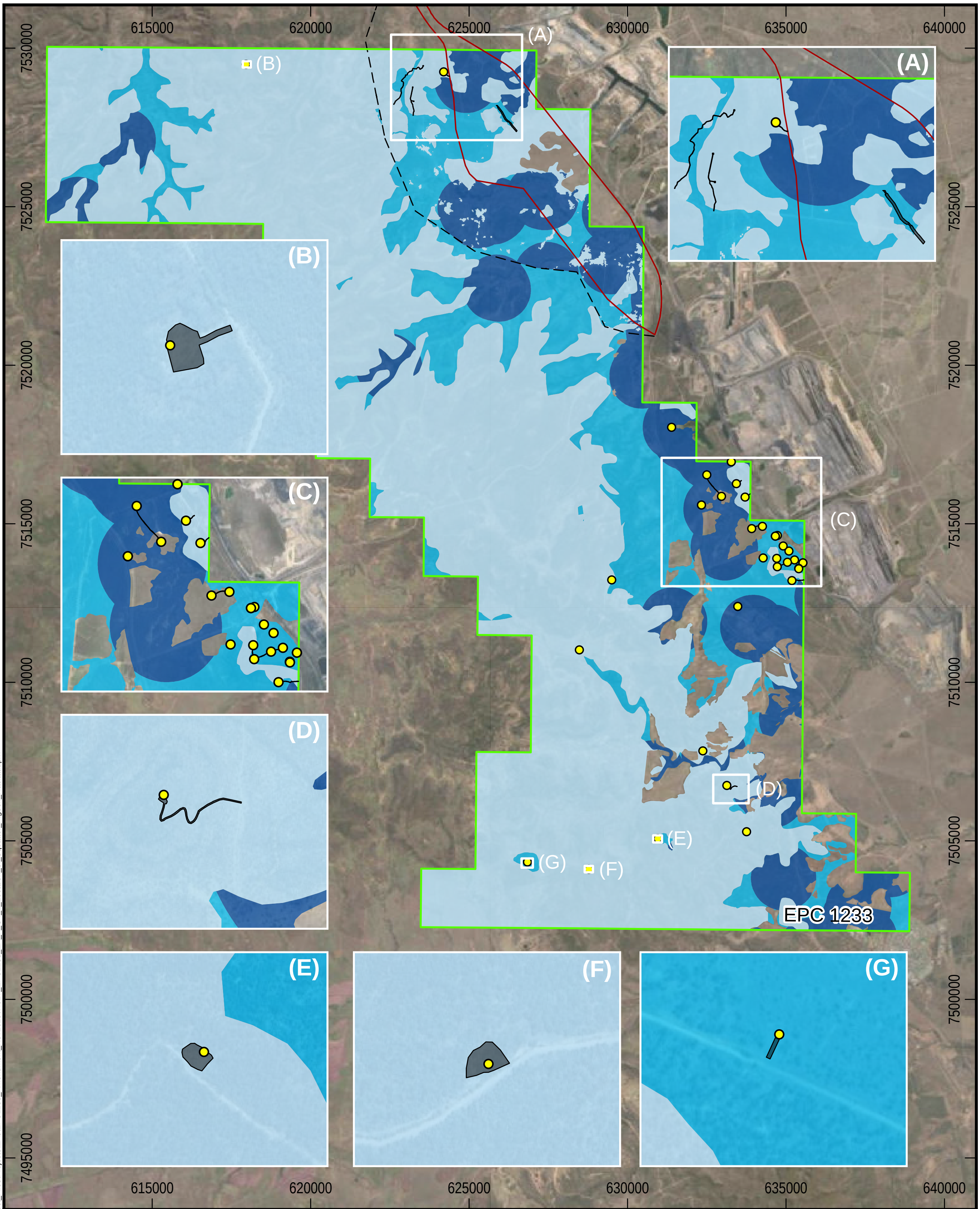
30/03/2026

Datum: GDA2020
Projection: MGA55

FIGURE G3.1

VITRINITE BRIGHTER COAL

MEC



Path: S:\Projects\VI017_Vulcan_South_EXP_and_BSP\GIS\ArcGIS\Project_Files\Projects\EAs\EPC1233_Amendment_Nov2025\VI017_EPC1233_EA_F_G4_1_Location_of_Squatter_Pigeon_Habitat.aprx

Legend

- Rehabilitated Drill Holes
- EPC 1233
- ML 700073
- Field Survey Area
- Cumulative Disturbance Footprint

Squatter Pigeon Habitat

- Breeding and Foraging
- Foraging
- Dispersal

Source: State of Queensland (Department of Resources) 2024, Vitrinite 2025, MEC 2025. Imagery - Earthstar Geographics, © OpenStreetMap and contributors.

EPPR03277115

Location of Squatter Pigeon Habitat

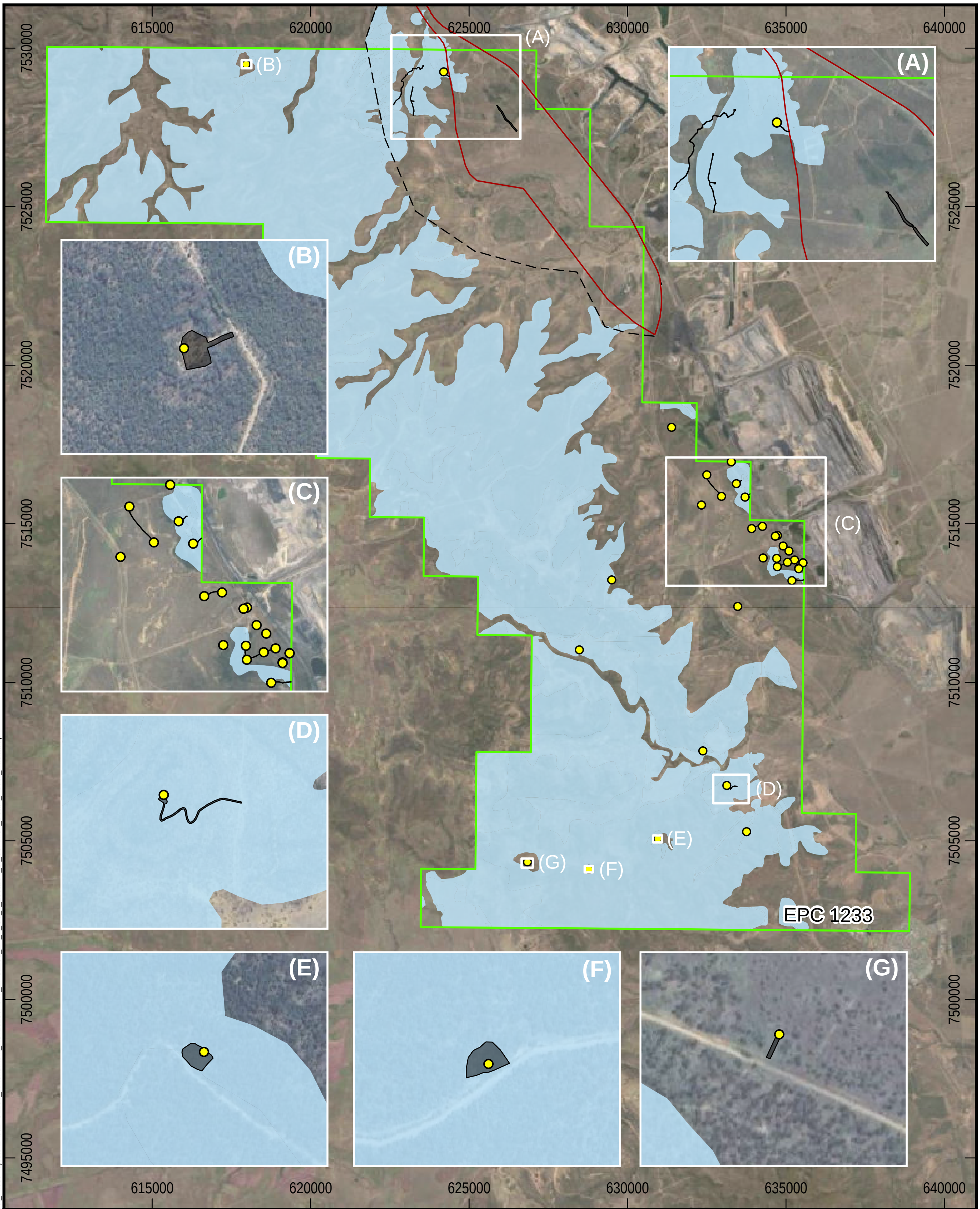
0 2 4 6
Kilometers
Scale: 1:175,000 (A4)

30/03/2026

Datum: GDA2020
Projection: MGA55

FIGURE G4.1

VITRINITE
BRIGHTER COAL



Path: S:\Projects\VI017_Vulcan_South_EXP_and_BSP\GIS\ArcGIS\Project_Files\Projects\EAs\EPC1233_Amendment_Nov2025\VI017_EPC1233_EA_F_G5_1_Location_of_Common_Death_Adder_Habitat.aprx

Legend

- Rehabilitated Drill Holes
- EPC 1233
- ML 700073
- Field Survey Area
- Cumulative Disturbance Footprint
- Common Death Adder Habitat

Source: State of Queensland (Department of Resources) 2024, Vitrinite 2025, MEC 2025. Imagery - Earthstar Geographics, © OpenStreetMap and contributors.

EPPR03277115

Location of Common Death Adder Habitat

0 2 4 6

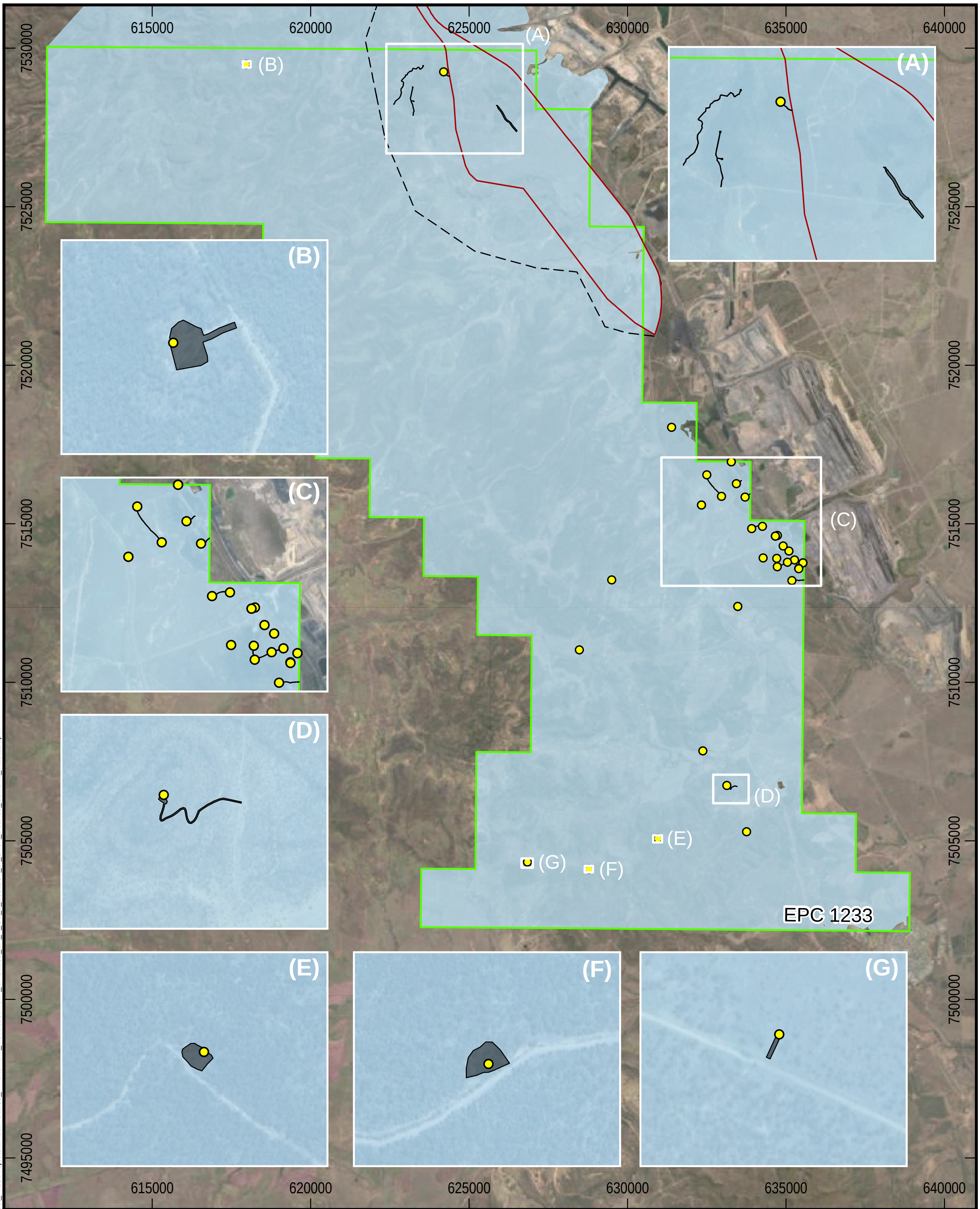
Kilometers

Scale: 1:175,000 (A4)

30/03/2026

Datum: GDA2020
Projection: MGA55

FIGURE G5.1



Path: S:\Projects\VI017_Vulcan_South_EXP_and_BSP\GIS\ArcGIS\Project_Files\Projects\EAs\EPC1233_Amendment_Nov2025\VI017_EPC1233_EA_F_G6_1_Location_of_Short_Beaked_Echidna_Habitat.aprx

Legend

- Rehabilitated Drill Holes
- EPC 1233
- ML 700073
- Field Survey Area
- Cumulative Disturbance Footprint
- Short Beaked Echidna Habitat

Source: State of Queensland (Department of Resources) 2024, Vitrinite 2025, MEC 2025. Imagery - Earthstar Geographics, © OpenStreetMap and contributors.

EPPR03277115

Location of Short-Beaked Echidna Habitat

0 2 4 6
Kilometers
Scale: 1:175,000 (A4)

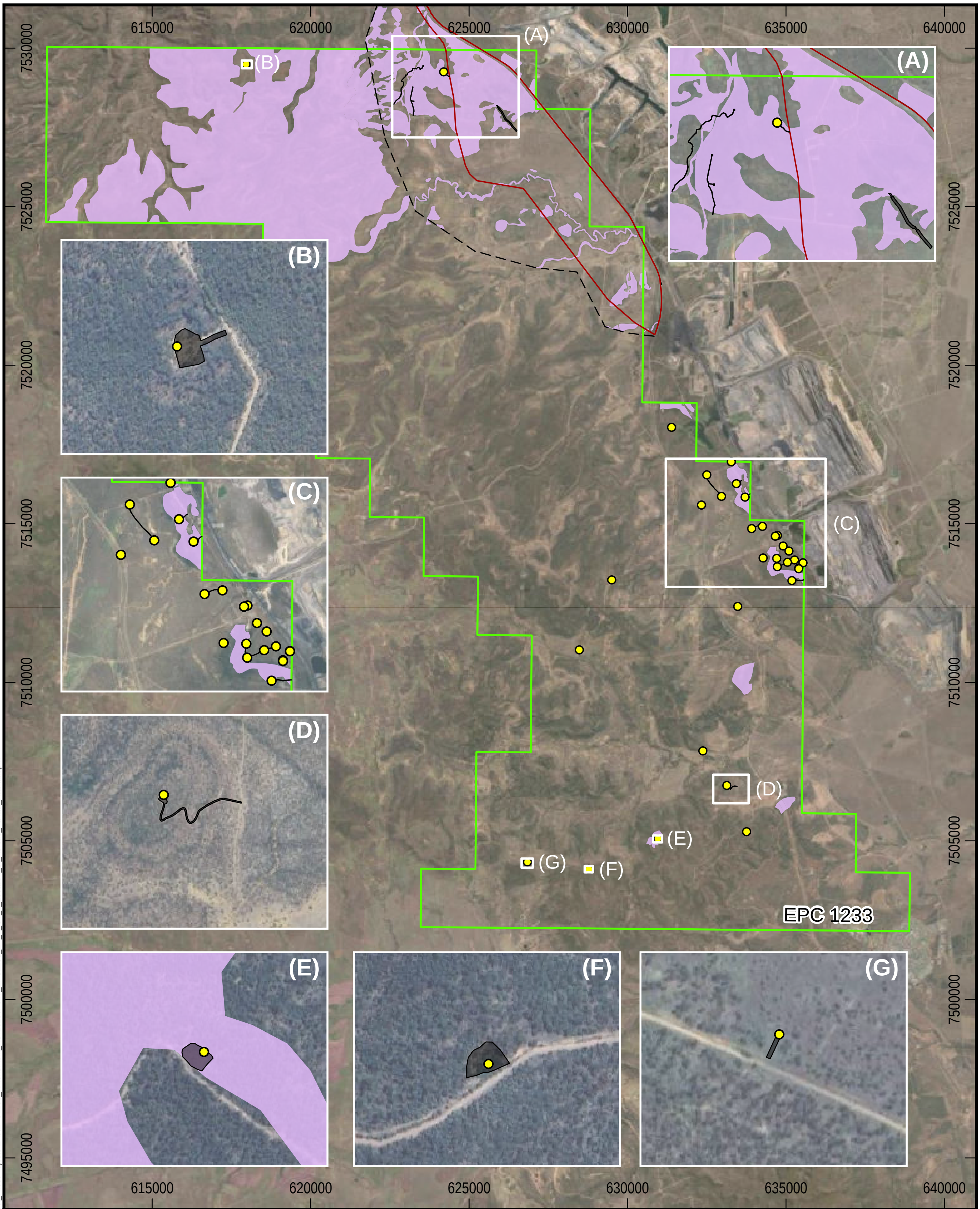
30/03/2026

Datum: GDA2020
Projection: MGA55

FIGURE G6.1

VITRINITE BRIGHTER COAL

MEC



Path: S:\Projects\VI017_Vulcan_South_EXP_and_BSP\GIS\ArcGIS\Project_Files\Projects\EAs\EPC1233_Amendment_Nov2025\VI017_EPC1233_EA_F_G7_1_Location_of_Rufous_Fantail_Habitat.aprx

Legend

- Rehabilitated Drill Holes
- EPC 1233
- ML 700073
- Field Survey Area
- Cumulative Disturbance Footprint
- Rufous Fantail Habitat

Source: State of Queensland (Department of Resources) 2024, Vitrinite 2025, MEC 2025. Imagery - Earthstar Geographics, © OpenStreetMap and contributors.

EPPR03277115

Location of Rufous Fantail Habitat

0 2 4 6

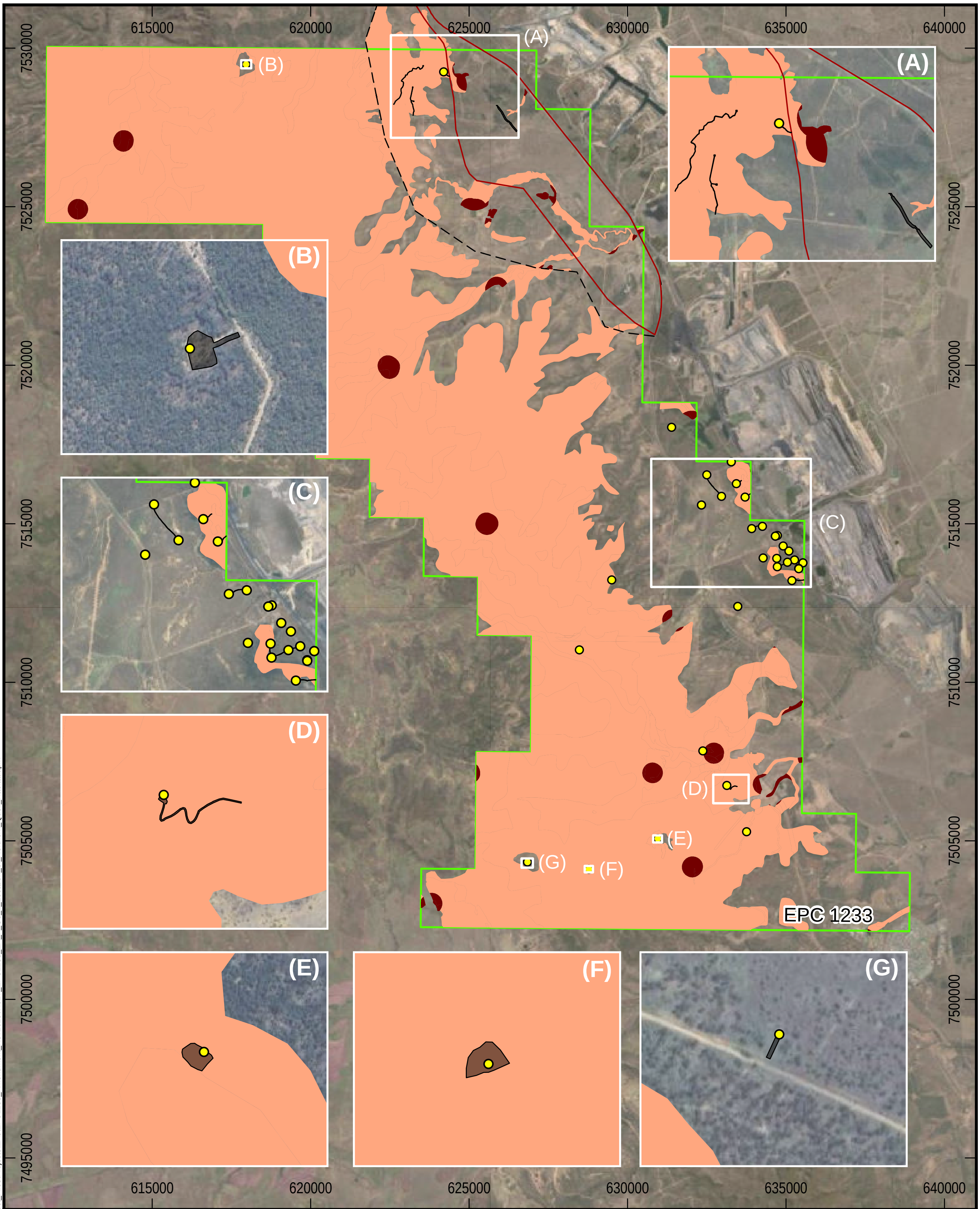
Kilometers

Scale: 1:175,000 (A4)

30/03/2026

Datum: GDA2020
Projection: MGA55

FIGURE G7.1



Legend

- Rehabilitated Drill Holes
- EPC 1233
- ML 700073
- Field Survey Area
- Cumulative Disturbance Footprint

Potential Northern Quoll Habitat

- Habitat Within 300m of Water
- Landzone 3 and 10

Source: State of Queensland (Department of Resources) 2024, Vitrinite 2025, MEC 2025. Imagery - Earthstar Geographics, © OpenStreetMap and contributors.

EPPR03277115

Location of Northern Quoll Habitat

0 2 4 6

Kilometers

Scale: 1:175,000 (A4)

30/03/2026

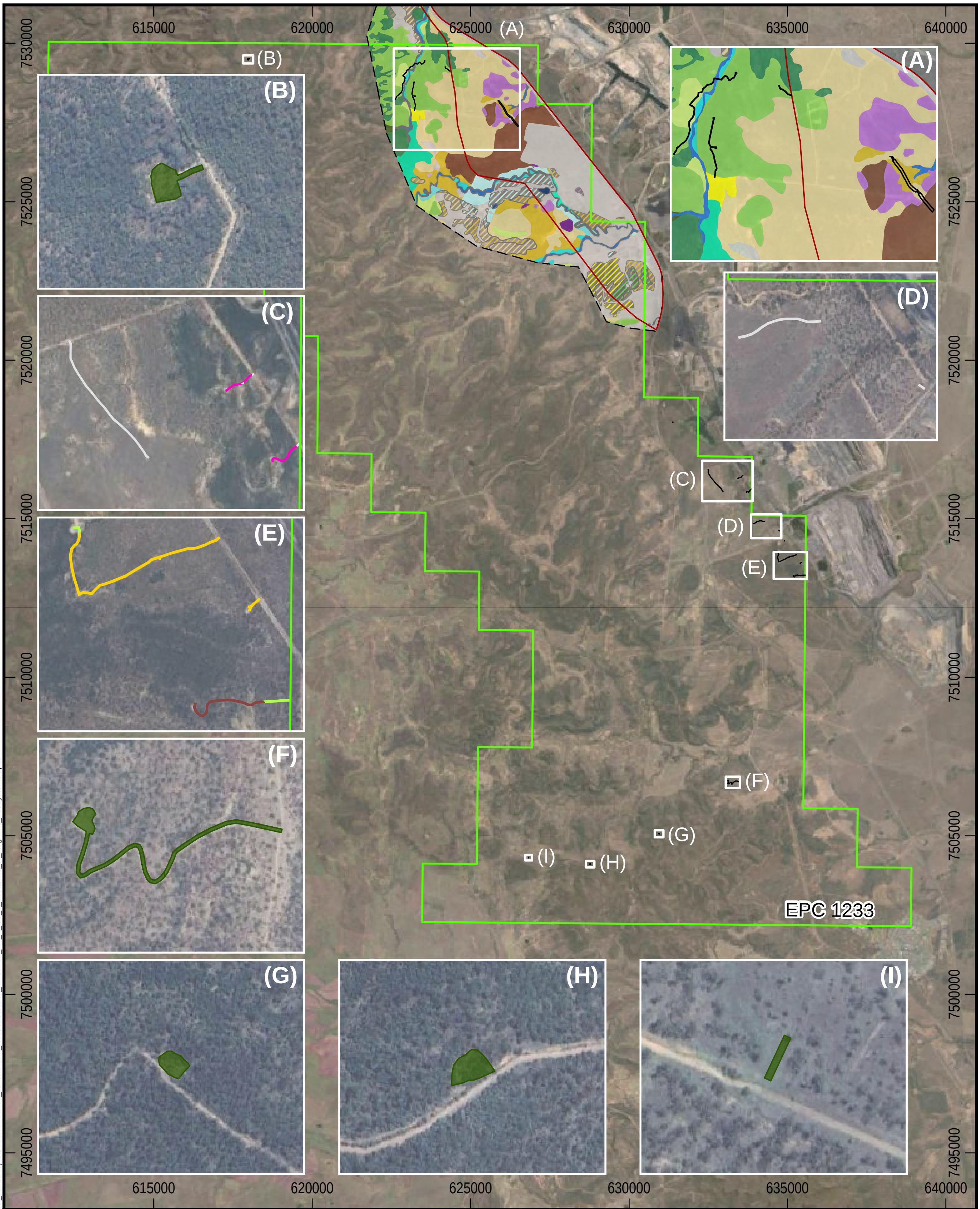
Datum: GDA2020
Projection: MGA55

FIGURE G8.1

VITRINITE BRIGHTER COAL

MEC

Path: S:\Projects\VI017_Vulcan_South_EXP_and_BSP\GIS\ArcGIS\Project_Files\Projects\EAs\EPC1233_Amendment_Nov2025\VI017_EPC1233_EA_F_G8_1_Location_of_Northern_Quoll_Habitat.aprx



Path: S:\Projects\VI017_Vulcan_South_EXP_and_BSP\GIS\ArcGIS\Project_Files\Projects\EAs\EPC1233_Amendment_Nov2025\VI017_EPC1233_EA_F_G9_1_Locations_of_Regional_Ecosystems.aprx

Legend

- ML 700073
- Survey Area
- Cumulative Disturbance Footprint
- EPC 1233

Field-Verified REs

- 11.10.1
- 11.10.1x1
- 11.10.3
- 11.10.7
- 11.10.7/ 11.5.9
- 11.3.1
- 11.3.2
- 11.3.2/ 11.3.7
- 11.3.25
- 11.3.27c
- 11.3.27e
- 11.3.7
- 11.3.7/ 11.3.2
- 11.4.8
- 11.4.9
- 11.5.3
- 11.5.9
- 11.5.9/ 11.10.1x1
- 11.9.2
- HVR 11.10.1x1
- HVR 11.10.3
- HVR 11.3.2
- HVR 11.3.25
- HVR 11.4.8
- HVR 11.5.3
- HVR 11.5.3/ 11.3.2
- HVR 11.5.9
- Non-remnant

Certified REs (Outside Survey Area)

- 11.10.1
- 11.10.3
- 11.5.3
- 11.5.3/ 11.5.9b/ 11.3.25
- HVR 11.10.3
- HVR 11.5.3/ 11.5.9b/ 11.3.25
- Non-remnant

EPPR03277115

Locations of Regional Ecosystems (REs)

Source: State of Queensland (Department of Resources) 2024, Vitrinite 2025, MEC 2026. Imagery - Earthstar Geographics, © OpenStreetMap and contributors.

0 2 4 6

Kilometers

Scale: 1:175,000 (A4)

30/03/2026

Datum: GDA2020
Projection: MGA55

FIGURE G9.1

VITRINITE
BRIGHTER COAL

MEC

END OF ENVIRONMENTAL AUTHORITY