

Permit

Environmental Protection Act 1994

Environmental authority EPPR00939813 – Moranbah South Project

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

Environmental authority number: EPPR00939813

Environmental authority takes effect on 26 July 2023

Environmental authority holder(s)

Name(s)	Registered address
Anglo Coal (Grosvenor) Pty Ltd	Level 11, 201 Charlotte Street BRISBANE CITY QLD 4000
Exxaro Australia Pty Ltd	33 Vantor Avenue WEST PERTH WA 6005

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	MDL277; MDL377; and EPC548
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	MDL277; MDL377; and EPC548

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).

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Contaminated land

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

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days)

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

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

Take effect

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

- a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority-on the nominated day; or
- b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or
- c) otherwise- one 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.

The anniversary day of this environmental authority is the same day each year as the original take effect date unless you apply to change the anniversary day. The payment of the annual fee will be due each year on this day. An annual return will be due each year on 01 April.

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.

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Signature

28 July 2023

Date

Dr. Alison Cummings
Department of Environment and Science
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 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 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, Mines and Energy (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

Development Approval

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

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Conditions of environmental authority

The environmentally relevant activities conducted at the locations as described above must be conducted in accordance with the following site-specific conditions of approval. This environmental authority consists of the following Schedules:

- Schedule A: General;
- Schedule B: Air and Noise;
- Schedule C: Waste;
- Schedule D: Land;
- Schedule E: Biodiversity;
- Schedule F: Rehabilitation;
- Schedule G: Water;
- Definitions; and
- Figures

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Schedule A: General	
Condition number	Condition
A1	This environmental authority authorises environmental harm referred to in the conditions. Where there is no condition or this environmental authority is silent on a matter, the lack of a condition or silence does not authorise environmental harm.
A2	The environmental authority holder must: <ul style="list-style-type: none"> 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 condition; and d) ensure all instruments and devices used for the measurement and monitoring of any parameter under any condition of this environmental authority are properly calibrated.
A3	Monitoring, reporting and emergency response procedures The environmental authority holder must record and notify the administering authority of any emergency or incident which demonstrates non-compliance with the conditions of this environmental authority.
A4	The environmental authority holder 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.
A5	Within ten (10) business days following the initial notification of an emergency or incident under condition A4 , or receipt of monitoring results, whichever is the latter, further written advice must be provided to the administering authority, including the following: <ul style="list-style-type: none"> 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.

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A6	<p>Complaints</p> <p>The environmental authority holder must record all environmental complaints received about the mining activities including:</p> <ul style="list-style-type: none"> a) name, address and contact number for 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.
A7	<p>The environmental authority holder must, when requested by the administering authority, undertake relevant specified monitoring within a reasonable timeframe nominated or agreed to by the administering authority to investigate any complaint of environmental harm. The results of the investigation (including an analysis and interpretation of the monitoring results) and abatement measures, where implemented, must be provided to the administering authority within 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.</p>
A8	<p>Roads and tracks</p> <p>When constructing new roads and tracks, the environmental authority holder must ensure that the area and duration of disturbance to land, vegetation and watercourses is minimised.</p>
A9	<p>Service, maintenance and storage areas</p> <p>The environmental authority holder must not directly or indirectly release fuels, oils, lubricants or other contaminants to any watercourse, waterway, groundwater, wetland or lake.</p>
A10	<p>The environmental authority holder must ensure that:</p> <ul style="list-style-type: none"> a) all chemical, fuel and oil storage facilities of less than 10,000 litres on a mining tenement are designed and operated in accordance with Australian Standard 1940 – ‘<i>The storage and handling of flammable and combustible liquids</i>’, Section 2, Minor Storage; b) all chemical, fuel and oil storage facilities of more than 10,000 litres on a mining tenement are banded to contain at least one hundred percent of the volume of the largest container, plus twenty-five percent of the storage capacity of the largest container up to a maximum of 10,000 litres, together with ten percent of the storage capacity beyond 10,000 litres; and c) chemical, fuel and oil storage facilities on a mining tenement are operated and maintained in accordance with the Australian Standard 1940 – ‘<i>The Storage and Handling of flammable and combustible liquids</i>’.

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A11	Hazardous contaminants The environmental authority holder must plan and conduct activities on site to prevent any potential or actual release of a hazardous contaminant.
A12	The environmental authority holder must ensure that spills of hazardous contaminants are cleaned up as quickly as practicable and that spills are not cleaned up by hosing, sweeping or otherwise in such a way that releases contaminants to any watercourse, waterway, groundwater, wetland or lake.

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Schedule B: Air and Noise	
Condition number	Condition
B1	The environmental authority holder must not cause an unreasonable release of dust.
B2	The environmental authority holder must not cause unreasonable noise at a noise sensitive place.

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Schedule C: Waste	
Condition number	Condition
C1	General waste must not be disposed of within MDL377, MDL277, or EPC548 unless otherwise authorised in this environmental authority.
C2	Regulated waste must not be disposed of within MDL377, MDL277, or EPC548.
C3	General and regulated waste may be temporarily stored on MDL277, MDL377 and EPC548 prior to offsite disposal.
C4	Residual drilling material may only be disposed of on-site: <ul style="list-style-type: none"> a) by mix-bury-cover method if the residual drilling material meets the approved quality criteria; or b) by another method if it is certified by an appropriately qualified person as being of acceptable quality for disposal to land by the proposed method and that environmental harm will not result from the proposed disposal.
C5	Waste rock The environmental authority holder must, where practical, separate acid producing waste rock from benign waste rock.
C6	The environmental authority holder must dispose of acid producing waste rock in an excavation or pit and backfill as soon as practical. Backfill the excavation or pit containing acid producing waste rock with benign, low permeability material and seal the excavation or pit with a compacted capping layer at least one (1) meter thick.

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Schedule D: Land	
Condition number	Condition
D1	Pre-clearing surveys must be undertaken by an appropriately qualified person prior to any disturbance.
D2	The environmental authority holder must implement the following measures, where practicable: <ul style="list-style-type: none"> a) Utilise pre-existing access tracks; b) Retain fallen timber and cleared vegetation and leave in-situ to create micro-habitat; c) Avoid Brigalow communities; and d) Avoid clearing mature trees.
D3	When drilling, excavating, sampling, or establishing a campsite, the environmental authority holder must ensure that the area and duration of disturbance to land and vegetation is minimised.
D4	Excluding disturbance caused by access tracks, not more than 1,000 square meters can be disturbed at any one location unless otherwise authorised in this environmental authority.
D5	The environmental authority holder is authorised to cause: <ul style="list-style-type: none"> a) seven (7) drill pads on MDL277, each with a maximum disturbance footprint of 6,400 square metres; and b) thirty-one (31) drill pads on MDL277, and two (2) drill pads on MDL377, each with a maximum disturbance footprint of 1,600 square metres.
D6	Campsites Campsites must not, at any one time, cause more than 5,000 square meters to be disturbed.
D7	Campsites must not be established in areas of regulated vegetation.
D8	The mining activity must not extract more than twenty (20) cubic meters of substance from each kilometre of a riverine area.
D9	Erosion and Sediment Control The environmental authority holder must design, install and maintain adequate banks and/or diversion drains to minimise the potential for storm water runoff to enter disturbed areas.
D10	The environmental authority holder must design, install and maintain adequate erosion and sediment control structures wherever necessary to prevent or minimise erosion of disturbed areas and the sedimentation of any watercourse, waterway, wetland or lake.
D11	Topsoil and overburden management The environmental authority holder must ensure that topsoil is removed and stockpiled prior to carrying out any mining activity and prevent or minimise the mixing and erosion of topsoil and overburden stockpiles.

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D12	<p>Weed and pest management</p> <p>The holder of the environmental authority must prevent the spread of invasive plants and Weeds of National Significance (WoNS) by ensuring that all vehicles and machinery are adequately cleaned before taking the vehicles and machinery out of a Declared Plant Area.</p>
D13	<p>Drilling, excavating, and sampling</p> <p>The environmental authority holder is not authorised to undertake costeaning or bulk sampling.</p>
D14	<p>The environmental authority holder must ensure:</p> <ul style="list-style-type: none"> a) all marker pegs are marked with contrasting colour so as to be clearly visible; b) all marker pegs are removed from the tenement at the completion of exploration activities; and c) all permanent markers (example, concrete plugs or steel plates) are installed at ground level and made safe.
D15	<p>The environmental authority holder must not drill, excavate, or clear vegetation:</p> <ul style="list-style-type: none"> a) in standing waters, wetlands, or lakes; or b) on the sloped banks or within three (3) meters of the top of the bank or five (5) meters of the toe of the bank; or c) within, or on the levee banks of the normal flow channel.
D16	<p>Exploration drill holes</p> <p>The environmental authority holder must decommission all non-artesian drill holes, apart from those still required for monitoring purposes, as soon as practical but no later than six (6) months after the hole was drilled by undertaking the following actions:</p> <ul style="list-style-type: none"> a) where practical dispose of all unused drill chips to the hole or to a sump pit; b) cap the hole at a depth that is appropriate for the previous land use of the area (unless the land owner stipulates a future use which requires the cap to be placed deeper); and c) backfill the hole above the cap with soil or material similar to the surrounding soil or material.
D17	<p>The environmental authority holder must isolate non-artesian aquifers where a drill hole intersects more than one water bearing strata by casing or plugging the hole as soon as practical after the hole is no longer required, but no later than two (2) months after the hole was drilled, apart from those holes that are still required for monitoring purposes if:</p> <ul style="list-style-type: none"> a) the flow difference between aquifers exceeds 500 litres per hour; and b) the difference in electrical conductivity of water is greater than ten (10) percent of the lower value.

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D18	<p>Conditions D2 and D15 do not apply to a non-artesian exploration drill hole if:</p> <ul style="list-style-type: none"> a) the landowner and the environmental authority holder have agreed that it should be left for conversion to a water bore; b) the landowner gives a written undertaking to accept responsibility for the hole; c) the details of the agreement and the drill hole (such as its GPS location and the drill logs showing the water bearing strata and flow rates) are provided to the Department of Resources within thirty (30) days of the landowner giving the undertaking; and d) the hole is temporarily capped so as to prevent possible ingress of surface waters and associated sediments and pollutants.
D19	<p>The environmental authority holder must ensure that exploration drill holes that strike artesian flows of water that exceeds 500 litres per hour for seven (7) days must be either:</p> <ul style="list-style-type: none"> a) decommissioned as soon as practical, but no later than one (1) month after the hole was drilled, apart from holes that are still required for monitoring or evaluation purposes; or b) capped to allow for future conversion into a controlled artesian bore by a licensed water bore driller; or c) converted into a controlled artesian bore by a licensed water bore driller, provided that: <ul style="list-style-type: none"> i) the land owner has undertaken in writing to accept responsibility for the drill hole; and ii) the explorer provides details of the agreement and the drill hole to the Department of Resources within thirty (30) days of obtaining the landowner's agreement.
D20	<p>The environmental authority holder must ensure that exploration drill holes that are to be retained for future mineral resource evaluation purposes are cased and capped. Holes to be retained for more than three (3) years must be capped with steel casing and appropriately identified.</p>
D21	<p>Seismic surveys</p> <p>The environmental authority holder must plan and determine the final position of seismic survey lines in consultation with the landowner.</p>
D22	<p>The preparation of lines for seismic surveys must not:</p> <ul style="list-style-type: none"> a) be conducted for more than 93 line km in environmentally sensitive areas; or b) be conducted for more than 1,343 line km within the buffer distance of environmentally sensitive areas¹; or c) result in the clearing of vegetation, with the exception of slashing and selective tree-thinning. <p><i>Note: ¹The buffer distance for environmentally sensitive areas 'A' and 'B' are one thousand (1,000) metres and five hundred (500) metres, respectively.</i></p>

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D23	<p>Selective tree-thinning</p> <p>Selective tree-thinning must not result in removal of more-than five percent (5%) of the regulated vegetation, greater-than four (4) metres in height, for any patch.</p>
D24	<p>Post-survey report</p> <p>Where seismic surveys are conducted under condition D22, the environmental authority holder must:</p> <ul style="list-style-type: none"> a) complete a post-survey report which details the following— <ul style="list-style-type: none"> i) verification that the selective tree-thinning of regulated vegetation complies with condition D23; and ii) confirmation that no significant residual impact has occurred in the carrying out of the seismic survey ; and b) provide a post-survey report to the administering authority within six (6) months of the completion or cessation of seismic surveys.

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Schedule E: Biodiversity	
Condition number	Condition
E1	<p>Impacts to Prescribed Environmental Matters</p> <p>Significant residual impacts to prescribed environmental matters are not authorised under this environmental authority or the <i>Environmental Offsets Act 2014</i> unless the significant residual impact(s) is specified in Table E1 - Significant residual impacts to prescribed environmental matters.</p>
E2	<p>Records demonstrating that each impact to a prescribed environmental matter listed in Table E1 – Significant residual impacts to prescribed environmental matters as having 'No' significant residual impact did not, or is not likely to, result in a significant residual impact to that matter must be:</p> <ul style="list-style-type: none"> a) completed by an appropriately qualified person; and b) kept for the life of the environmental authority.

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Table E1 - Significant residual impacts to prescribed environmental matters

Prescribed Environmental Matter (PEM)	Maximum extent of impact (ha) ¹	Significant residual impact (Yes/No) ²	Location
Endangered Regional Ecosystems (ERE)			
ERE 11.4.9 <i>Acacia harpophylla</i> shrubby woodland with <i>Terminalia oblongata</i> on Cainozoic clay plains	0.2	No	Figure 1: Locations of Regional Ecosystems on the Moranbah South tenements
Of Concern Regional Ecosystems (RE)			
RE 11.3.2 <i>Eucalyptus populnea</i> woodland on alluvial plains	0.1	No	Figure 1: Locations of Regional Ecosystems on the Moranbah South tenements
RE 11.3.21 <i>Dichanthium sericeum</i> and/or <i>Astrebla</i> spp. grassland on alluvial plains. Cracking clay soils.	<0.1	No	
RE 11.8.11 <i>Dichanthium sericeum</i> grassland on Cainozoic igneous rocks	0.5	No	
Vegetation Management Watercourse REs ³			
RE 11.3.21 <i>Dichanthium sericeum</i> and/or <i>Astrebla</i> spp. grassland on alluvial plains. Cracking clay soils.	<0.1	No	Figure 2: Location of Vegetation Management Waterway Vegetation on the Moranbah South tenements
RE 11.3.25 <i>Eucalyptus tereticornis</i> or <i>E. camaldulensis</i> woodland fringing drainage lines	0.1	No	
RE 11.5.3 <i>Eucalyptus populnea</i> +/- <i>E. melanophloia</i> +/- <i>Corymbia clarksoniana</i> woodland on Cainozoic sand plains and/or remnant surfaces	0.1	No	
RE 11.8.5 <i>Eucalyptus orgadophila</i> open woodland on Cainozoic igneous rocks	0.1	No	
RE 11.8.11 <i>Dichanthium sericeum</i> grassland on Cainozoic igneous rocks	0.1	No	

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Threatened and Special Least Concern Species			
King Bluegrass (<i>Dichanthium queenslandicum</i>)	0.7	No	Figure 3: Location of King Bluegrass habitat on the Moranbah South tenements
Australian Painted Snipe (<i>Rostratula australis</i>)	0.1	No	Figure 4: Location of Australian Painted Snipe habitat on the Moranbah South tenements
Squatter Pigeon (southern) (<i>Geophaps scripta scripta</i>)	3.1	No	Figure 5: Location of Squatter Pigeon habitat on the Moranbah South tenements
Koala (<i>Phascolarctos cinereus</i>)	6.0	No	Figure 6: Location of Koala habitat on the Moranbah South tenements
Greater Glider (<i>Petauroides Volans</i>)	0.6	No	Figure 7: Location of Greater Glider habitat on the Moranbah South tenements
Ornamental Snake (<i>Denisonia maculate</i>)	0.3	No	Figure 8: Location of Ornamental Snake habitat on the Moranbah South tenements
Short-beaked Echidna (<i>Tachyglossus aculeatus</i>)	6.2	No	Figure 9: Location of Short-beaked Echidna habitat on the Moranbah South tenements
Connectivity areas			
Connectivity areas	6.5	No	Figure 1: Locations of Regional Ecosystems on the Moranbah South tenements

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.

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Schedule F: Rehabilitation	
Condition number	Condition
F1	The environmental authority holder must rehabilitate areas disturbed by mining activities to a stable landform similar to that of surrounding undisturbed areas.
F2	The environmental authority holder must ensure disturbed areas of regulated vegetation are rehabilitated in such a way that promotes revegetation of native plant species consistent with those found naturally in, or within the buffer of, the environmentally sensitive areas.
F3	For all other areas, the environmental authority holder must spread seeds or plant species that will promote revegetation of a similar species and density of cover to that of the surrounding undisturbed areas or vegetation that is appropriate for providing erosion control and stabilisation of the disturbed areas.
F4	Rehabilitation of riverine areas disturbed by mining activities, must be completed as soon as practical after completion of mining activity and prior to the onset of the wet season.
F5	Rehabilitation of disturbance by mining activities in areas of regulated vegetation must be completed as soon as practical but no longer than three (3) months after completion of the mining activity.
F6	Rehabilitation processes on all areas disturbed by mining activities must be completed as soon as practical but no longer than six (6) months after completion of the mining activity.
F7	The environmental authority holder must backfill all excavations, drill holes or sampling sites as soon as practical following the completion of exploration activities.
F8	Condition F7 does not apply to any excavations, drill holes or sampling sites that are to remain after the completion of exploration activities, by agreement with the landowner.
F9	For any infrastructure to remain after all mining activities have ceased, the environmental authority holder must obtain the written agreement of the landowner stating they will take over responsibility for that infrastructure.

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Schedule G: Water	
Condition number	Condition
G1	The environmental authority holder must not directly or indirectly release wastewater to any watercourse, waterway, groundwater, wetland or lake.

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.

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

‘Approved quality criteria’ for residual drilling material means the criteria for waste that is not regulated waste in Schedule 9 of the *Environmental Protection Regulation (2019)*.

‘Banks’ means the feature which confines major flows within a watercourse. They are steeper than a terrace and are generally of a slope greater than 1:1 on outer bends.

‘Bunded’ means enclosed in earth mounds or similar structures (e.g. a concrete block wall), whether impervious or not, constructed to contain spilled material (e.g. petrol, diesel, oil etc).

‘Campsite’ means 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 mining camp.

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

‘Declared Plant Area’ means areas designated by the Department of Agriculture and Fisheries or Local Government as areas infested with plants declared under *Land Protection (Pest and Stock Route Management) Act 2002*.

‘Disturbance’ of land includes:

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

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

- a) areas off lease (e.g. roads or tracks which provide access to the mining lease);
- b) areas previously disturbed which have achieved the rehabilitation outcomes;

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

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

‘Environmental authority’ means a licence or approval issued by the administering authority under the *Environmental Protection Act 1994* (Qld).

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

‘Exploration activity(ies)’ means mining activities permitted under an environmental authority that allows the holder to:

- a) determine the existence, quality and quantity of minerals
- b) evaluate the potential for development of the mineral resource;
- c) mining and engineering feasibility studies; and
- d) other activities approved by the Minister.

‘General waste’ means waste other than regulated waste. For the purpose of this environmental authority, general waste does not include waste rock, overburden, and the contents of tailings dams.

‘Hazardous contaminant’ means a contaminant 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, flammability; or
- b) its physical, chemical or infectious characteristics (e.g.: spills of mercury, cyanide, petrol, diesel or oil).

‘Infrastructure’ includes roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, pipelines, powerlines, airstrips, helipads and other similar structures.

‘Invasive Plant’ means a plant that has been identified as an invasive plant under the *Biosecurity Act 2014*.

‘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.

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‘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.

‘Mining activity(ies)’ means exploration activities, rehabilitation and monitoring activities on the mining tenures stated in Environmentally Relevant Activity and location details of this environmental authority.

‘Mix-bury-cover method’ means the stabilisation of residual drilling material in the bottom of a sump by mixing with subsoil and which occurs in accordance with the following methodology:

- a) the base of the subsoil and residual solid mixture must be separated from the groundwater table by at least one metre of a continuous layer of impermeable subsoil material ($k_w=10-8m/s$) or subsoil with a clay content of greater than 20%; and
- b) the residual solids is mixed with subsoil in the sump and cover; and
- c) the subsoil and residual solids is mixed at least three parts subsoil to one part waste (v/v); and
- d) a minimum of one metre of clean subsoil must be placed over the subsoil and residual solids mixture; and
- e) topsoil is replaced.

‘Noise sensitive place’ means any of the following places –

- a) a dwelling;
- b) a library, childcare centre, kindergarten, school, college, university or other educational institution;
- c) a hospital, surgery or other medical institution;
- d) a protected area or an area identified under a conservation plan as a critical habitat or an area of major interest, under the *Nature Conservation Act 1992*;
- e) a marine park under the *Marine Parks Act 2004*; and
- f) a park or garden that is open to the public (whether or not on payment of money) for use other than for sport or organised entertainment).

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

‘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.

‘Rehabilitation processes’ means the measures and actions taken to achieve rehabilitation outcomes including any or all of the following:

- a) removing all unwanted infrastructure;
- b) backfilling mine excavations (e.g. pits) and capping drill holes;
- c) reshaping the land surface to a stable landform similar to that of surrounding undisturbed areas;
- d) spreading of topsoil;

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- e) spreading seed or planting seedlings to promote revegetation;
- f) benching ridge cuts and removing any overhanging material.

'Residual drilling material' means waste drilling materials including muds and cuttings or cement returns from drill holes which are left behind after drilling fluids are removed.

'Regulated vegetation' means vegetation as defined under the *Environmental Offsets Regulation 2014*.

'Riverine area' means the land adjoining and associated with watercourses, including the bed, banks, adjoining terraced land and riparian vegetation.

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

'Significantly disturbed' land means land that:

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

Significantly disturbed land includes:

- a) areas where soil has been compacted, removed, covered, exposed or stockpiled;
- b) areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation & topsoil)
- c) areas where land use suitability or capability has been diminished;
- d) areas within a watercourse, waterway, wetland or lake where mining project activities occur;
- e) areas submerged by tailings or hazardous contaminant storage and dam walls in all cases;
- f) 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 has ceased; or
- g) areas where land has been contaminated.

Significantly disturbed land does not include:

- a) areas off lease (e.g. roads or tracks which provide access to the mining lease);
- b) areas previously significantly disturbed which have achieved the rehabilitation outcomes;
- c) by agreement with the administering authority, areas previously significantly disturbed which have not achieved the rehabilitation objectives due to circumstances beyond the control of the mine operator (such as climatic conditions);
- d) areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc.) which is to be left by agreement with the landowner. The agreement to leave permanent infrastructure must be recorded in writing and lodged with the administering authority;
- e) disturbances that pre-existed the grant of the tenure unless those areas are disturbed during the term of the tenure.

'Slashing' means the mowing or cutting of ground vegetation so as to not kill vegetation, damage large standing vegetation (e.g. trees and shrubs), or disturb soils.

'Substance' means any naturally occurring geomorphological material.

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‘Unreasonable noise’ means noise that:

- a) causes unlawful environmental harm; and
- b) is unreasonable, having regard to the following matters:
 - i) its characteristic;
 - ii) its intrusiveness
 - iii) the time at which it is made;
 - iv) where it can be heard;
 - v) other noises ordinarily present at the place where it can be heard; and
- c) exceeds quality objectives defined in Schedule 1 of the Environmental Protection (Noise) Policy 2019 ‘Acoustic quality objectives’.

‘Unreasonable release’ of dust to the air environment, means a release of dust, that:

- a) causes unlawful environmental harm; and
- b) is unreasonable having regard to the following matters:
 - i) its characteristic;
 - ii) its intrusiveness;
 - iii) other releases of dust at the place affected by the release;
 - iv) where the effect of the release of dust can be noticed; or
 - v) the order in which the person releasing the dust started to carry out the activity from which the release is made and persons affected by the release started to carry out other activities that may be affected by the release of dust.

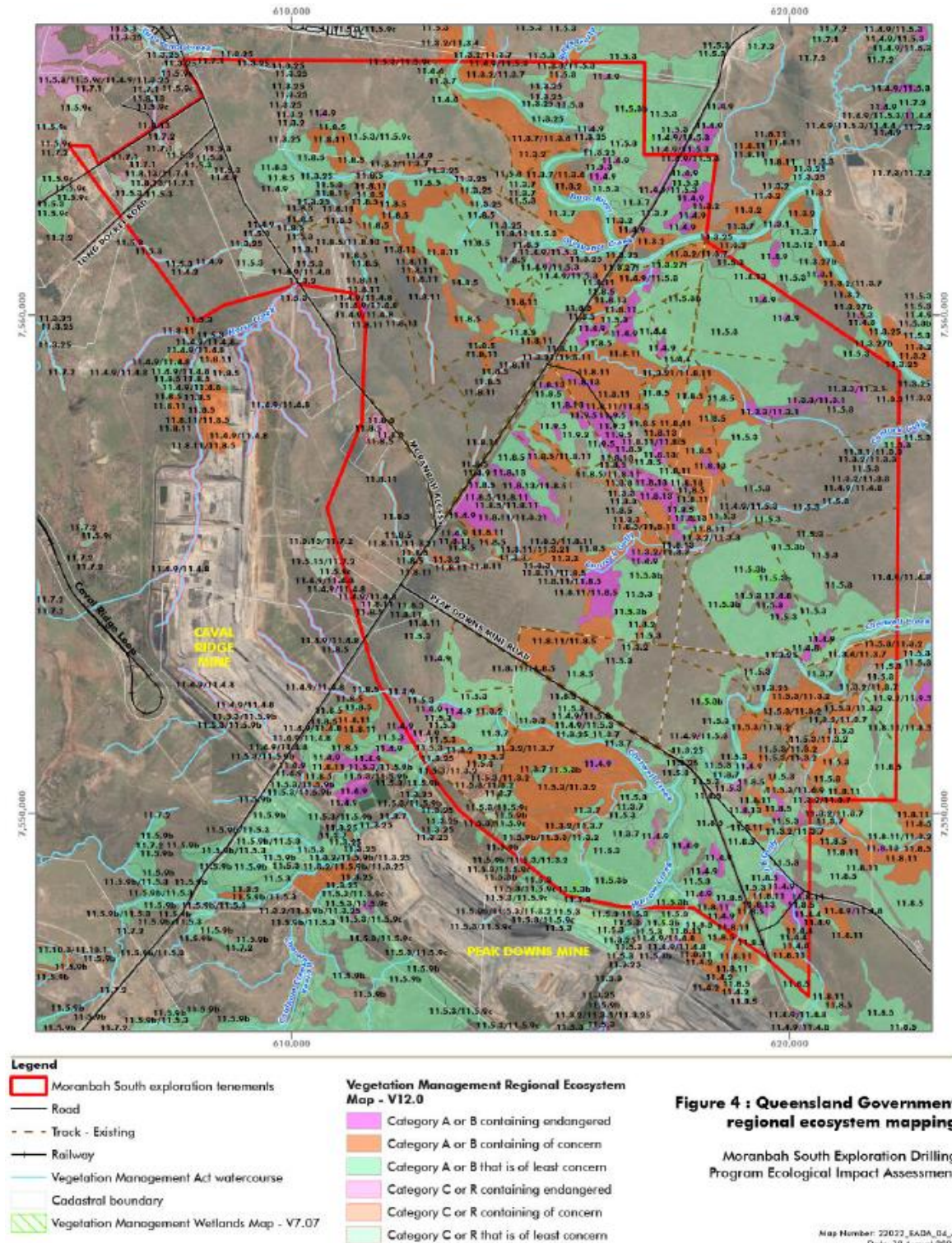
‘Waterway’ means a naturally occurring feature where surface water runoff normally collects, such as a clearly defined swale or gully, but only flows in response to a local rainfall event.

‘Weeds of National Significance (WoNS)’ means the plant species listed on the Australian Government’s Department of Agriculture, Water and the Environment website <https://weeds.org.au/weeds-profiles/>.

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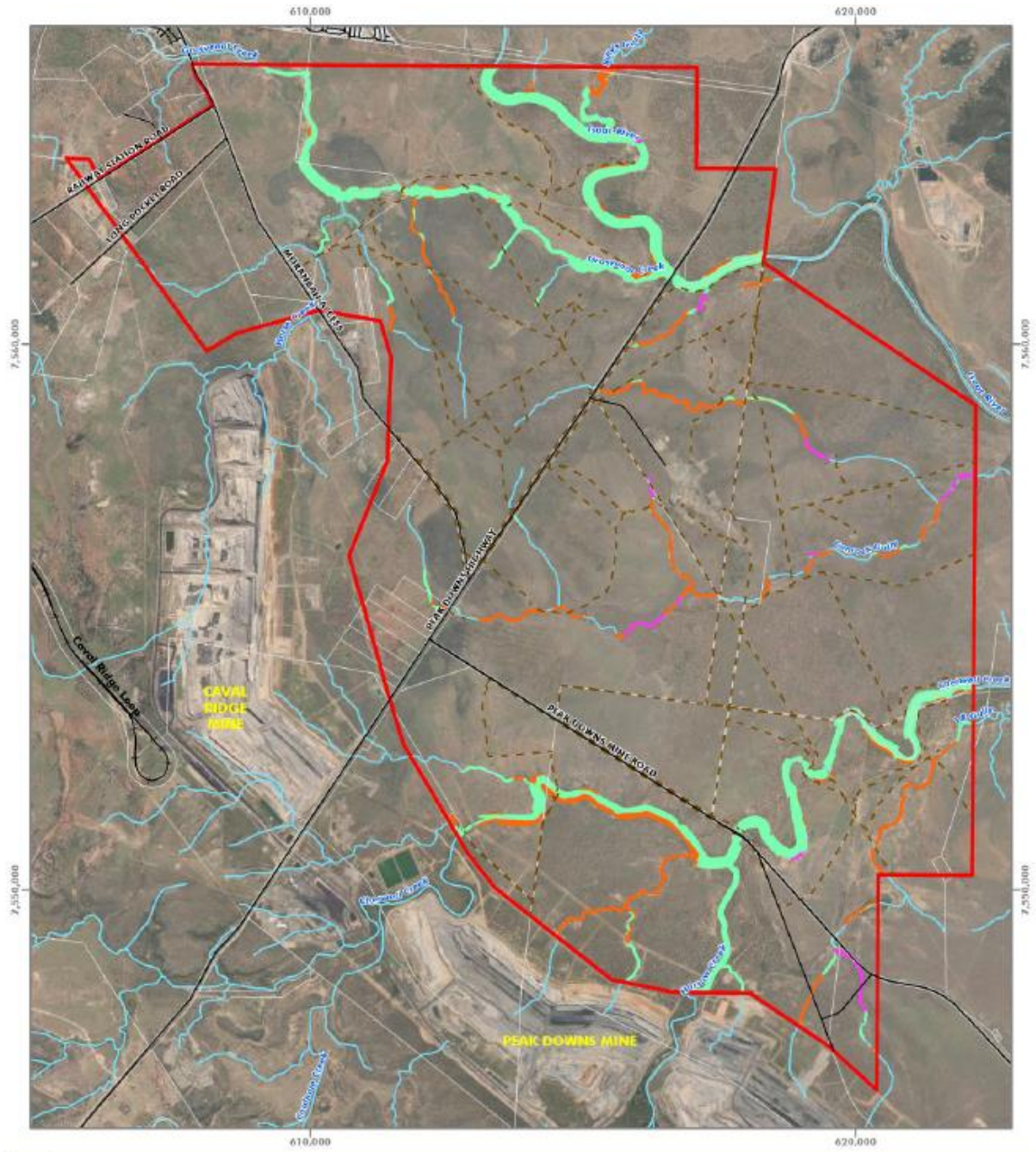
Figures

Figure 1: Locations of Regional Ecosystems on the Moranbah South tenements



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Figure 2: Location of Vegetation Management Waterway Vegetation on the Moranbah South tenements



- Legend**
- Moranbah South exploration tenements
 - Road
 - Track - Existing
 - Railway
 - Vegetation Management Act watercourse
 - Cadastral boundary
- Vegetation Management Waterway vegetation**
- Endangered
 - Of concern
 - Least concern

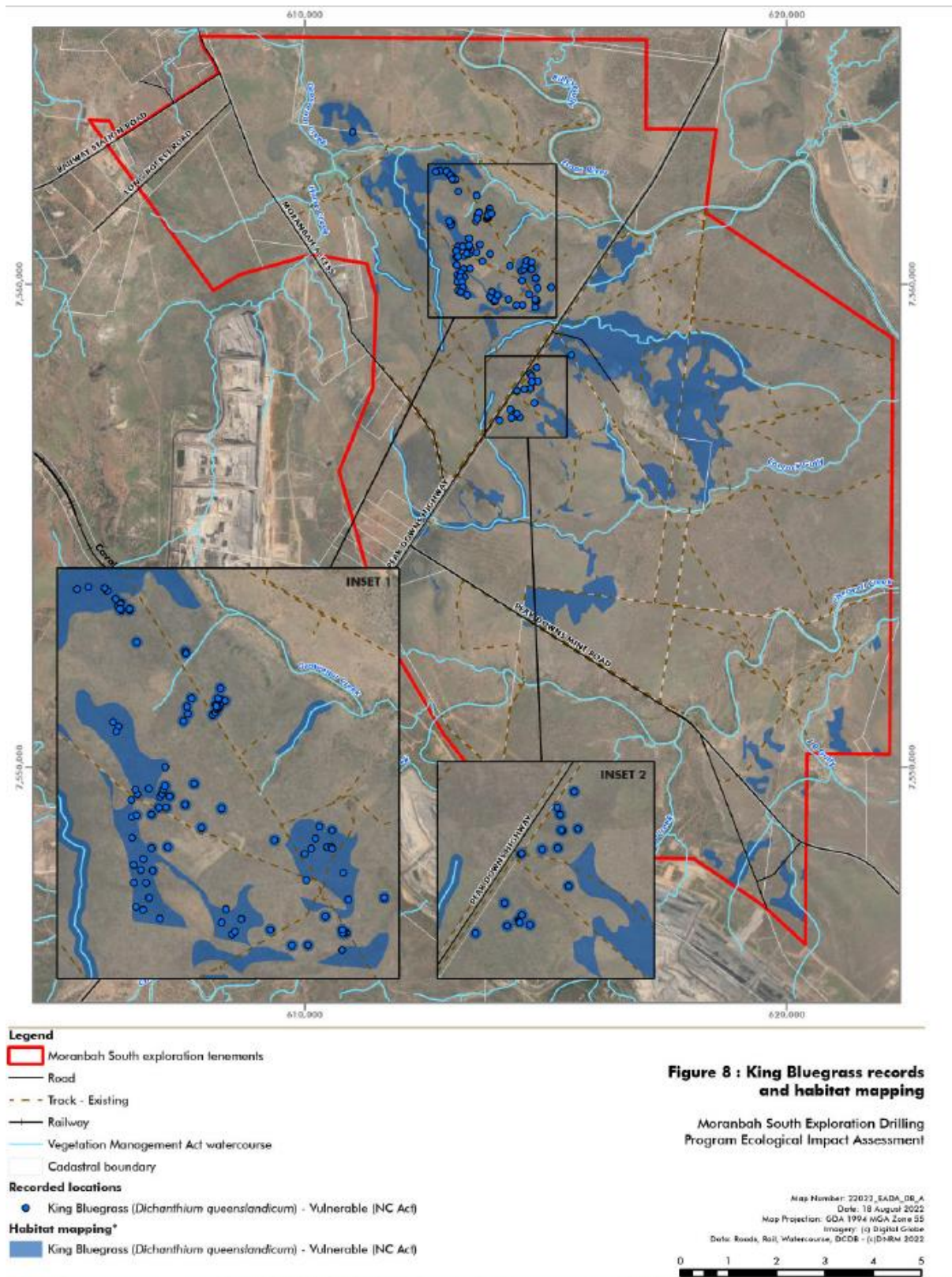
Figure 7 : Vegetation Management Waterway Vegetation

Moranbah South Exploration Drilling Program Ecological Impact Assessment

Map Number: 22072_SADA_07_A
 Date: 18 August 2022
 Map Projection: GDA 1994 MGA Zone 55
 Imagery: (c) Digital Globe
 Data: Roads, Rail, Watercourse, DCDE - (i)DHRM 2022

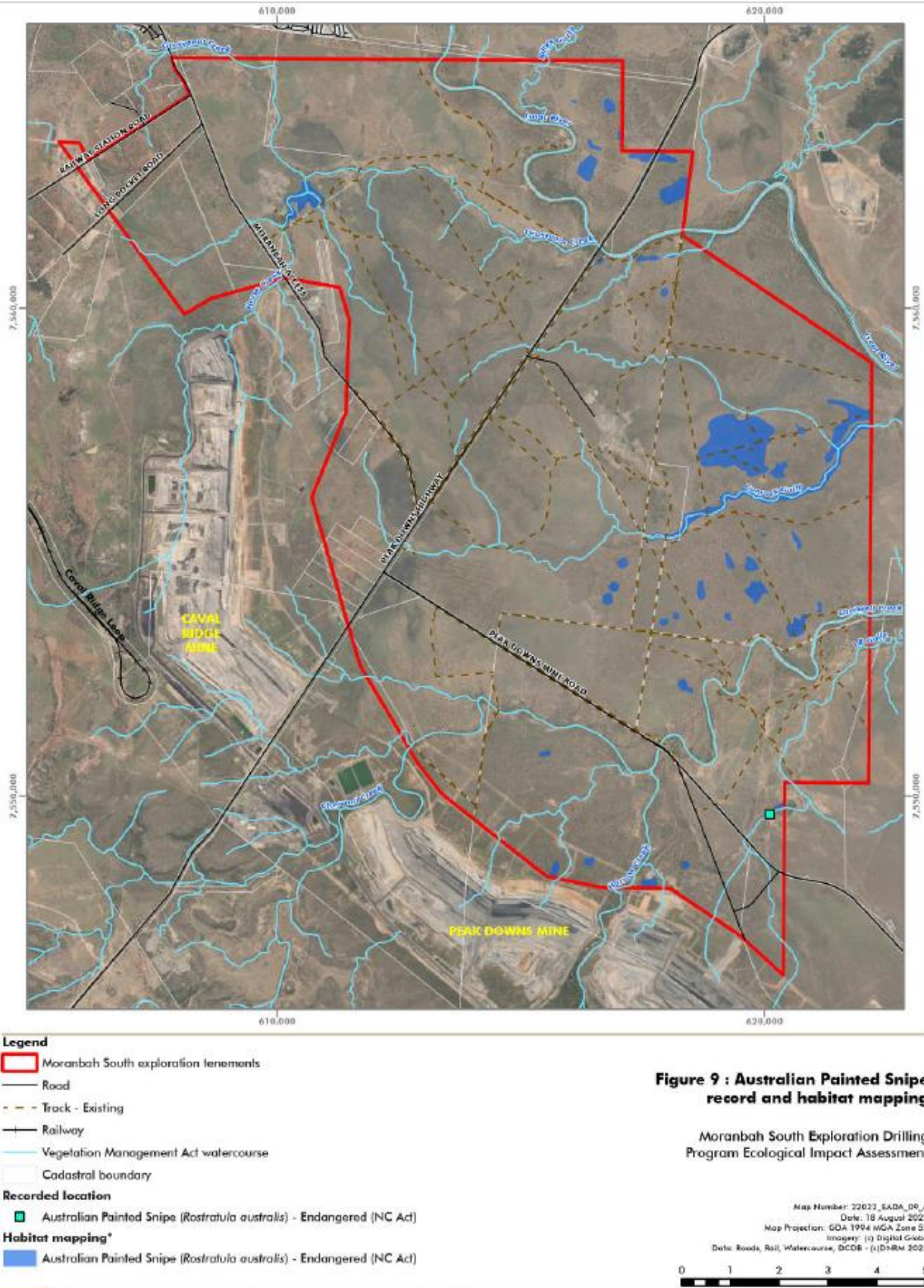
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Figure 3: Location of King Bluegrass habitat on the Moranbah South tenements



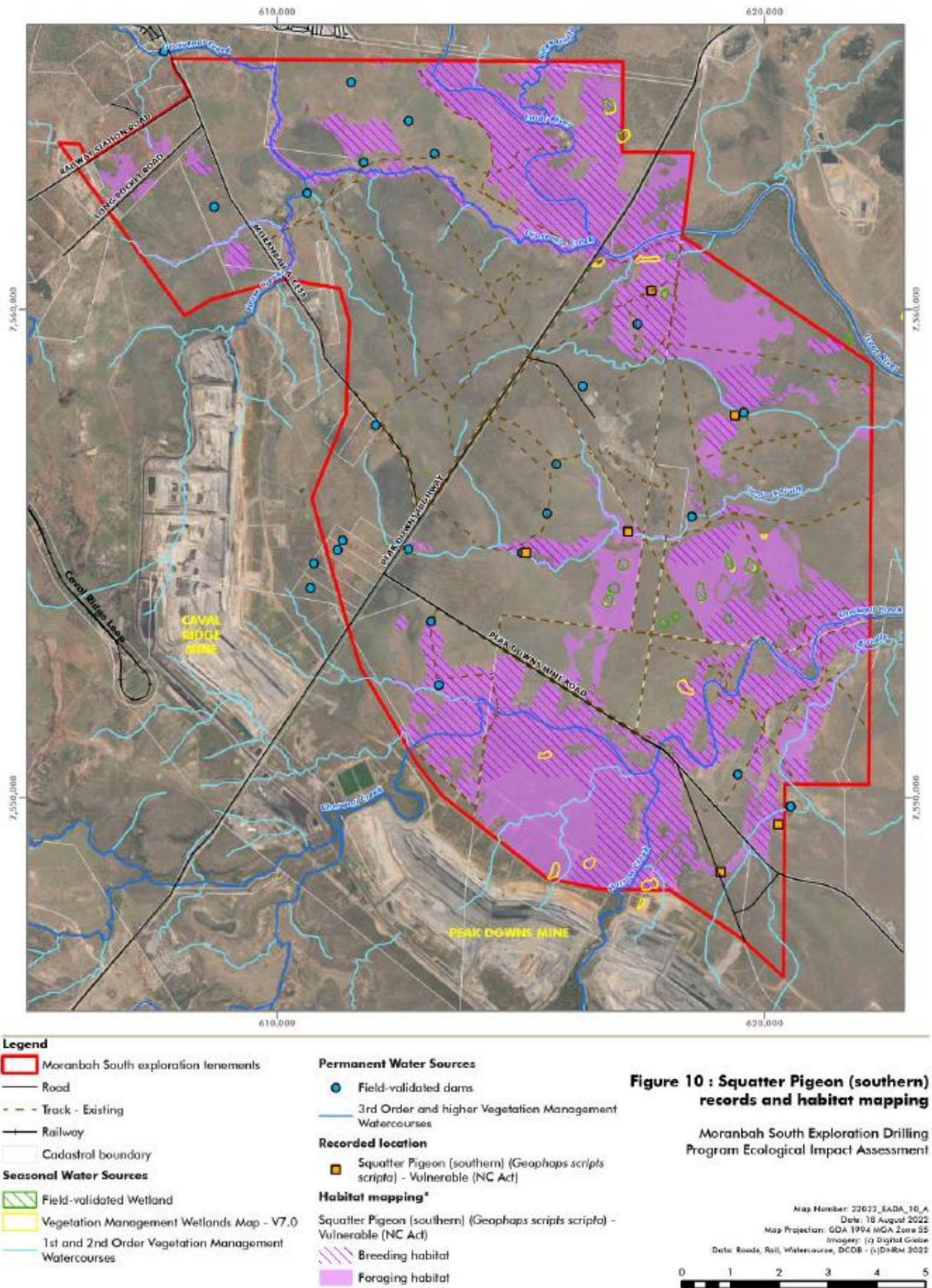
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Figure 4: Location of Australian Painted Snipe habitat on the Moranbah South tenements



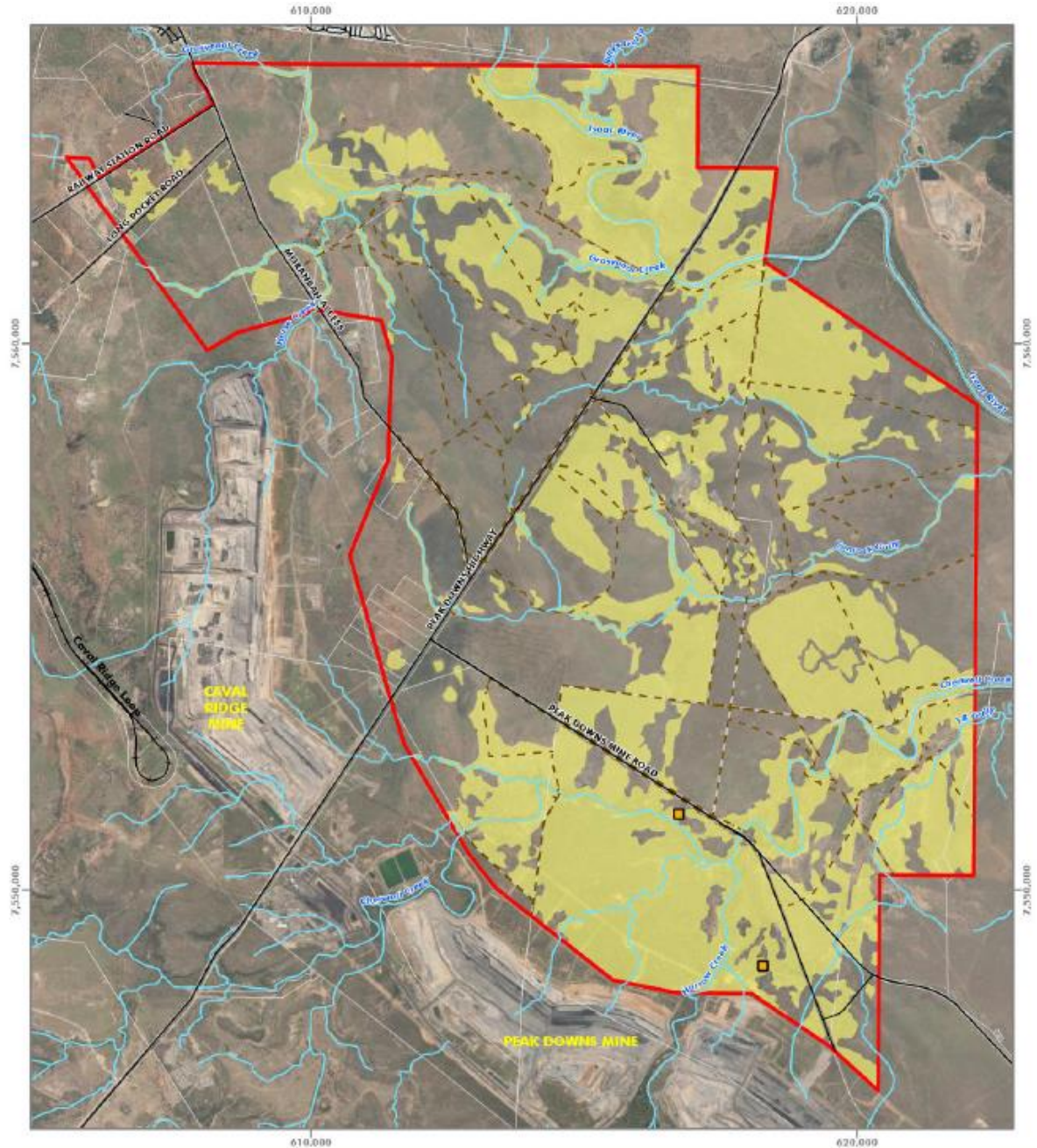
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Figure 5: Location of Squatter Pigeon habitat on the Moranbah South tenements



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Figure 6: Location of Koala habitat on the Moranbah South tenements



- Legend**
- Moranbah South exploration tenements
 - Road
 - Track - Existing
 - Railway
 - Vegetation Management Act watercourse
 - Cadastral boundary
- Recorded locations**
- Koala (*Phascolarctos cinereus*) - Endangered (NC Act)
- Habitat mapping***
- Koala (*Phascolarctos cinereus*) - Endangered (NC Act)

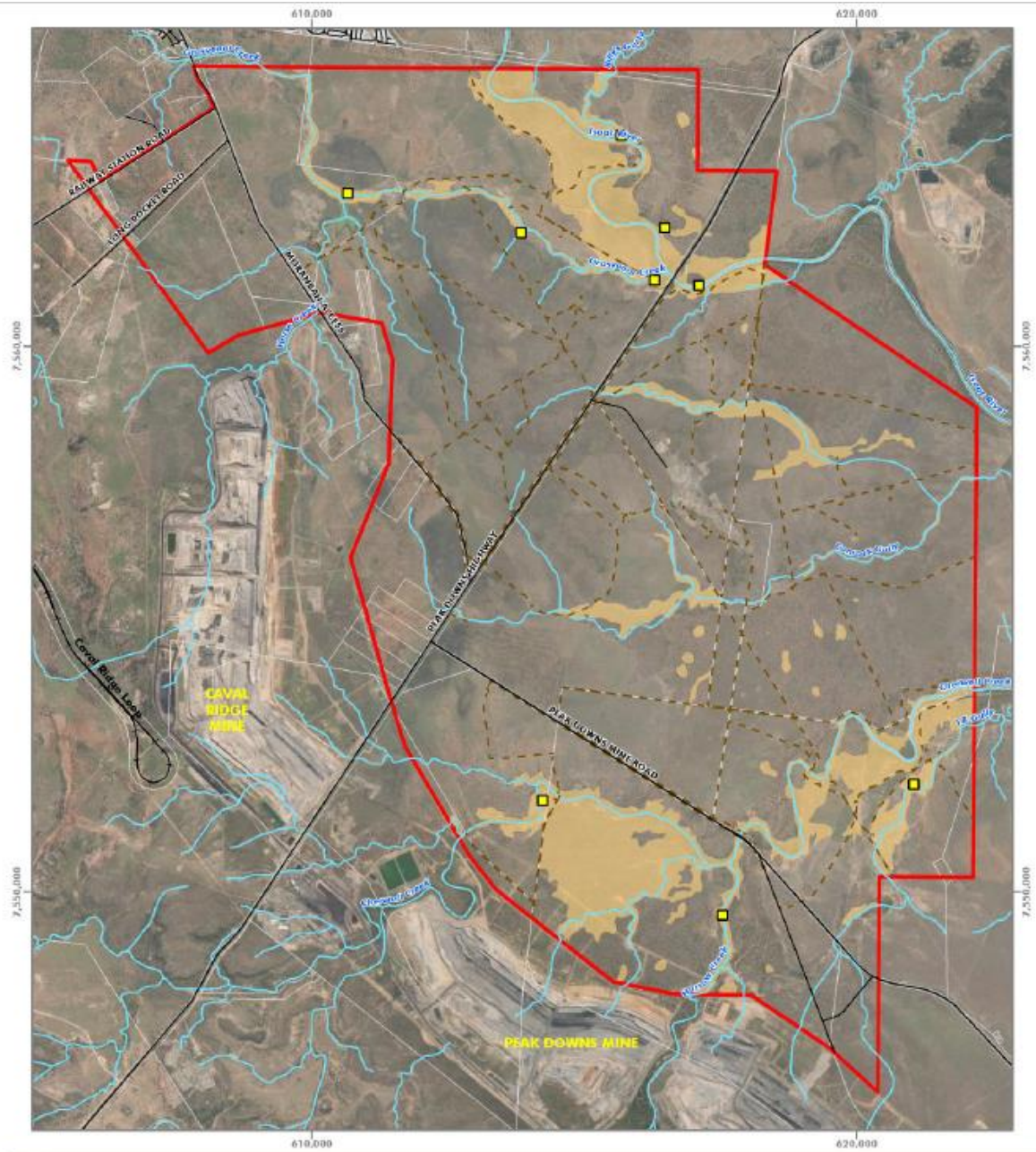
Figure 11 : Koala records and habitat mapping
 Moranbah South Exploration Drilling Program Ecological Impact Assessment

Map Number: 22022_EADA_11_A
 Date: 18 August 2022
 Map Projection: GDA 1994 MGA Zone 55
 Imagery: (c) Digital Globe
 Data: Roads, Rail, Watercourse, DCOB - (c) DMR 2022

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Figure 7: Location of Greater Glider habitat on the Moranbah South tenements



- Legend**
- Moranbah South exploration tenements
 - Road
 - - - Track - Existing
 - +— Railway
 - Vegetation Management Act watercourse
 - Cadastral boundary
- Recorded locations**
- Greater Glider (*Petauroides Volans*) - Endangered (NC Act)
- Habitat mapping***
- Greater Glider (*Petauroides Volans*) - Endangered (NC Act)

Figure 12 : Greater Glider records and habitat mapping

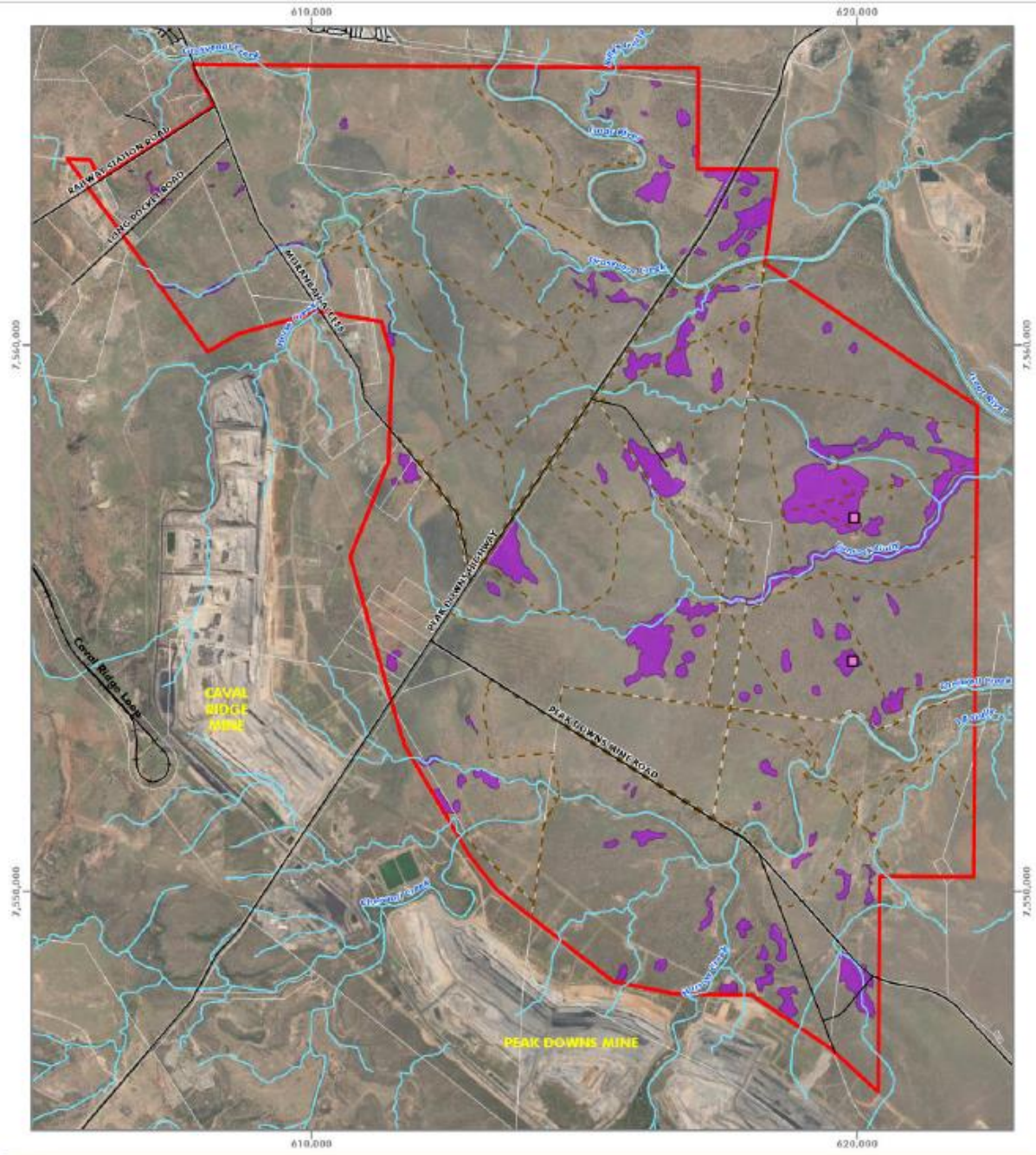
Moranbah South Exploration Drilling Program Ecological Impact Assessment

Map Number: 22022_SADA_T2_A
 Date: 18 August 2022
 Map Projection: GDA 1984 MGA Zone 55
 Imagery: (c) Digital Globe
 Data: Roads, Rail, Watercourse, BCDE - (c) DNRM 2022



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Figure 8: Location of Ornamental Snake habitat on the Moranbah South tenements



- Legend**
- Moranbah South exploration tenements
 - Road
 - Track - Existing
 - Railway
 - Vegetation Management Act watercourse
 - Cadastral boundary
- Recorded location**
- Ornamental Snake (*Denisonia maculata*) - Vulnerable (NC Act)
- Habitat mapping***
- Ornamental Snake (*Denisonia maculata*) - Vulnerable (NC Act)

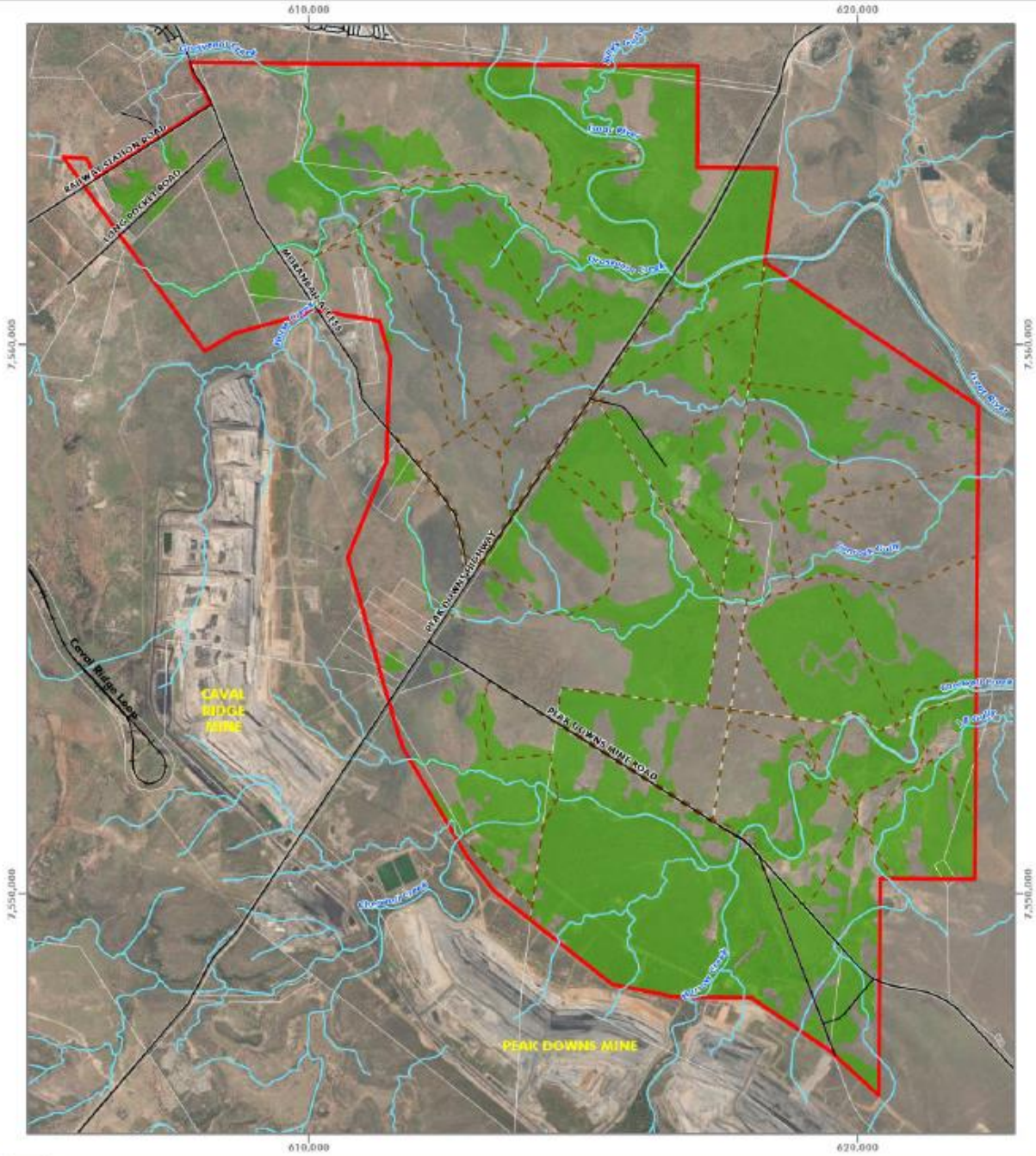
Figure 13 : Ornamental Snake records and habitat mapping

Moranbah South Exploration Drilling Program Ecological Impact Assessment

Map Number: 22072_SADA_12_A
 Date: 18 August 2022
 Map Projection: GDA 1994 MGA Zone 55
 Imagery: (c) Digital Globe
 Data: Roads, Rail, Watercourse, DCDE - (c)DHRM 2022

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Figure 9: Location of Short-beaked Echidna habitat on the Moranbah South tenements



- Legend**
- Moranbah South exploration tenements
 - Road
 - Track - Existing
 - Railway
 - Vegetation Management Act watercourse
 - Cadastral boundary
- Habitat mapping***
- Short-beaked Echidna (*Tachyglossus aculeatus*) – Special Least Concern (NC Act)

Figure 14 : Short-beaked Echidna habitat mapping

Moranbah South Exploration Drilling Program Ecological Impact Assessment

Map Number: 20673_EA04_14_A
 Date: 18 August 2022
 Map Projection: GDA 1994 MGA Zone 55
 Imagery: (c) Digital Globe
 Data: Roads, Rail, Watercourse, DCDE - (c) DNRM 2022

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END OF ENVIRONMENTAL AUTHORITY