

Permit

Environmental Protection Act 1994

Environmental authority P-EA-100802672

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

Environmental authority number: P-EA-100802672

Environmental authority takes effect on 15 October 2025. This is the take effect date.

The first annual fee is payable within 20 business days of the take effect date.

The anniversary date of this environmental authority is the same day each year as the take effect date. 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.

Environmental authority holder(s)

Name(s)	Registered address
CALLAN COKING COAL PTY LTD	Level 34, 345 Queen Street, BRISBANE QLD 4000

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Schedule 3 - 09 - A mining activity involving drilling, costeaning, pitting or carrying out geological surveys causing significant disturbance	MDL454
Schedule 3 - 10 - investigating the potential development of a mineral resource by large bulk sampling or constructing an exploratory shaft, adit or open pit	
Ancillary 33 - Crushing, milling, grinding or screening - Crushing, grinding, milling or screening more than 5000t of material in a year	

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any

inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Contaminated land

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

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

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

Take effect

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

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

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *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. 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.



Signature

15 October 2025

Date

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
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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 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).

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 the Environment, Tourism, Science and Innovation to ensure that you have the most current version of the environmental authority relating to this site.

Schedules of conditions**A: General****B: Air****C: Waste****D: Noise and Vibration****E: Groundwater****F: Surface Water****G: Land****H: Biodiversity****Definitions****Appendices**

Conditions of environmental authority

Schedule A: 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 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.
A3	Activities authorised by this environmental authority must not cause environmental nuisance at a sensitive place.
A4	In carrying out activities authorised by this environmental authority, the environmental authority holder must not exceed the total maximum disturbance areas listed in Table A1 - Maximum Disturbance Area for each Bulk Sample Disturbance Domain¹. ¹The total maximum disturbance area does not include exploration and groundwater monitoring activities that are authorised outside of Appendix 1. Project Layout – Authorised Disturbance Areas.
A5	Unless otherwise stated by a condition of this environmental authority, in carrying out activities authorised by this environmental authority, the environmental authority holder must not extend beyond the disturbance domain footprints depicted in Appendix 1. Project Layout – Authorised Disturbance Areas .
A6	Exploration Unless otherwise stated by a condition of this environmental authority, exploration activities must be undertaken in accordance with the '<i>Eligibility criteria and standard conditions for exploration and mineral development projects</i>' (ESR/2016/1985).
A7	Exploration activities may be undertaken outside of the disturbance footprint depicted in Appendix 1. Project Layout – Authorised Disturbance Areas, within the tenure boundaries, and must not: (a) cause more than 10ha of land to be significantly disturbed at any one time; and (b) result in significant residual impact to prescribed environmental matters beyond that authorised by Table H1 – Significant Residual Impacts to Prescribed Environmental Matters.
A8	Coal extraction No more than 942,000 tonnes of run-of-mine (ROM) coal is authorised to be extracted under this environmental authority.

A9	Commencement of activities The environmental authority holder must provide the administering authority with a date in writing for when activities authorised under condition A4 commence under this environmental authority no later than fourteen (14) days after the commencement of activities.
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Table A1 - Maximum Disturbance Area for each Bulk Sample Disturbance Domain

Disturbance Domain	Maximum disturbance area (ha)
Bulk Sample Pit	59.2
Out-of-Pit Dump	65.5
MIA Complex	18.5
ROM Area	11.5
Topsoil Stockpile	33.8
Water Infrastructure	20.9
Haul Road	12.3
Access Road	16.0
Total Maximum Disturbance Footprint	237.7

A10	Maintenance of measures, plant and equipment The environmental authority holder must: (a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; (b) maintain such measures, plant and equipment in a proper and efficient condition; (c) operate such measures, plant and equipment in a proper and efficient manner; and (d) ensure all instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority are properly calibrated.
A11	Records of installation, calibration and maintenance carried out under condition A10 must be kept.
A12	Monitoring and records All monitoring records and reports required by this environmental authority must be kept for a minimum of five (5) years.
A13	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.

A14	Upon request from the administering authority, copies of all records, reports, plans, programs, reviews, monitoring/sampling data 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.
A15	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.
A16	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.
A17	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 environmental authority holder must, where required under relevant legislation: (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.
A18	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 analyses¹. ¹Excludes in situ and field-based monitoring.
A19	Risk management The environmental authority holder must develop and implement, for the duration of activities, a risk management system for activities which mirrors the content requirements of the Standard for Risk Management (ISO31000:2018), or the latest edition of an Australian Standard for risk management, to the extent relevant to environmental management.

A20	Notification of emergencies, incidents and exceptions The environmental authority holder must notify the administering authority by written notification within twenty-four (24) hours of becoming aware of any emergency or incident or action 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.
A21	The notification provided to the administering authority as required by condition A20 must include, but not be limited to, the following information: (a) the holder of the environmental authority; (b) the number of the environmental authority; (c) the location of the emergency or incident; (d) the date and time of the emergency or incident; (e) the time the environmental authority holder became aware of the emergency or incident; (f) the estimated quantity and type of any substances involved in the emergency or incident; (g) the suspected cause of the emergency or incident; (h) the environmental harm caused, threatened, or suspected to be caused by the emergency or incident; (i) actions taken to prevent any further release and mitigate any environmental harm caused by the emergency or incident; and (j) the name and telephone number of the designated contact person.
A22	Within ten (10) business days following the initial notification of an emergency or incident under condition A20, or receipt of monitoring results, whichever is the later, or a longer period agreed to in writing by the administering authority, the environmental authority holder must complete an investigation and provide a report 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 environmental harm; and (c) proposed measures to prevent a recurrence of the emergency or incident and/or address any remaining environmental harm or potential for environmental harm.
A23	Measures identified under condition A22(c) must be implemented within twenty-eight (28) days of the investigation required by condition A22 being finalised, or a longer period agreed to in writing by the administering authority.

A24	Complaints The environmental authority holder 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.
A25	The environmental authority holder 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.
A26	Annual reporting An annual report must be prepared by 31 March each year for the prior calendar year and made available to the administering authority on request.

A27	The report required by condition A26 must include the following information: (a) A map showing the areas of existing disturbance, proposed disturbance for the subsequent calendar year and existing and proposed rehabilitation; (b) The location, coordinates and area (hectares) of all areas disturbed by the activities carried out under this environmental authority in the prior calendar year, distinguished by whether the area has been disturbed, commenced rehabilitation or has been fully rehabilitated in accordance with the conditions of this environmental authority; (c) The date of completion of mining activities in each area; (d) The date each area commenced rehabilitation; (e) A table showing exploration drillholes, the date they were drilled and the date they were rehabilitated; and (f) Details of the rehabilitation activities conducted for areas identified in A27(b) including: (i) rehabilitation monitoring results; and (ii) include any actions and recommendations to rectify or improve, areas of rehabilitation that are of concern to assure achievement of the conditions in Schedule G: Land.
A28	Third-party reporting The environmental authority holder must: (a) within one (1) year of activities authorised under condition A4 commencing, obtain from a third-party appropriately qualified person a report on compliance with the conditions of this environmental authority; (b) obtain further such reports at regular intervals, not exceeding three (3) years from the completion of the report required by condition A28(a); and (c) provide each report to the administering authority within thirty (30) days of its completion.

Schedule B: Air	
Condition number	Condition
B1	Dust nuisance The release of dust and/or particulate matter as a result of the mining activity must not cause environmental nuisance at any sensitive or commercial place.
B2	Dust and particulate matter monitoring The environmental authority holder must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that dust deposition and/or particulate matter emissions generated by the activities do not cause exceedances of the air quality limits stated in Table B1 – Air Quality Limits when measured at any sensitive or commercial place.

Table B1 – Air Quality Limits

Quality Characteristic	Air Quality Limit	Averaging Period	Monitoring Standard
Particulate Matter with an aerodynamic diameter of less than 10 micrometres (PM ₁₀)	50 µg/m ³	24-hour	1. Australian Standard AS3580.9.9 Methods for sampling and analysis of ambient air — Determination of suspended particulate matter—PM₁₀ low volume sampler – Gravimetric method; or 2. Australian Standard AS3580.9.6 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter—PM₁₀ high volume sampler with size selective inlet—Gravimetric method; or 3. Any alternative method of monitoring PM₁₀ which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority
Particulate matter with an aerodynamic diameter of less than 2.5 micrometres (PM _{2.5})	20 µg/m ³	24-hour	Australian Standard AS3580.9.10 Methods for sampling and analysis of ambient air — Determination of suspended particulate matter—PM _{2.5} low volume sampler – Gravimetric method
Dust deposition	120 mg/m ² /day	Monthly	Australian Standard AS3580.10.1 Methods for sampling and analysis of ambient air—Determination of particulate matter — Deposited matter – Gravimetric method

B3	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; and (b) for a monitoring period as agreed upon with the administering authority; and (c) for the relevant contaminant limits, averaging periods and in accordance with the methods specified in Table B1 – Air Quality Limits; and (d) the results of the monitoring undertaken are to be notified to the administering authority within ten (10) days following completion of monitoring.
B4	In accordance with condition B3, if the monitoring indicates an exceedance of the relevant limits in Table B1 – Air Quality Limits, then the environmental authority holder must investigate whether the exceedance is due to emissions from the activity. If the mining activity is found to be the cause of the exceedance, then the environmental authority holder must immediately implement dust abatement measures so that emissions of dust from the activity do not result in further environmental nuisance.
B5	Dust Management Plan A Dust Management Plan must be developed prior to the commencement of activities and implemented for all stages of the mining activities.
B6	The Dust Management Plan required by condition B5 must include: (a) a preventative management system for dust control; (b) Trigger Action Response Plan; (c) site background (contextual information); (d) proposed works and potential impacts and impact analysis; (e) site risk assessment; (f) design of an internal operational monitoring program including objectives, separate from any compliance monitoring or limits/levels required by condition B3; (g) performance criteria and monitoring methods; (h) number and location of monitoring sites; (i) quality assurance/quality control (QA/QC) requirements; (j) stakeholder consultation; (k) roles and responsibilities; and (l) reports.

Schedule C: Noise and Vibration	
Condition number	Condition
C1	Noise nuisance Noise from the authorised activities must not cause an environmental nuisance at any sensitive or commercial place.
C2	Noise limits The environmental authority holder must ensure that noise generated by activities do not exceed the criteria in Table C1 – Noise Limits at a sensitive place.

Table C1 – Noise Limits

Noise level dB(A) measured as:	7am to 6pm	6pm to 10pm	10pm to 7am
L _{Aeq} , adj, 1 hour	35	35	35
L _{A1} , adj, 1 hour	40	40	35

C3	Noise monitoring program The environmental authority holder must develop and implement, for the duration of activities, a noise monitoring program to monitor compliance with Table C1 – Noise Limits for activities authorised by this environmental authority conducted at sensitive receptor R1 and R3, as depicted in Appendix 2. Sensitive Receptors .
C4	Noise measurements must be taken using a class 1 sound level meter as classified under Australian Standard (IEC 61672).

C5	Notwithstanding condition C4, all monitoring of noise emissions from the activity must be undertaken in accordance with the most recent version of Queensland Government's '<i>Noise Measurement Manual</i>' (ESR/2016/2195), the relevant Australian Standard and the <i>Environmental Protection Regulation 2019</i> (Chapter 5, Part 4) and must include the following descriptors, characteristics and conditions: (a) L_{A10}, adj, 1 hour; (b) L_{A1}, adj, 1 hour; (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.
C6	Noise monitoring exceedance If noise monitoring indicates an exceedance of any relevant limit in Table C1 – Noise Limits, noise abatement measures must be immediately implemented to minimise any adverse impacts to the sensitive place and to prevent any further exceedances.
C7	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. 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 C6; (e) how measures taken will reduce noise generated by the authorised activities; and (f) the contribution of the authorised activities to the noise level experienced at the sensitive place.
C8	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.
C9	Low Frequency Noise Noise emissions from mining activities, when including substantial low frequency noise, must not cause an overall sound pressure level at a noise sensitive place exceeding 50dB(Linear). Note: "Substantial low frequency noise" means a noise emission that has an unbalanced frequency spectrum shown in one-third octave band measurements, with a predominant component located within the frequency range 10 to 200 Hz.

C10	Blasting The environmental authority holder must ensure that blasting does not cause the limits for peak particle velocity and air blast overpressure in Table C2 – Blasting Noise and Vibration Limits to be exceeded at any sensitive or commercial place.
C11	Blast monitoring program The environmental authority holder must develop and implement, for the duration of activities, 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) or another such place to investigate an allegation of environmental nuisance caused by blasting.
C12	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.

Table C2 – Blasting Noise and Vibration Limits

Blasting Noise Limits	Sensitive or commercial place limits		
	Monday to Saturday		Sundays and Public Holidays
	7am to 6pm	6pm to 7am	
Airblast overpressure	115 dB (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	No blasting to occur without notification to sensitive receptors. If blasting occurs refer to 'Monday to Saturday' limits.
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	No blasting to occur without notification to sensitive receptors. If blasting occurs refer to 'Monday to Saturday' limits.

C13	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.
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C14	A report must be provided to the administering authority within ten (10) business days of an exceedance of limits in Table C2 – Blasting Noise and Vibration Limits. The report must detail: (a) the blasting noise and vibration emission data at the sensitive place; (b) location of the blast(s) within the mining area (including which bench level); (c) a description of atmospheric conditions including temperature, humidity, wind speed and direction occurring at the time; (d) whether environmental harm has occurred; (e) measures implemented to reduce or prevent environmental harm; and (f) long-term mitigation measures to prevent recurrence of environmental harm.
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Schedule D: Waste	
Condition number	Condition
D1	The environmental authority holder must not directly or indirectly release waste from the site to any waters.
D2	All waste generated by activities must be removed to a licenced waste facility that is lawfully able to accept the waste under the <i>Environmental Protection Act 1994</i> .
D3	Storage and disposal of tyres Tyres must be stored and disposed of in accordance with the latest version of the Operational policy ' <i>Disposal and storage of scrap tyres at mine sites</i> ' (ESR/2016/2380).
D4	Burning of waste Unless otherwise permitted by the conditions of this environmental authority or with prior approval from the administering authority and in accordance with a relevant standard operating procedure, waste must not be burnt.
D5	The environmental authority holder must not burn vegetation cleared in the course of carrying out the authorised activities.
D6	Non-Mineral Waste Management A Non-Mineral Waste Management Plan, in accordance with the <i>Waste Reduction and Recycling Act 2011</i> , must be developed prior to the commencement of activities and implemented for all stages of the mining activity.

D7	In accordance with condition D6, the Non-Mineral Waste Management Plan must at a minimum include the following: (a) a description of each waste stream types and amounts generated by the authorised activity; (b) waste management control strategies, including: (i) segregation of the wastes; (ii) storage of the wastes; (iii) transport of the wastes; and (iv) monitoring and reporting matters concerning the wastes; (c) how the waste will be managed in accordance with the waste management hierarchy (that is, avoid, reuse, recycling, energy recovery, disposal); (d) a program for reusing, recycling or disposing of all wastes; (e) the hazardous characteristics of the wastes generated including disposal procedures for hazardous wastes; (f) details of any accredited management system employed, or planned to be employed, to deal with the waste; and (g) procedures for dealing with accidents, spills and other incidents; (h) the indicators or other criteria on which the performance of the waste management program will be assessed; (i) how often the performance of the waste management practices will be assessed; and (j) staff training and induction to the waste management program.
D8	The plan required under condition D6 must be reviewed annually and updated, if required.
D9	Waste Rock Disposal Plan A Waste Rock Disposal Plan must: (a) be developed prior to the commencement of activities and implemented for all stages of activities; and (b) be reviewed annually and updated, if required.

D10	The Waste Rock Disposal Plan required under condition D9 must at a minimum include: (a) effective characterisation of the waste rock and spoil to predict, under the proposed placement and disposal strategy, the quality of runoff and seepage generated concerning potentially environmentally significant effects including salinity, acidity, alkalinity and dissolved metals, metalloids and non-metallic inorganic substances; (b) a program of progressive sampling and characterisation to identify dispersive waste rock and the salinity, acid and alkali producing potential, metal and acid concentrations of waste rock; (c) a material balance and disposal plan demonstrating how waste rock will be selectively placed and/or encapsulated to prevent potential generation of acid and metalliferous drainage (AMD), where relevant; (d) where relevant, a sampling program to verify encapsulation and/or placement of potentially AMD forming waste rock; (e) details regarding the management of seepage and leachates; and (f) the indicators or other criteria on which the performance of the plan will be assessed.
D11	Acid forming material The environmental authority holder must take all reasonable and practicable measures to leave potentially acid-forming (PAF) rock, soil and sediments undisturbed.
D12	Waste rock identified as being PAF material must be disposed of in accordance with the plan required by condition D9 and must not be disposed of in the out-of-pit waste rock dump.

Schedule E: Groundwater	
Condition number	Condition
E1	The environmental authority holder must not release contaminants, directly or indirectly, to groundwater.
E2	All groundwater monitoring data from January to December of the previous calendar year must be submitted to the administering authority via WaTERS by 1 March of each calendar year.
E3	Groundwater monitoring bores The construction, maintenance, operation and decommissioning of groundwater bores (including groundwater monitoring bores) must be undertaken by an appropriately qualified person in a manner that: (a) prevents contaminants entering the groundwater; and (b) ensures representative groundwater samples from the target hydrogeological unit; and (c) maintains the hydrogeological environment within the hydrogeological unit.
E4	A bore report must be kept for each monitoring bore which includes: (a) a unique identification reference number and geographic coordinate location; and (b) construction information including, but not limited to, the depth of bore, depth and length of casing, depth and length of screening and bore sealing details; and (c) stratigraphy and target hydrogeological unit of the bore; and (d) depth at which groundwater was intercepted; and (e) the final standing water level after bore development.
E5	Groundwater monitoring Groundwater must be monitored for the duration of activities: (a) at the locations specified in Table E1 – Groundwater Monitoring Locations and Frequency, as illustrated in Appendix 3. Location of Groundwater Monitoring Bores; and (b) at the frequencies specified in Table E1 – Groundwater Monitoring Locations and Frequency; and (c) for standing water level; and (d) for the quality characteristics identified in Table E2 – Groundwater Quality Limits.
E6	Monitoring and sampling of groundwater must comply with the latest version of the Queensland Government's <i>'Monitoring and Sampling Manual'</i> .

Table E1 – Groundwater Monitoring Locations and Frequency

Bore	GW06-01	GW06-02	GW07-01	GW07-02	GW08-01	GW09-01	GW09-02	GW09-03	GW16
Latitude (GDA2020)	-22.608859	-22.608893	-22.628757	-22.628865	-22.642812	-22.647051	-22.646941	-22.646814	-22.623569
Longitude (GDA2020)	148.594978	148.595222	148.618226	148.618227	148.630485	148.62152	148.621426	148.621444	148.632904
Strata	Weathered Permian / Tertiary	Burngrove Formation	Alluvium / Tertiary	Rewan Formation	Weathered Permian / Tertiary	Weathered Permian / Tertiary	Phillips Seam	Leichardt Seam	Alluvium / Tertiary
Depth (mbgl)	28.0	70.0	25.0	106.0	64.0	50.0	46.0	60.0	21.0
Screened depth (mbgl)	24-27	66-69	22-25	97-103	60-63	47-50	43-46	54-57	18-21
Baseline water level (mbgl)	26.85	36.48	Dry	56.03	24.36	41.71	42.04	42.15	13.69
SWL Investigation Trigger Level (mbgl)	27.0	38.48		58.03	29.36	49.0	45.0	56.0	15.69
Monitoring Frequency	Monthly for 24 months and quarterly thereafter								

NOTE:

mbgl = meters below ground level

SWL = Standing Water Level

Table E2 – Groundwater Quality Limits

Parameter	Bores	Limit	Comments
pH (field) (pH units)	All bores	6.5 - 8.5	Broad range to encompass all bores, adapted from WQO
Electrical Conductivity (field) (µS/cm)	GW06-01, GW07-01, GW16	4506	Shallow EPP WQO
	GW06-02, GW07-02, GW08-01, GW09-01, GW09-02, GW09-03	7450	Deep EPP WQO
Sulfate (mg/L)	GW06-01, GW07-01, GW16	832	Shallow EPP WQO
	GW06-02, GW07-02, GW08-01, GW09-01, GW09-02, GW09-03	520	Deep EPP WQO
Metals and Metalloids			
Aluminium (dissolved) (mg/L)	All bores	0.055	ANZG (2018)
Arsenic (dissolved) (mg/L)	All bores	0.013	ANZG (2018)
Boron (dissolved) (mg/L)	All bores	0.94	ANZG (2018)
Copper (dissolved) (mg/L)	All bores	0.0014	ANZG (2018)
Iron (dissolved) (mg/L)	GW06-01, GW07-01, GW16	0.085	Shallow EPP WQO
	GW06-02, GW07-02, GW08-01, GW09-01, GW09-02, GW09-03	0.382	Deep EPP WQO
Lead (dissolved) (mg/L)	All bores	0.0034	ANZG (2018)
Mercury (dissolved) (mg/L)	All bores	0.00006	ANZG (2018) 99 th percentile
Molybdenum (dissolved) (mg/L)	All bores	0.034	ANZG (2018)
Selenium (dissolved) (mg/L)	All bores	0.005	ANZG (2018) 99 th percentile
*TRH C6-C9 (µg/L)	All bores	< 20	LOR
*TRH C10-C36 (µg/L)	All bores	< 50	LOR
Major Ions (mg/L)			
Bicarbonate	All bores	For interpretation purposes only	
Calcium		For interpretation purposes only	
Carbonate		For interpretation purposes only	
Chloride		For interpretation purposes only	
Magnesium		For interpretation purposes only	
Potassium		For interpretation purposes only	
Sodium		For interpretation purposes only	

NOTE:

ANZG (2018) = Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia, or more recent version.

EPP WQO (aquatic ecosystems) = values derived from Environmental Protection (Water) Policy 2009 Isaac River Sub-basin Environmental Values and Water Quality Objectives Basin No. 130 (part), including all waters of the Isaac River Sub-basin (including Connors River), Zone 23 (80th percentile).

*Total Recoverable Hydrocarbons (TRH)

All metals and metalloids must be measured as 'dissolved' (from analysis of a field filtered sample) and total (unfiltered). Limits for metals and metalloids apply to dissolved results

E7	Groundwater quality The mining activity must not cause groundwater measured from any bore specified in Table E1 – Groundwater Monitoring Locations and Frequency to exceed the corresponding quality limits specified in Table E2 – Groundwater quality limits on any three (3) consecutive sampling occasions.
E8	If the groundwater from any bore identified in Table E1 – Groundwater Monitoring Locations and Frequency exceeds the quality limits specified in Table E2 – Groundwater Quality Limits on three (3) consecutive occasions, the environmental authority holder must: (a) notify the administering authority via WaTERS within twenty-four (24) hours of receiving the results; and (b) complete a Trigger Investigation in accordance with condition E11.
E9	Groundwater Standing Water Level (SWL) Groundwater SWL when measured at the groundwater monitoring bores specified in Table E1 – Groundwater Monitoring Locations and Frequency must not exceed the SWL trigger level specified in Table E1 – Groundwater Monitoring Locations and Frequency.
E10	If the SWL of groundwater measured at any bore specified in Table E1 – Groundwater Monitoring Locations and Frequency exceeds the corresponding trigger levels specified in Table E1 – Groundwater Monitoring Locations and Frequency, the environmental authority holder must: (a) notify the administering authority via WaTERS within twenty-four (24) hours of receiving the results; and (b) conduct a Trigger Investigation in accordance with condition E11.
E11	Trigger Investigation The Trigger Investigation required by condition E8 and E10 must be completed within fourteen (14) days of receiving results under the corresponding condition E7 and E9 to determine if the exceedance is a result of: (a) activities authorised under this environmental authority; (b) natural variation; or (c) neighbouring land use resulting in groundwater impacts.
E12	The environmental authority holder must provide a report of the Trigger Investigation to the administering authority within fourteen (14) days of completing the investigation under condition E11.

E13	If the Trigger Investigation under condition E11 determines the exceedance was the result of activities authorised under this environmental authority, then a follow up investigation must be completed within fourteen (14) days of completing the investigation under condition E11, and must: (a) determine the source, cause and extent of contamination; (b) determine whether environmental harm has occurred; (c) implement immediate measures to reduce or prevent environmental harm; and (d) develop and detail long-term mitigation measures to address any existing environmental harm and prevent recurrence of environmental harm.
E14	Following completion of the investigation required by condition E13, the environmental authority holder must submit a written report to the administering authority within ten (10) business days outlining: (a) details of the investigation carried out including any assumptions and limitations of the investigation; (b) findings of the investigation including an explanation of the cause of the exceedance identified; (c) recommendations of the investigation; and (d) actions taken to comply with the conditions of the environmental authority and to prevent environmental harm.
E15	Groundwater Management and Monitoring Program The environmental authority holder must develop and implement a Groundwater Management and Monitoring Program prior to the commencement of activities for all stages of the mining activity.

E16	The Groundwater Management and Monitoring Program required by condition E15 must: (a) include the SWL of all groundwater bores within Table E1 – Groundwater Monitoring Locations and Frequency; (b) identify any impacts to groundwater quality due to the authorised activities conducted under this environmental authority; (c) ensure that adequate groundwater monitoring and data analysis is undertaken to achieve the following objectives: (i) detect any impacts to groundwater levels due to the mining activity; (ii) detect any impacts to groundwater quality due to the mining activity; (iii) determine trends in groundwater quality; and (iv) determine trends in groundwater level; (d) include maps showing the actual water level drawdown contours caused by the take of associated water based on SWL monitoring in accordance with Table E1 – Groundwater Monitoring Locations and Frequency; (e) document sampling and monitoring methodology, including an appropriate quality assurance and quality control program; and (f) include a review process to identify required improvements to the program.
E17	Prepare a report detailing the findings of condition E16(a)-(d) (inclusive) by 31 March each year for the prior calendar year.

Schedule F: Surface Water	
Condition number	Condition
F1	With the exception of disturbance authorised under condition A5 , mining 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; or (d) within or on the levee banks of the normal flow channel.
F2	All surface monitoring data is to be submitted to the administering authority via WaTERS on 1 April each year for the prior calendar year.
F3	Release to receiving waters Contaminants that will, or have the potential to, cause environmental harm must not be released directly or indirectly to any waters or the bed and banks of any waters as a result of the authorised activity, except as permitted under the conditions of this environmental authority.
F4	Mine affected water must not be released directly or indirectly to the receiving environment.
F5	Surface water runoff is permitted to be released to waters for the purpose of ensuring stormwater does not become mine affected water from: (a) erosion and sediment control (ESC) structures identified in Table F1 – ESC Structure Monitoring Locations that are installed and operated in accordance with the Erosion and Sediment Control Plan required by condition F22 if monitoring required by condition F6 confirms water quality is compliant with the sediment dam trigger values specified in Table F2 – Surface Water Quality Objectives; and (b) water management infrastructure that is installed and operated, in accordance with a Water Management Plan that complies with condition F20.
F6	The water from ESC structures must be monitored at the release locations detailed in Table F1 – ESC Structure Monitoring Locations for each quality characteristic, and at the frequencies, specified in Table F2 – Surface Water Quality Objectives .

Table F1 – ESC Structure Monitoring Locations

ESC Structure	Location Latitude (GDA2020)	Location Longitude (GDA2020)	ESC structure water source location	Downstream Monitoring Point	Receiving waters description
SD1	-22.6334	148.6440	Out-of-pit spoil dump	MDC_DS	May Downs Creek
SD2	-22.6429	148.6451	Topsoil Stockpile	BC_DS	Bore Creek

Table F2 – Surface Water Quality Objectives

Quality characteristic (units)	Sediment dam trigger value	Downstream monitoring point trigger value	Source	Frequency
pH (pH units)	6.5 – 8.5	6.5 – 8.5	EPP WQO (aquatic ecosystems)	Monthly and Daily during release from the ESC structures as per Condition F5(a) (the first sample must be taken within 2 hours of commencement of release)
Electrical Conductivity (µS/cm)	492*	Baseflow: 410 ² High flow: 210 ³	EPP WQO (aquatic ecosystems)	
Total suspended solids (mg/L) ¹	36*	30	EPP WQO (aquatic ecosystems)	
Turbidity (NTU) ¹	60*	50	EPP WQO (aquatic ecosystems)	
Dissolved oxygen	64%-132%	85%-110% saturation	EPP WQO (aquatic ecosystems)	
Sulfate (as SO ₄) mg/L	6*	5	EPP WQO (aquatic ecosystems)	
Ammonia (µg/L)	20	20	EPP WQO (aquatic ecosystems)	
Nitrate (µg/L)	60	60	EPP WQO (aquatic ecosystems)	
Metals and Metalloids				
Aluminium (mg/L)	0.066*	0.055	ANZG (2018), MMC	Monthly and Daily during release from the ESC structures as per Condition F5(a) (the first sample must be taken within 2 hours of commencement of release).
Arsenic (mg/L)	0.0156*	0.013	ANZG (2018), MMC	
Cadmium (mg/L)	0.00024*	0.0002	ANZG (2018), MMC	
Chromium (mg/L)	0.0012*	0.001	ANZG (2018), MMC	
Copper (mg/L)	0.0024*	0.002	MMC	
Lead (mg/L)	0.00408*	0.0034	ANZG (2018)	
Manganese (mg/L)	2.28*	1.9	ANZG (2018), MMC	
Mercury (mg/L)	0.000072*	0.00006	ANZG (2018) 99 th percentile	
Molybdenum (mg/L)	0.0408*	0.034	ANZG (2018), MMC	
Selenium (mg/L)	0.006*	0.005	ANZG (2018) 99 th percentile	

NOTE:

ANZG (2018) = Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia, or more recent version.

EPP WQO (aquatic ecosystems) = values derived from Environmental Protection (Water) Policy 2009 Isaac River Sub-basin Environmental Values and Water Quality Objectives Basin No. 130 (part), including all waters of the Isaac River Sub-basin (including Connors River), Lower Isaac River catchment waters.

MMC = Model Mining Conditions (ESR/2016/1936). Department of the Environment, Tourism, Science and Innovation, Queensland Government, or more recent version.

All metals and metalloids must be measured as 'dissolved' (from analysis of a field filtered sample) and total (unfiltered). Limits for metals and metalloids apply to dissolved results.

*20% increase on trigger value

1 = sediment dam release point trigger values for Total Suspended Solids and Turbidity can be exceeded for water discharged from the sediment dam during uncontrolled releases during a heavy rainfall event over and above the sediment dam's design storage capacity.

2 = Less than 0.5 m³/s in the receiving waters.

3 = > 5.0 m³/s where 10 m³/s in the receiving waters

F7	If monitoring required by condition F6 , for any ESC structure, identifies an exceedance of any of the sediment dam trigger values identified in Table F2 – Surface Water Quality Objectives , all water in that structure must be transferred to a storage listed in Table F4 – Mine Affected Water Storages .
F8	If the monthly or release-based water quality sampling as specified in condition F6 identifies an exceedance of a sediment dam trigger value detailed in Table F2 – Surface Water Quality Objectives , the environmental authority holder must complete an investigation into the cause of the exceedance in water quality and the potential for environmental harm.
F9	If the investigation required by condition F8 determines that the exceedance is the result of the mining activity, the environmental authority holder must notify the administering authority within twenty-four (24) hours of receiving the investigation results via WaTERS.
F10	Following completion of the investigation required by condition F8 , the environmental authority holder must submit a written report to the administering authority within ten (10) business days outlining: (a) details of the investigation carried out including any assumptions and limitations of the investigation; (b) findings of the investigation including an explanation of the cause of the exceedances identified; (c) recommendations of the investigation; and (d) actions taken to comply with the conditions of the environmental authority and to prevent environmental harm.
F11	Releases to receiving waters must not cause erosion of the bed and banks of the receiving environment or cause a material build-up of sediment in such waters.
F12	Water monitoring and sampling must be in accordance with the latest version of the Queensland Government's <i>'Monitoring and Sampling Manual'</i> .
F13	The environmental authority holder must design, install and maintain adequate stormwater management infrastructure to minimise stormwater from entering disturbed areas.
F14	Receiving environment monitoring Upstream and downstream surface waters must be monitored: (a) for the quality characteristics in Table F2 – Surface Water Quality Objectives; (b) at the monitoring frequency specified in Table F2 – Surface Water Quality Objectives; and (c) at the monitoring points identified in Table F3 – Receiving Waters Monitoring Locations and Appendix 4. Surface Waters Monitoring Locations.

Table F3 – Receiving Waters Monitoring Locations

Station ID	Catchment Area	Latitude (GDA2020)	Longitude (GDA2020)	Description
Monitoring – Upstream sites				
BBC_US	Blackburn Creek	-22.5871	148.5819	Blackburn Creek at the upstream Mineral Development License boundary
MDC_US	May Downs Creek	-22.6261	148.5844	May Downs Creek at the upstream Mineral Development License boundary
BC_US	Bore Creek	-22.6643	148.6011	Bore Creek at the upstream Mineral Development License boundary
Monitoring – Downstream sites				
BBC_DS	Blackburn Creek	-22.5344	148.6527	Blackburn Creek at Golden Mile Road
MDC_DS	May Downs Creek	-22.6095	148.6666	May Downs Creek at Dingo Mount Flora Road
BC_DS	Bore Creek	-22.6497	148.6701	Bore Creek at Dingo Mount Flora Road
SC_DS	Stephens Creek	-22.5292	148.6421	Stephens Creek at Golden Mile Road
RC_DS	Rolf Creek	-22.7119	148.6983	Rolf Creek at Dingo Mount Flora Road

F15	Unless otherwise advised by the administering authority, if a water quality characteristic measured at a downstream site specified in Table F3 – Surface Waters Monitoring Locations exceeds any of the <i>Downstream monitoring point trigger values</i> specified in Table F2 – Surface Water Quality Objectives, the environmental authority holder must compare this result to the applicable upstream site and: (a) If the quality measured at a downstream site is equal to or less than the quality measured at the applicable upstream site, no further action is required; or (b) If the quality measured at a downstream site is greater than the quality measured at the applicable upstream site, complete an investigation into the cause of the exceedance in water quality and the potential for environmental harm and submit a written report to the administering authority within twenty (20) business days outlining: (i) details of the investigation carried out including any assumptions and limitations of the investigation; (ii) findings of the investigation including an explanation of the cause identified; (iii) recommendations of the investigation; and (iv) actions taken to comply with the conditions of the environmental authority and to prevent environmental harm.
F16	If an exceedance in accordance with condition F15(b) occurs, the environmental authority holder must notify the administering authority within twenty-four (24) hours of receiving the monitoring result via WaTERS.
F17	All surface water monitoring data must be submitted to the administering authority on request.
F18	Mine affected water storage monitoring The quality of water in water storages in Table F4 – Mine Affected Water Storages must be monitored: (a) at the location in Table F4 – Mine Affected Water Storages; (b) at the monitoring frequency in Table F4 – Mine Affected Water Storages; (c) for all quality characteristics specified in Table F2 – Surface Water Quality Objectives; and (d) include the volume of the water storage (in megalitres) at the time of monitoring.
F19	If results of any water storage monitoring from condition F18 exceed a trigger value for the water quality characteristics specified in Table F2 – Surface Water Quality Objectives, then all necessary actions must be taken to prevent access to the storage by wildlife and livestock.

Table F4 – Mine Affected Water Storages

Mine Affected Water Storage	Location Latitude (GDA2020)	Location Longitude (GDA2020)	Description	Frequency
MWD1	-22.6449	148.6351	ROM MWD	Quarterly
MWD2	-22.6474	148.6429	MIA MWD	Quarterly
MWD3	-22.6416	148.6203	Pit MWD	Quarterly

F20	Water Management Plan Before the commencement of activities, a Water Management Plan must be developed and implemented for the authorised activity.
F21	The Water Management Plan must: (a) provide for effective water management of actual and potential environmental impacts resulting from the authorised activity; and (b) include: (i) a details of the potential source of contaminants; (ii) a water balance model for the site; (iii) a water management system for the site; (iv) measures to prevent, manage and reduce AMD; (v) contingency procedures for incidents and emergencies; and (vi) a program for monitoring and review of the effectiveness of the Water Management Plan.
F22	Erosion and Sediment Control On or before the commencement of activities, an Erosion and Sediment Control Plan must be developed and implemented for the authorised activity.

F23	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; (b) an assessment of relevant properties of soils and waste materials; (c) identification of receiving waters environmental values, water quality objectives and management intent; (d) specification of minimum design criteria for erosion and sediment control structures to achieve the management intent of receiving waters; (e) locations and descriptions of all erosion and sediment control measures; (f) installation and management details for the monitoring locations listed in Table F1 – ESC Structure Monitoring Locations; and (g) an audit schedule to ensure erosion and sediment control measures are maintained.
F24	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; (b) assess the plan against the requirements of condition F23; (c) include recommended actions to ensure actual and potential environmental impacts are effectively managed; (d) provide details and timelines of the actions to be taken; and (e) identify any amendments made to the Erosion and Sediment Control Plan.
F25	Any amendment to the Erosion and Sediment Control Plan identified by condition F24(e) must be made and the plan implemented by 1 September each year, or a longer period agreed to in writing by the administering authority.

Schedule G: Land	
Condition number	Condition
G1	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.
G2	All areas significantly disturbed by mining activities authorised under condition A4 must be rehabilitated in accordance with all requirements stated in Appendix 5. Rehabilitation Completion Criteria and: - no later than twenty (20) months following completion of mining activities in each disturbance domain identified in Table A1 – Maximum Disturbance Area for each Bulk Sample Disturbance Domain; or - the timeframe specified in Appendix 5. Rehabilitation Completion Criteria, where a timeframe has been specified for that specific criterion or milestone only.
G3	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.
G4	Topsoil The environmental authority holder must ensure that: (a) topsoil is removed from areas to be disturbed by the authorised activities and stockpiled 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 provide to the administering authority on request. Note: <i>To separate topsoil and overburden and to prevent or minimise the erosion of these stockpiles the following measures or similar measures can be used:</i> <i>identify topsoil and overburden layers before stripping topsoil;</i> <i>store topsoil and overburden in separate stockpiles;</i> <i>install silt fences or bunding around the stockpiles;</i> <i>where practicable reuse topsoil stockpiles within 12 months;</i> <i>establish and maintain a temporary cover crop on stockpiles; and</i> <i>limit the height of topsoil stockpiles to 2 metres.</i>
G5	Topsoil stockpiles must: (a) be located away from drainage areas, roads, machinery, transport corridors, and stock grazing areas; and (b) be seeded or covered with a water-shedding lining to prevent unnecessary erosion of topsoil.

G6	Measures to prevent fauna being harmed from entrapment must be implemented during the construction and operation of the authorised activities.
G7	Hazardous contaminants The environmental authority holder must plan and conduct activities on site to prevent any potential or actual release of a hazardous contaminant.
G8	The environmental authority holder 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 waters.
G9	All chemicals and flammable or combustible liquids must be contained within an on-site effective containment system that is impervious to the material stored and managed 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. Where no relevant Australian standard exists, store such materials within an effective onsite containment system.
G10	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.
G11	Contaminated land Before applying for surrender of this environmental authority, the environmental authority holder must (if applicable) provide to the administering authority a site investigation report under the Act, in relation to any part of the relevant tenure which has been used for notifiable activities or which the environmental authority holder is aware is likely to be contaminated land, and also carry out any further work that is required as a result of that report to ensure that the land is suitable for its final land use.
G12	Weed Management A Weed Management Plan must be developed prior to the commencement of activities, and implemented for the duration of activities and must outline: (a) areas of control priority and the methods used to determine such areas; (b) strategies to promote dense pasture cover (to decrease weeds establishment) through reduced disturbance; (c) monitoring methodologies that document the spread of weeds and any new outbreaks; (d) methods for the control of weeds that include best practice management; (e) stringent wash-down and inspection procedures for both machinery involved in clearing/construction activities and those operating outside of designated roads during mine operation; (f) truck wash procedure to reduce weed infestations; (g) protocol for an annual weed inspection; and (h) promotion of the awareness of weed management issues at the site.

G13	Exploration Unless otherwise stated by a condition of this environmental authority, disturbance due to exploration activities in areas not authorised to be mined must be rehabilitated in accordance with the '<i>Eligibility criteria and standard conditions for exploration and mineral development projects</i>' (ESR/2016/1985).
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Schedule H: Biodiversity	
Condition number	Condition
H1	Impacts to Prescribed Environmental Matters Significant Residual Impacts to prescribed environmental matters are not authorised under this environmental authority or the <i>Environmental Offsets Act 2014</i> unless the impact(s) is specified in Table H1 - Significant Residual Impacts to Prescribed Environmental Matters.
H2	All impacts to Matters of State Environmental Significance in Table H1 - Significant Residual Impacts to Prescribed Environmental Matters, and depicted in Appendix 8. Impacts to Prescribed Environmental Matters, must be determined, documented, and mapped by an appropriately qualified person.
H3	Records of impacts to Matters of State Environmental Significance in condition H2 must be kept for a minimum of five (5) years and include: (a) the size and extent of impact; (b) details about the condition of the Matters of State Environmental Significance (e.g., dominant vegetation and remnant status); and (c) a determination of whether the impact is a significant residual impact.
H4	Pre-clearing surveys must be undertaken by an appropriately qualified person prior to any disturbance to avoid any impacts to prescribed environmental matters unless the impact(s) are specified in Table H1 - Significant Residual Impacts to Prescribed Environmental Matters.
H5	Environmental Offsets An environmental offset must be made in accordance with the <i>Environmental Offsets Act 2014</i> and the most recent version of the Queensland Environmental Offsets Policy (EPP/2015/1658) for the maximum extent of impact to each prescribed environmental matter requiring an offset listed in Table H1 - Significant Residual Impacts to Prescribed Environmental Matters. Note: Deemed conditions provided in section 16 of the <i>Environmental Offsets Act 2014</i> also apply to this authority. Any contravention of a deemed condition will be dealt with under the <i>Environmental Protection Act 1994</i>.

Table H1 – Significant Residual Impacts to Prescribed Environmental Matters

Prescribed Environmental Matter	Maximum Extent of Impact (hectares)	Significant Residual Impact (Yes/No)	State Environmental Offset Required
Threatened and Special Least Concern Species			
Australian Painted-snipe (<i>Rostratula australis</i>)	187.8	Yes	No*
Latham's Snipe (<i>Gallinago hardwickii</i>)	187.8	No	No
Sharp-tailed Sandpiper (<i>Calidris acuminata</i>)	158.3	No	No
Squatter Pigeon (<i>Geophaps scripta scripta</i>)	0.4	No	No
Short-beaked Echidna (<i>Tachyglossus aculeatus</i>)	237.6	No	No
Grey Snake (<i>Hemiaspis damelii</i>)	187.8 ha possible foraging, shelter and dispersal habitat 12.6 ha of possible shelter habitat 7.6 ha of possible dispersal habitat	No	No
Ornamental Snake (<i>Denisonia maculata</i>)	187.8 ha possible foraging, shelter and dispersal habitat 12.6 ha of possible shelter habitat 7.6 ha of possible dispersal habitat	Yes	No*
<i>Solanum elaeagnifolium</i>	42.0	Yes	Yes
<i>Solanum adenophorum</i>	42.0	Yes	Yes

* This matter is proposed to be offset under the EPBC Act approval conditions.

END OF CONDITIONS

Definitions

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

Administering authority is the agency that administers the environmental authority provisions under the *Environmental Protection Act 1994*.

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).

ANZG (2018) refers to the Australian and New Zealand Guidelines for Fresh and Marine Water Quality. This is available at <https://www.waterquality.gov.au/anz-guidelines>.

Appropriately qualified person or AQP 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.

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.

Bund means:

- (a) an earth mound or similar structure (e.g. a concrete block wall), whether impervious or not, constructed to contain spilled material (e.g. petrol, diesel, oil etc); or
- (b) a structure to prevent or reduce soil erosion.

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.

Commencement of activities is the date as determined by condition **A9**, being the date that activities authorised under condition **A4** commenced.

Commercial place means a workplace used as 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, which is not part of the mining activity and does not include employees' accommodation or public roads.

Contaminant is defined in section 11 of the *Environmental Protection Act 1994* 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;
- (e) a combination of contaminants.

Contamination, with reference to the environment, is defined in section 10 of the *Environmental Protection Act 1994* as the release (whether by act or omission) of a contaminant into the environment.

Disturbance of land includes:

- (a) bulk sample activities including disturbance domains Bulk Sample Pit, Out-of-pit Dump, MIA Complex, Water infrastructure, Haul Road and Access Roads authorised under condition **A4** 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.

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

Environmental authority means a licence or approval issued by the administering authority under the *Environmental Protection Act 1994*.

Environmental authority holder means:

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

Environmental nuisance has the meaning in section 15 of the *Environmental Protection Act 1994*.

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

Exploration activity means tracks, lines, drill holes, drilling and sampling for the purposes of exploring the coal resource or conducting geological surveying.

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

Hazardous contaminant is defined in schedule 4 of the *Environmental Protection Act 1994*, and defines a hazardous contaminant as "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)".

Incident means a set of circumstances arising as a result of activities carried out under an environmental authority which cause or threaten to cause environmental harm.

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

LA01, adj, 1 hour means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any **1-hour** measurement period, using Fast response.

LAeq, adj, 1 hour means an A-weighted sound pressure level of a continuous steady sound, adjusted for tonal character, that within a **1-hour** period has the same mean square sound pressure of a sound that varies with time.

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

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

Landowner is defined in schedule 4 of the *Environmental Protection Act 1994*, and defines the owner of the land as -

- (a) The "owner" of land is-
 - (i) for freehold land-the person recorded in the freehold land register as the person entitled to the fee simple interest in the land; or
 - (ii) for land held under a lease, licence or permit under an Act-the person who holds the lease, licence or permit; or
 - (iii) for trust land under *the Land Act 1994* - the trustees of the land; or
 - (iv) for Aboriginal land under the *Aboriginal Land Act 1991* - the persons to whom the land has been transferred or granted; or
 - (v) for Torres Strait Islander land under the *Torres Strait Islander Land Act 1991*-the persons to whom the land has been transferred or granted; or
 - (vi) for land for which there is a native title holder under the *Native Title Act 1993* (Cwlth) -each registered native title party in relation to the land.
- (b) Also, a mortgagee of land is the owner of the land if –
 - (i) the mortgagee is acting as a mortgagee in possession of the land and has the exclusive management and control of the land; or
 - (ii) the mortgagee, or a person appointed by the mortgagee, is in possession of the land and has the exclusive management and control of the land.

Levee means an embankment that only provides for the containment and diversion of stormwater or flood flows from a contributing catchment, or containment and diversion of flowable materials resulting from releases from other works, during the progress of those stormwater or flood flows or those releases; and does not store any significant volume of **water** or **flowable substances** at any other times.

LOR means limit of reporting.

Material environmental harm is defined in section 16 of the *Environmental Protection Act 1994*.

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.

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

Mine affected water

- (a) means the following types of water:
 - (i) 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 2019 if it had not formed part of the mining activity
 - (iii) rainfall runoff which has been in contact with any areas disturbed by 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 bulk sample pit water or workshop water
 - (iv) groundwater which has been in contact with any areas disturbed by activities which have not yet been rehabilitated
 - (v) a mix of mine affected water (under any of paragraphs i)-vi) and other water.
- (b) does not include surface water runoff which, to the extent that it has been in contact with areas disturbed by 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 have 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.

Minimise means to reduce to the smallest possible amount or degree.

Monitoring bore means a groundwater bore that provides access to groundwater for measuring its quality and level; and allows groundwater samples to be withdrawn for laboratory analysis.

Overburden refers to material overlying a mineral ore deposit, up to but not including the topsoil.

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).

Post mine land use or PMLU means the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

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 **Appendix 1. Project Layout – Authorised Disturbance Areas** of this environmental authority.

Receiving waters means the waters into which this environmental authority authorises releases of surface runoff water.

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

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

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

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.

NOTE:

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

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

Accommodation for mine employees or contractors is a sensitive place if the land is held by a mining company or related company, and if occupation is restricted to the employees, contractors and their families for the particular mine or mines which are held by the same company or a related company. For example, a township (occupied by the mine employees, contractors and their families for multiple mines that are held by

different companies) would be a sensitive place, even if part or all of the township is constructed on land owned by one or more of the companies.

Seepage means the process by which water leaks through the base or sides of a water storage but does not mean the movement of water as the result of opening a gate or valve or turning on a pump.

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

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.

However, the following areas are not included:

- (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 of Schedule G: Land or exploration areas rehabilitated in accordance with Condition G13;
- (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 the Landowner Agreement 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.

Surface runoff water is water from areas that are disturbed by mining operations (including out-of-pit dumps and rehabilitated areas). This runoff may contain high sediment loads but would not contain contaminated material or high total dissolved solids (TDS).

The Act means the *Environmental Protection Act 1994*.

The site refers to the area of land on which the project footprint is located as illustrated in **Appendix 1. Project Layout – Authorised Disturbance Areas**.

Topsoil refers to 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 surface.

'µS/cm' means micro siemens per centimetre.

Void means any constructed, open excavation in the ground.

Waste is defined under Section 13 of the *Environmental Protection Act 1994*.

Waste rock means material other than a mineral ore deposit that is extracted as part of the mining activity carried out on the land the subject of this environmental authority.

Water is defined under Schedule 4 of the *Water Act 2000*.

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 refers to 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.

WaTERS means Water Tracking and Electronic Reporting System or subsequent updated system, used to submit monitoring data and notify the Queensland Government.

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.

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

Wetland refers to an area 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.

WQO refers to Water Quality Objectives as defined under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019.

END OF DEFINITIONS

APPENDICES

Appendix 1. Project Layout – Authorised Disturbance Areas

Appendix 2. Sensitive Receptors

Appendix 3. Location of Groundwater Monitoring Bores

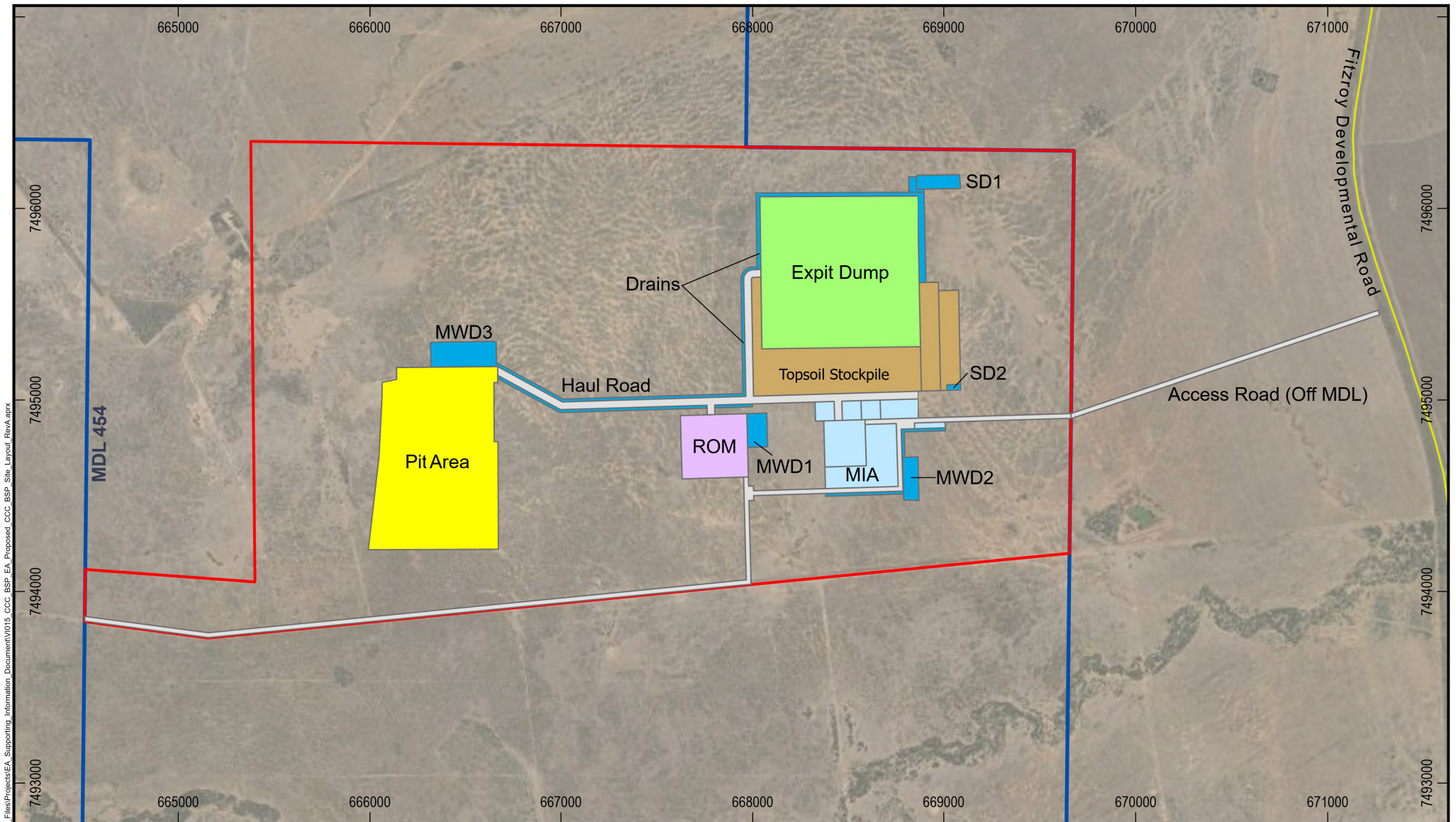
Appendix 4. Surface Waters Monitoring Locations

Appendix 5. Rehabilitation Completion Criteria

Appendix 6. Erosion Classification Framework

Appendix 7. Seed Mix Species List

Appendix 8. Impacts to Prescribed Environmental Matters



Legend

QLD Roads	Mine Infrastructure Area	Water Infrastructure
Bulk Sample Pit	ROM	MDL 454
Ex-pit Dump	Topsoil Stockpiles	Project Boundary
Roads		

Source: State of Queensland (Department of Resources) 2021, Callan Coking Coal 2024, METServe 2024, Maxar.

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APPENDIX 1

Project Layout – Authorised Disturbance Areas

0 250 500 1,000

Meters

Scale: 1:28,000 (A4)

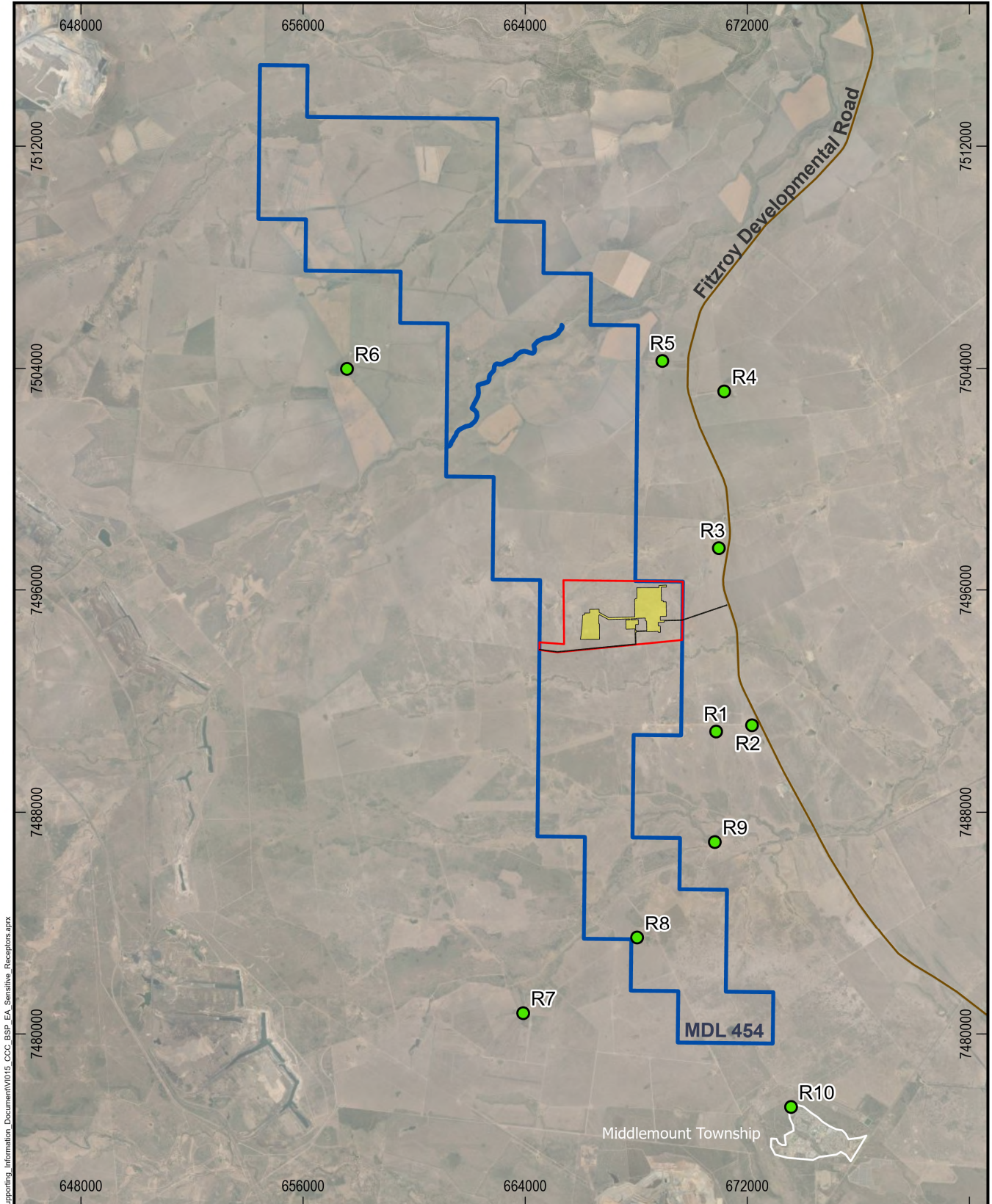
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Projection: MGA55

FIGURE 3-1

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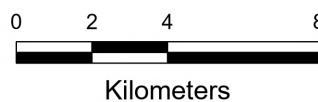
METSERVE
Mining & Energy Technical Services Pty Ltd



Legend

- Noise Receptors
- Fitzroy Developmental Road
- MDL 454
- Project Area
- Maximum Disturbance Footprint

Callan Coking Coal BSP **APPENDIX 2** **Sensitive Receptors**



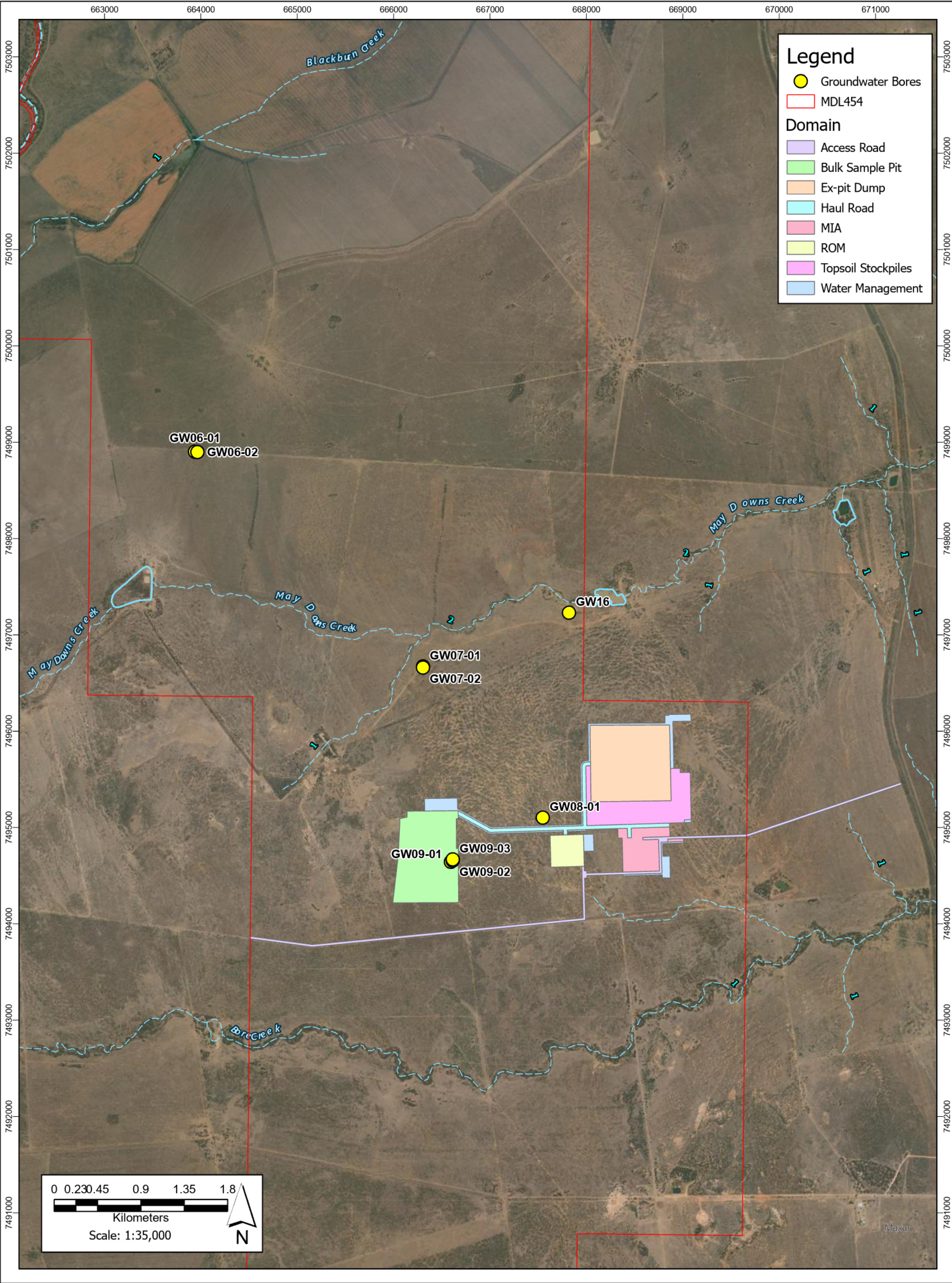
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Datum: GDA2020
Projection: MGA55

FIGURE 2-4





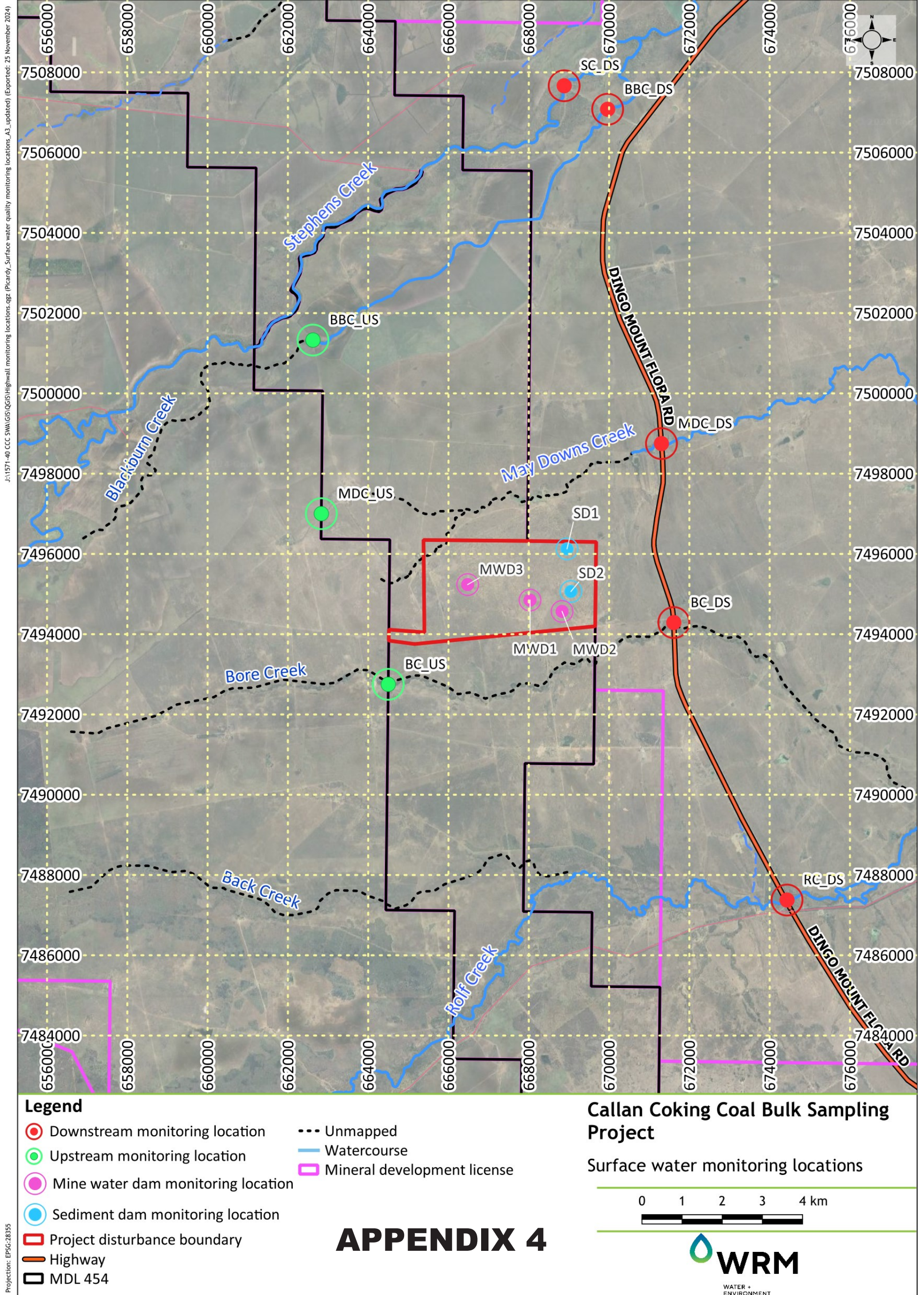


Figure 8.1 Surface water monitoring locations

Appendix 5. Rehabilitation Completion Criteria

Domain	Post-Mining Land Use	Rehabilitation Objectives	Completion Criteria	
All Domains	Cattle grazing	Safe for humans and animals and stable on decommissioning and into the foreseeable future	ALL1	Subsoil of a suitable quality, as signed-off by an AQP ¹ , has been applied, spread and compacted to design specifications.
			ALL2	All erosion and sediment control structures have been installed where required and are functioning properly as verified by an AQP.
			ALL3	Areas of surface ponding are remediated by re-profiling and ripping to be free draining.
			ALL4	Any erosion classified as 'moderate' or 'severe' as defined in Appendix 6. Erosion Classification Framework has been remediated.
			ALL5	An assessment of erosion potential has been completed by an AQP, and the average erosion rate is <5 t/ha/year.
			ALL6	Permanent drainage channels to be designed in accordance with the ' <i>Guideline: Works that interfere with water in a watercourse for a resource activity—watercourse diversions authorised under the Water Act 2000</i> '.
		Not a source of environmental harm to the surrounding environment. Vegetation communities capable of supporting grazing	ALL7	Soil health and suitability is assessed and documented by an AQP to confirm topsoil is suitable for the PMLU ² and target vegetation establishment.
			ALL8	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.
			ALL9	Topsoil is applied to a minimum depth of 0.25m.
			ALL10	Organic mulch is applied at a rate of at least 5t/ha of hay or organic material for sediment control, if determined by an AQP.

¹ 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

² 'PMLU' means Post-Mining Land Use.

			ALL11 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) $< 6\%$.
			ALL12 Seeding is completed at an average rate of 0.25 kg/ha for trees and shrubs, 13-15 kg/ha for grasses and 13-15 kg/ha for sterile cover crops.
			ALL13 With the exception of a non-permanent cover crop species, the seed mix contains only, but not necessarily all, those species listed in Appendix 7. Seed Mix Species List or as otherwise agreed to in writing by the administering authority
			ALL14 For ALL15 to ALL20, the applicable timeframe for condition G2, for each domain, is 5 years from the completion of seeding at the relevant domain.
			ALL15 More than six (6) species of perennial pasture species is present and perennial grass cover is $> 60\%$.
			ALL16 Shade tree species are present with a minimum density of 10 stems/ha.
			ALL17 Vegetation groundcover is $> 80\%$ on all slopes with a gradient $> 10\%$, and $> 50\%$ on slopes with a gradient $\leq 10\%$.
			ALL18 If after 12 months from the date of seeding, seeding has not been successful (e.g. failure to strike), supplementary seeding is required within 12 months.
			ALL19 Rehabilitated areas have less than 0.2% cover of <i>Parthenium hysterophorus</i> AND rehabilitated areas are to have less than 0.1% cover of <i>Harrisia martinii</i> AND any invasive plants listed under the <i>Biosecurity Act 2014</i> are not to exceed densities of one (1) individual per hectare, as confirmed by an AQP from annual monitoring.
			ALL20 Land suitability assessment by an AQP certifies that rehabilitated land has achieved a post-mine land suitability class of 3 or better for cattle grazing as defined in the '<i>Guidelines for Agricultural Land Evaluation in Queensland</i>'. Where a land assessment demonstrates that limiting factors prevent the achievement of a post-mine land suitability class of 3 or better, land must be rehabilitated to achieve

				at least a class 3 for all soil properties with the exception of those identified as limiting factors preventing achievement of class 3. ALL21 Surface water quality results monitored monthly during flow at downstream locations specified in Table F3 – Receiving Waters Monitoring Locations, must not exceed the values specified in Table F2 – Surface Water Quality Objectives for a minimum of five (5) consecutive years. ALL22 If the surface water quality exceeds criteria specified in Table F2 – Surface Water Quality Objectives, the applicable upstream/reference site must be compared to the downstream site result; and quality result measured at a downstream site must be equal to or less than the quality result measured at the applicable upstream/reference site. ALL23 Groundwater monitoring must demonstrate the groundwater quality is within the quality limits listed in Table E2 – Groundwater Quality Limits at the locations listed in Table E1 – Groundwater Monitoring Locations and Frequency for a minimum of five (5) consecutive years after achievement of the final rehabilitation completion criteria.
Bulk Sample Pit	Cattle grazing	Safe for humans and animals and stable on decommissioning and into the foreseeable future	BSP1 All rehabilitation and associated works are to have 'as-constructed' plans prepared. BSP2 The final landform surveyed is to be constructed as per the 'as-constructed' plans. BSP3 Batters do not exceed a maximum slope of 12.5% and are stable as demonstrated by erosion modelling. BSP4 Bulk sample pit is backfilled and landform certified as geotechnically stable by an AQP. BSP5 All erosion and sediment control structures have been installed as per the 'as constructed' plan and are functioning properly as verified by an AQP.	
Out-of-pit Dump	Cattle grazing	Safe for humans and animals and stable on decommissioning and	OOPD1 All rehabilitation and associated works are to have 'as-constructed' plans prepared. OOPD2 The final landform surveyed is to be constructed as per the 'as-constructed' plans.	

Environmental authority P-EA-100802672 Callan Coking Coal

		into the foreseeable future.	OOPD3	Batters do not exceed a maximum slope of 15% and are stable as demonstrated by erosion modelling.
			OOPD4	Final landform certified as geotechnically stable by an AQP.
			OOPD5	All erosion and sediment control structures have been installed as per the 'as constructed' plan and are functioning properly as verified by an AQP.
MIA Complex	Cattle grazing	Safe for humans and animals and stable on decommissioning and into the foreseeable future.	MIA1	All services are disconnected, terminated and removed, and all infrastructure, buildings, hardstand and machinery/equipment removed.
			MIA2	Reshaping and earthworks are certified as geotechnically stable by an AQP.
	Not a source of environmental harm to the surrounding environment. Vegetation communities capable of supporting grazing		MIA3	Detailed site investigation report, as required under the <i>Environmental Protection Act 1994</i> , completed.
			MIA4	All contamination is remediated or removed from site.
			MIA5	Any contamination removed from site has been removed in accordance with relevant regulations.
			MIA6	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.
Water infrastructure	Cattle grazing	Safe for humans and animals and stable on decommissioning and into the foreseeable future.	WI1	All surface water drainage infrastructure that is not required in the PMLU is removed.
			WI2	Reshaping and earthworks are certified as geotechnically stable by an AQP.
			WI3	All areas of substantial surface cracking or subsidence are remediated and no associated effects of erosion or changed surface water flow paths are evident.
	Not a source of environmental harm to the surrounding environment. Vegetation		WI4	Detailed site investigation report, as required under the <i>Environmental Protection Act 1994</i> , completed.
			WI5	All contamination is remediated or removed from site.
			WI6	Any contamination removed from site has been removed in accordance with relevant regulations.

		communities capable of supporting grazing	WI7	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.
Haul Road and Access Roads	Cattle grazing	Safe for humans and animals and stable on decommissioning and into the foreseeable future.	R1	All hardstand, concrete areas and road materials (bitumen, gravel) removed.
		Not a source of environmental harm to the surrounding environment. Vegetation communities capable of supporting grazing	R2	Detailed site investigation report, as required under the <i>Environmental Protection Act 1994</i> , completed.
			R3	All contamination is remediated or removed from site.
			R4	Any contamination removed from site has been removed in accordance with relevant regulations.
			R5	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.

Appendix 6. 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 7. 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.

Cattle grazing
Grasses <i>Ancistrachne uncinulata</i> (Hooky grass) <i>Bothriochloa ewartiana</i> (Desert bluegrass) <i>Chloris divaricata</i> <i>Chloris ventricosa</i> (Tall chloris) <i>Cymbopogon refractus</i> (Barbed-wire grass) <i>Dichanthium sericeum</i> <i>Themeda triandra</i> (Kangaroo grass) Japanese Millet - sterile hybrid Silk Sorghum Shrubs/Trees <i>Dodonaea viscosa</i> <i>Acacia argyrodendron</i> <i>Eucalyptus cambageana</i> (Dawson gum) <i>Casuarina cristata</i> (Belah) <i>Eucalyptus thozetiana</i> <i>Owenia acidula</i> (Emu apple) <i>Cassia brewsteri</i> <i>Lysiphyllum carronii</i> (Ebony tree) <i>Lysiphyllum cunninghamii</i> <i>Terminalia oblongata</i> <i>Geijera parviflora</i> (Wilga) <i>Eremophila mitchellii</i>

Appendix 8. Impacts to Prescribed Environmental Matters

Potential Habitat for the Australian Painted-snipe

Potential Habitat for the Latham's Snipe

Potential Habitat for the Sharp-tailed Sandpiper

Potential Squatter Pigeon Habitat

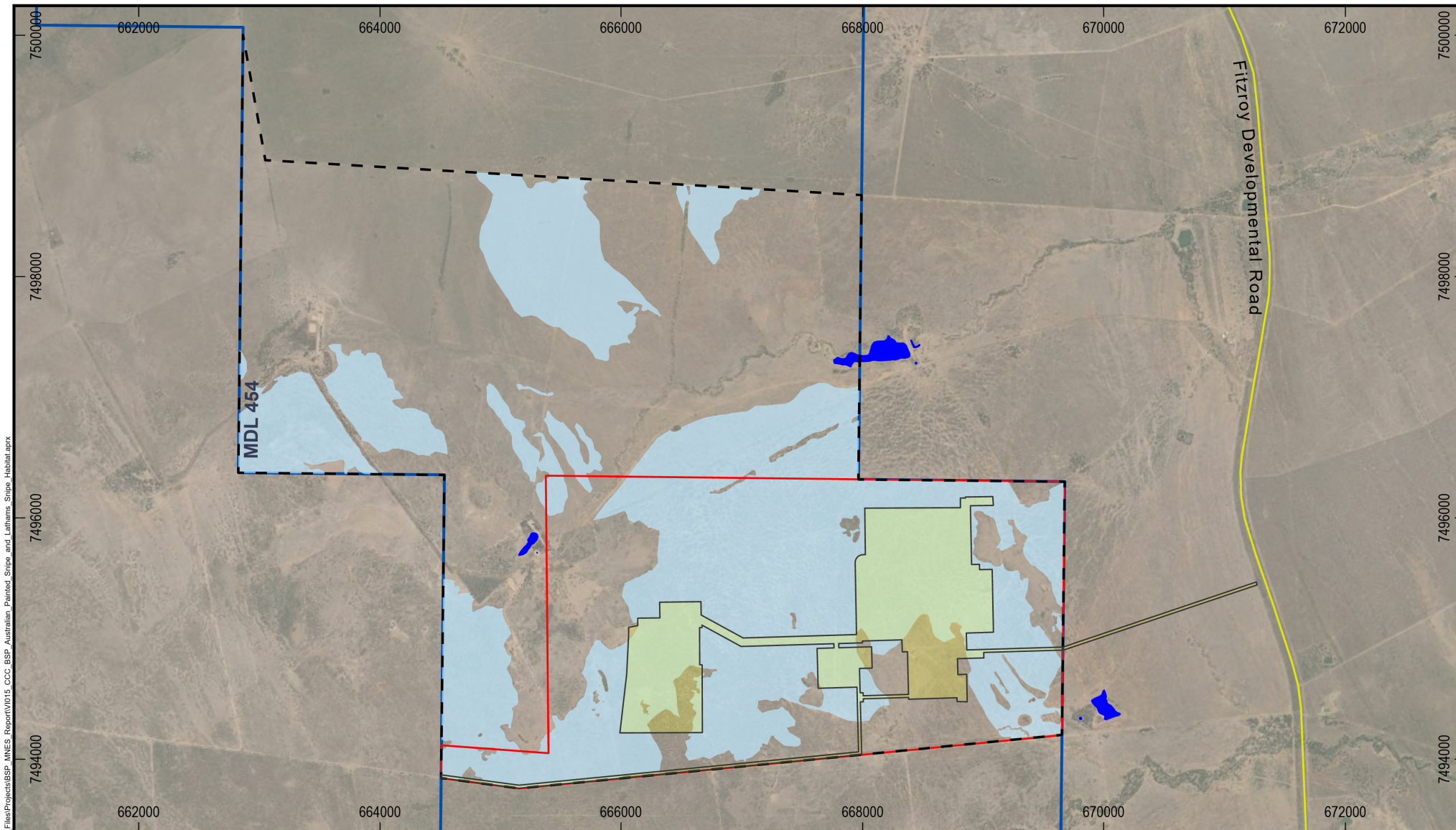
Potential Short-beaked Echidna Habitat

Potential Grey Snake Habitat

Ornamental Snake Habitat

Habitat for *Solanum elaeagnifolium* within the Survey Area

Potential *Solanum adenophorum* Habitat



Legend

- QLD Roads
- MDL 454
- - - Survey Area
- Project Area
- Clearing Footprint

Habitat Class

- Permanent Dams with Peripheral Vegetation
- Temporary Foraging Habitat in Shallow Gilgais

Source: State of Queensland (Department of Resources) 2024, Callan Coking Coal 2025, METServe 2025, Maxar.

Callan Coking Coal BSP **Potential Habitat for the Australian Painted-snipe**

0 0.5 1 1.5

Kilometers

Scale: 1:45,000 (A4)

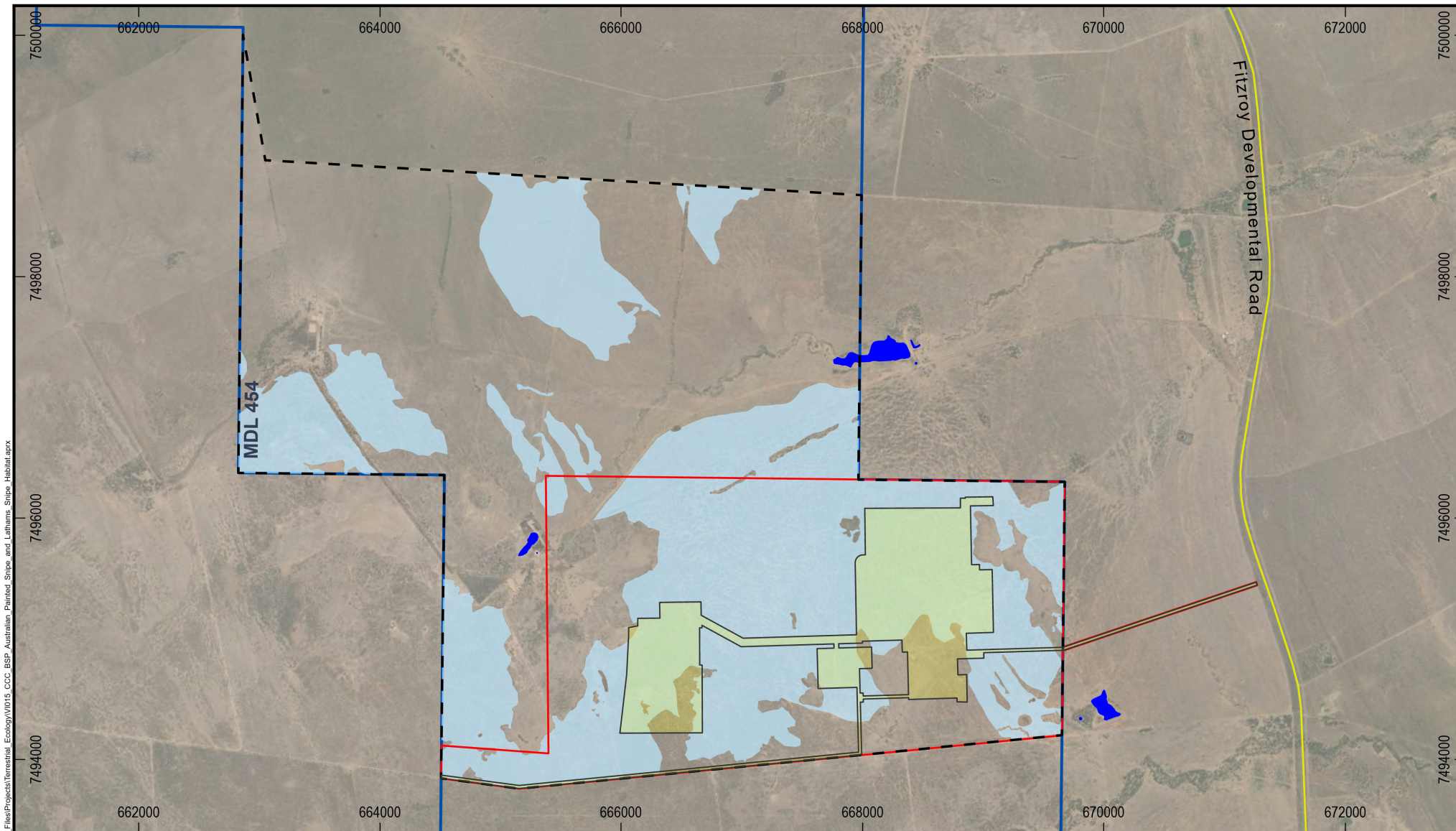
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FIGURE 4-5

CALLAN COKING COAL

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Legend	
QLD Roads	Habitat Class
MDL 454	Permanent Dams with Peripheral Vegetation
Survey Area	Temporary Foraging Habitat in Shallow Gilgais
Project Area	
Clearing Footprint	

Source: State of Queensland (Department of Resources) 2024, Callan Coking Coal 2024, MEC/METServe 2024, Maxar.

Callan Coking Coal BSP

Potential Habitat for the Latham's Snipe

Kilometers

Scale: 1:45,000 (A4)

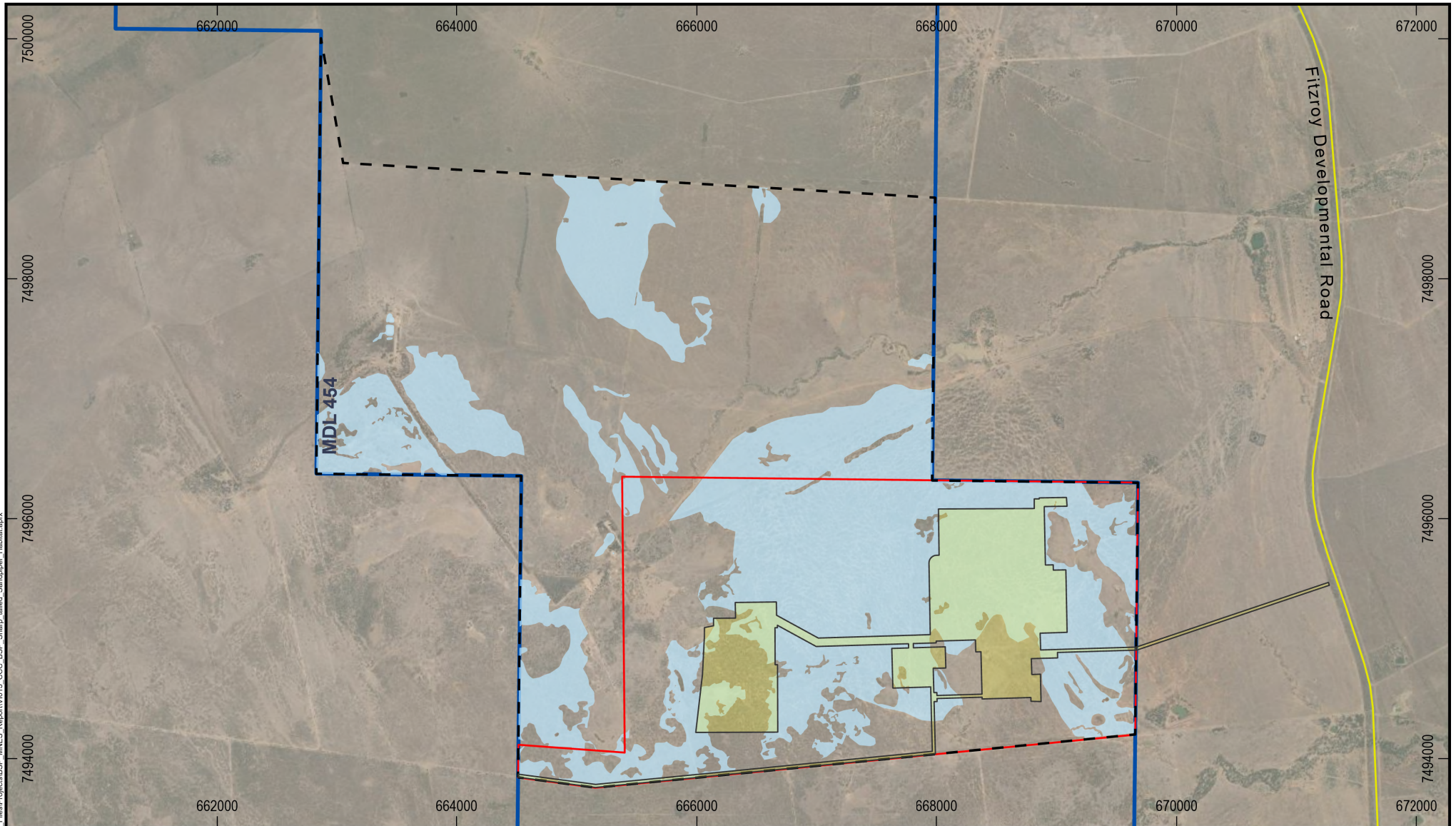
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CALLAN COKING COAL

METSERVE
Mining & Energy Technical Services Pty Ltd

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Legend

- QLD Roads
- MDL 454
- Survey Area
- Project Area
- Potential Sharp-tailed Sandpiper Habitat
- Clearing Footprint

Source: State of Queensland (Department of Resources) 2021, Callan Coking Coal 2025, METServe 2025, Maxar.

Callan Coking Coal BSP Potential Habitat for the Sharp-tailed Sandpiper



Scale: 1:45,000 (A4)

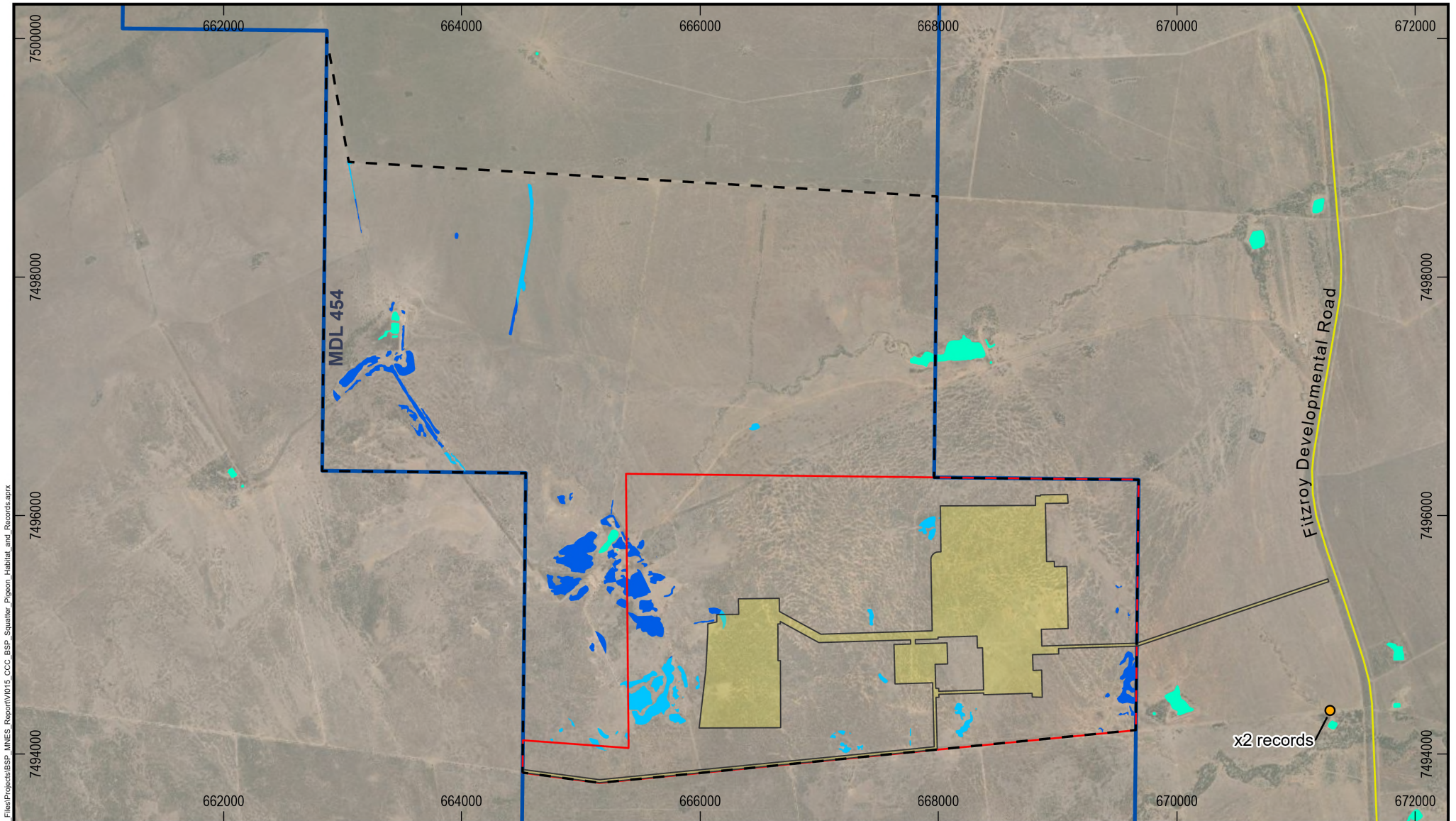
18/02/2025



Datum: GDA2020
Projection: MGA55

FIGURE 4-8





Path: S:\Projects\015 PiarodyGIS\ArcGIS\Project Files\Projects\BSP_MNES Report\015 CCC BSP Squatter Pigeon Habitat and Records.aprx

Squatter Pigeon Records	Clearing Footprint
QLD Roads	Nearby Waterbodies
MDL 454	Habitat Class
Survey Area	Breeding Habitat
Project Area	Foraging Habitat

Source: State of Queensland (Department of Resources) 2021, Callan Coking Coal 2025, METServe 2025, Maxar.

Callan Coking Coal BSP

Potential Squatter Pigeon Habitat

Kilometers

Scale: 1:45,000 (A4)

3/02/2025

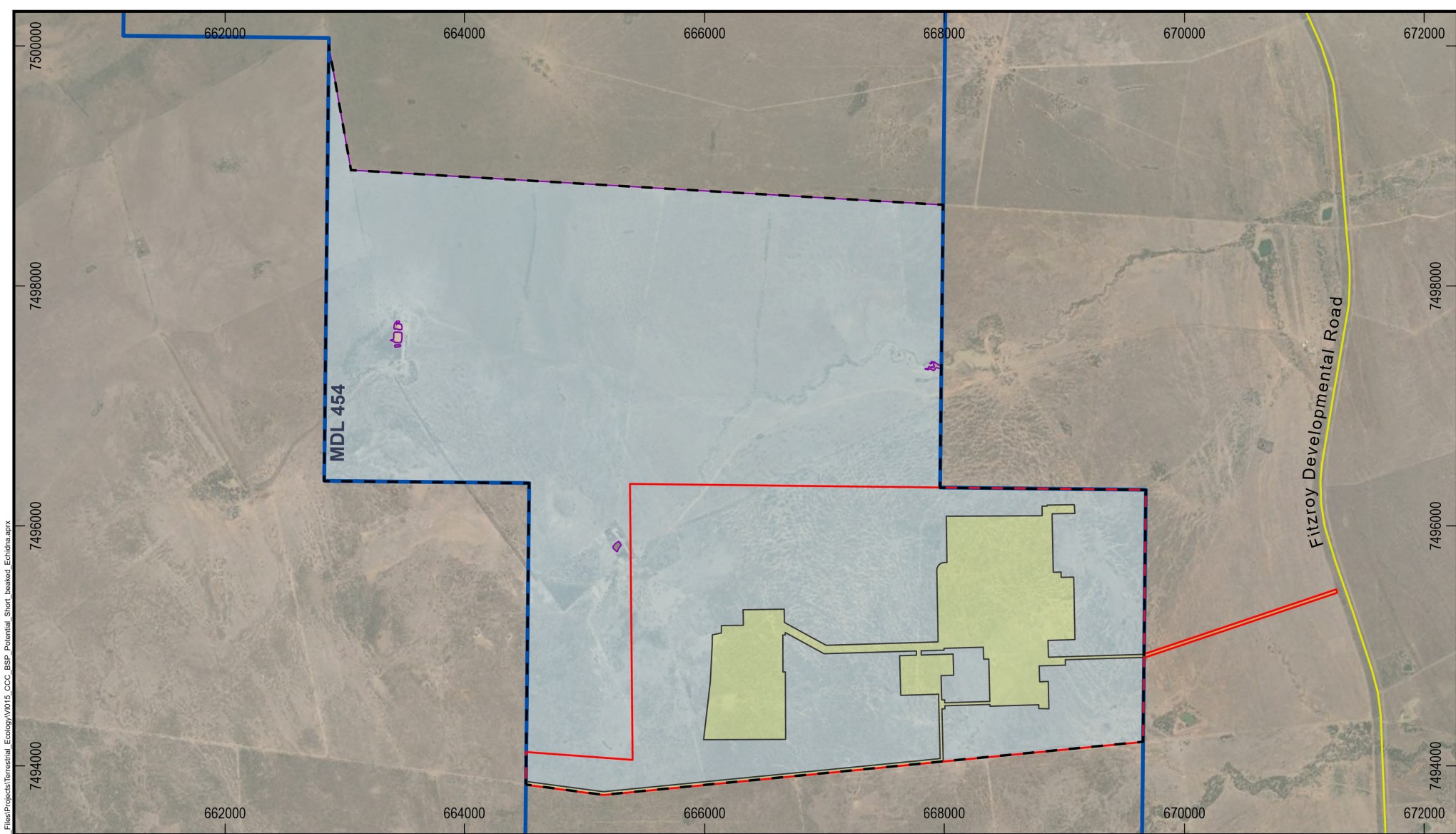
Datum: GDA2020
Projection: MGA55

FIGURE 4-10

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COAL**

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Path: S:\Projects\VO15_PicardyGIS\ArcGIS\Project_Files\Projects\Terrestrial_Ecology\VO15_CCC_BSP_Potential_Short_beaked_Echidna.aprx



Legend

QLD Roads

MDL 454

Survey Area

Project Area

Clearing Footprint

Potential Short-beaked Echidna Habitat

Source: State of Queensland (Department of Resources) 2021, Callan Coking Coal 2024, MEC/METServe 2025, Maxar.

Callan Coking Coal BSP

Potential Short-beaked Echidna Habitat

Scale: 1:45,000 (A4)

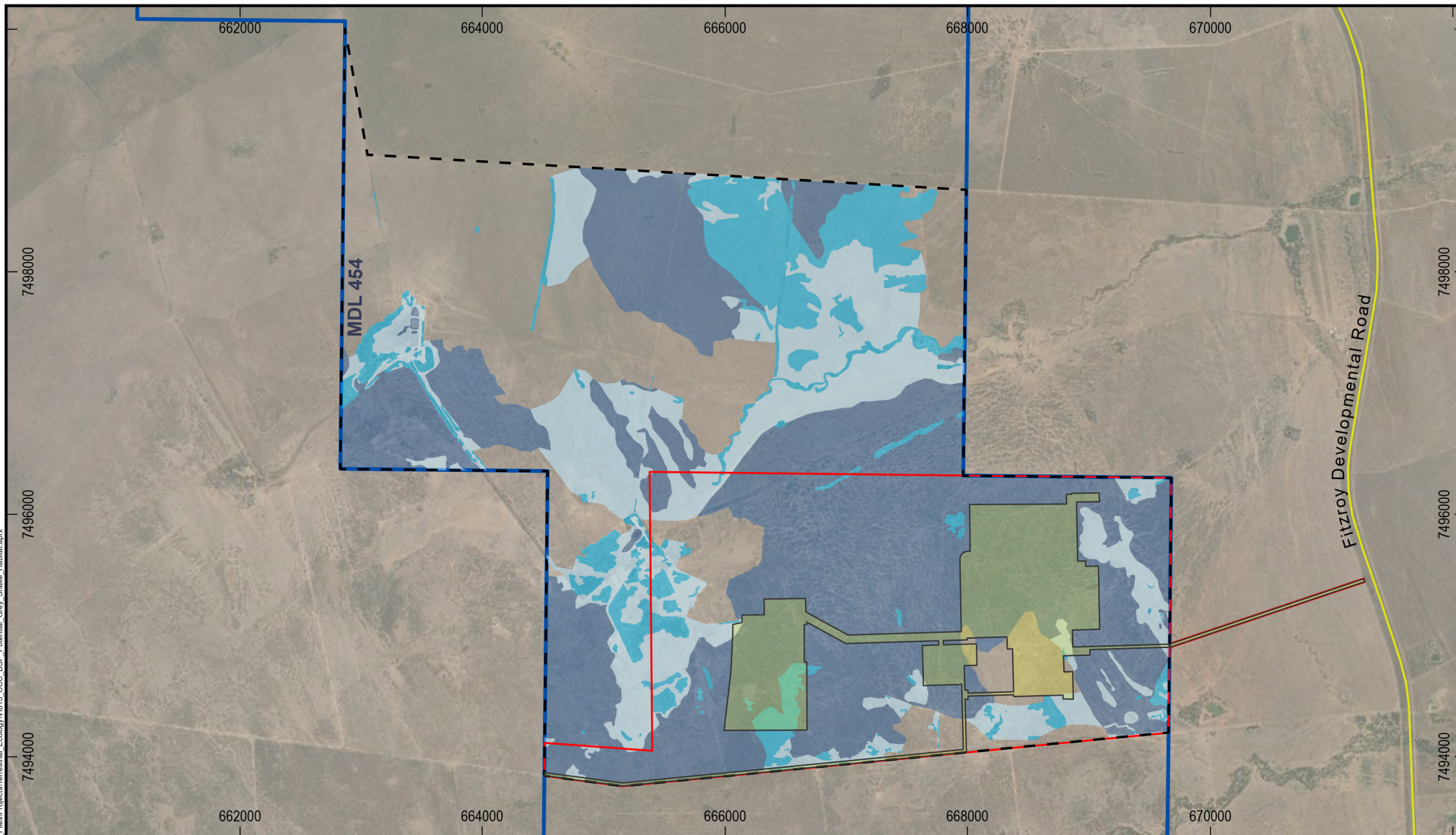
9/10/2025

Datum: GDA2020
Projection: MGA55

CALLAN COKING COAL

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Path: S:\Projects\W015_PicardyGIS\ArcGIS\Project_Files\Projects\Terrestrial_Ecology\W015_CCC_BSP_Potential_Grey_Snake_Habitat.aprx



Legend	
QLD Roads	Potential Grey Snake Habitat
MDL 454	Foraging/shelter/dispersal
Survey Area	Shelter/dispersal
Project Area	Dispersal
Clearing Footprint	

Source: State of Queensland (Department of Resources) 2021, Callan Coking Coal 2024, MEC/METServe 2024, Maxar.

Callan Coking Coal BSP

Potential Grey Snake Habitat

0 0.5 1 1.5

Kilometers

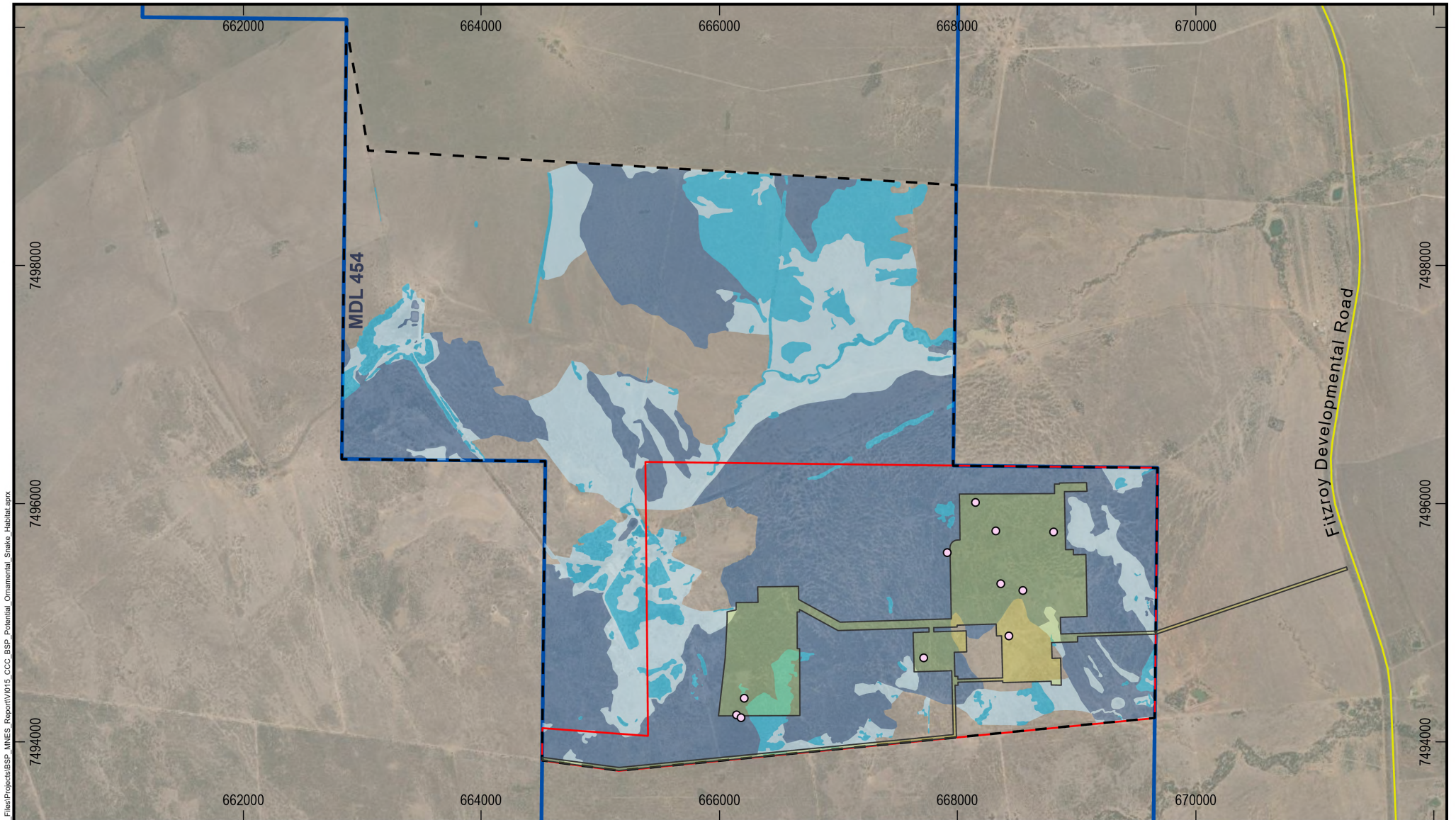
Scale: 1:45,000 (A4)

9/10/2025

Datum: GDA2020
Projection: MGA55

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Path: S:\Projects\VI015_Picard\GIS\ArcGIS\Project_Files\Projects\BSP_MNES_Report\VI015_CCC_BSP_Potential_Ornamental_Snake_Habitat.aprx

Legend	
○ Ornamental Snake Sightings	Habitat Class
— QLD Roads	■ Foraging/shelter/dispersal
■ MDL 454	■ Shelter/dispersal
■ Survey Area	■ Dispersal
■ Project Area	
■ Clearing Footprint	

Source: State of Queensland (Department of Resources) 2021, Callan Coking Coal 2025, METServe 2025, Maxar.

Callan Coking Coal BSP

Ornamental Snake Habitat

0 0.5 1 1.5

Kilometers

Scale: 1:45,000 (A4)

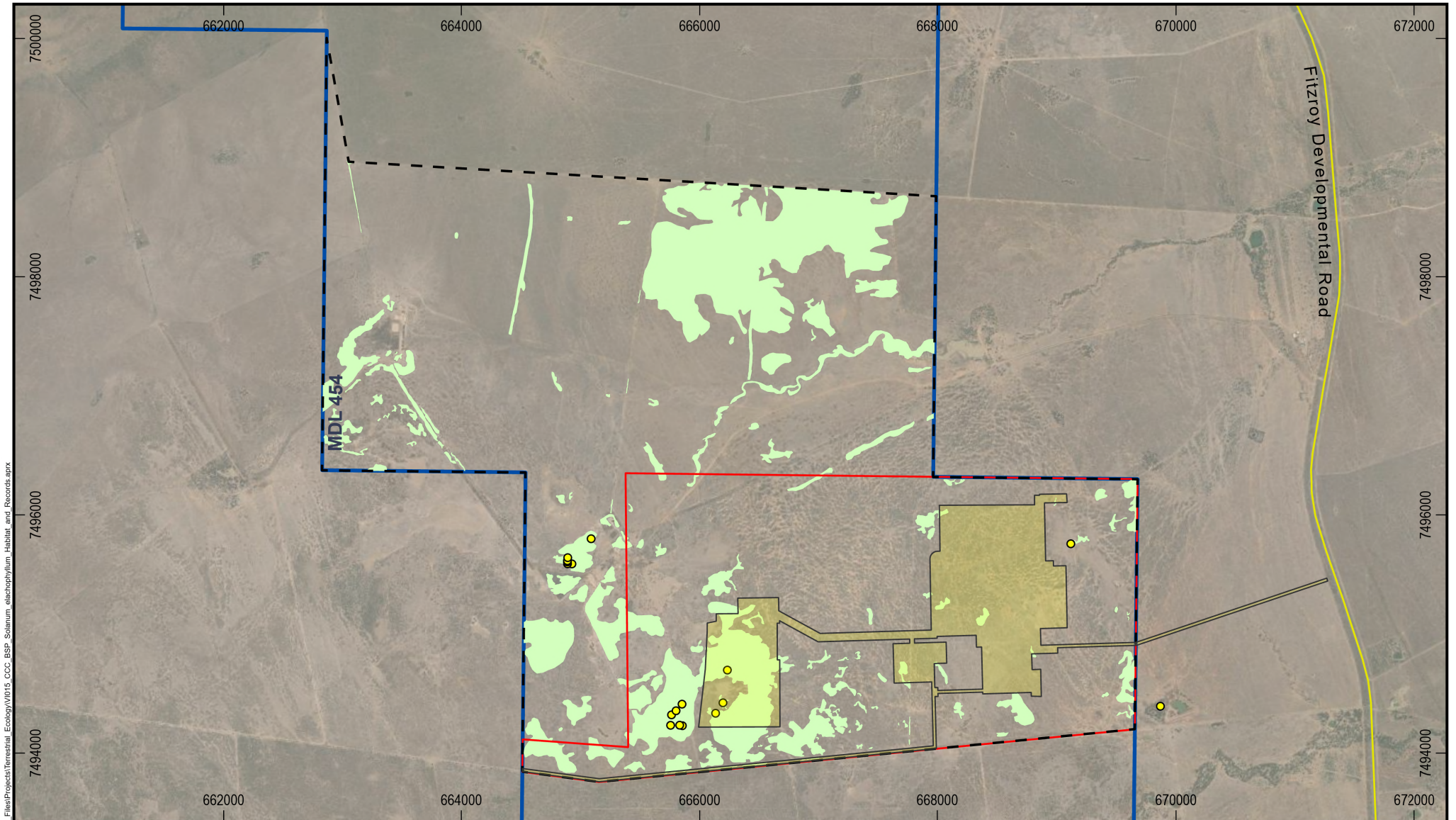
3/02/2025

Datum: GDA2020
Projection: MGA55

FIGURE 4-19

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- Legend**
- *Solanum elachophyllum* Records
 - QLD Roads
 - MDL 454
 - Survey Area
 - Project Area
 - Clearing Footprint
 - Solanum elachophyllum* Habitat

Source: State of Queensland (Department of Resources) 2021, Callan Coking Coal 2024, METServe 2024, Maxar.

Callan Coking Coal BSP

**Habitat for
Solanum elachophyllum
within the Survey Area**



Scale: 1:45,000 (A4)

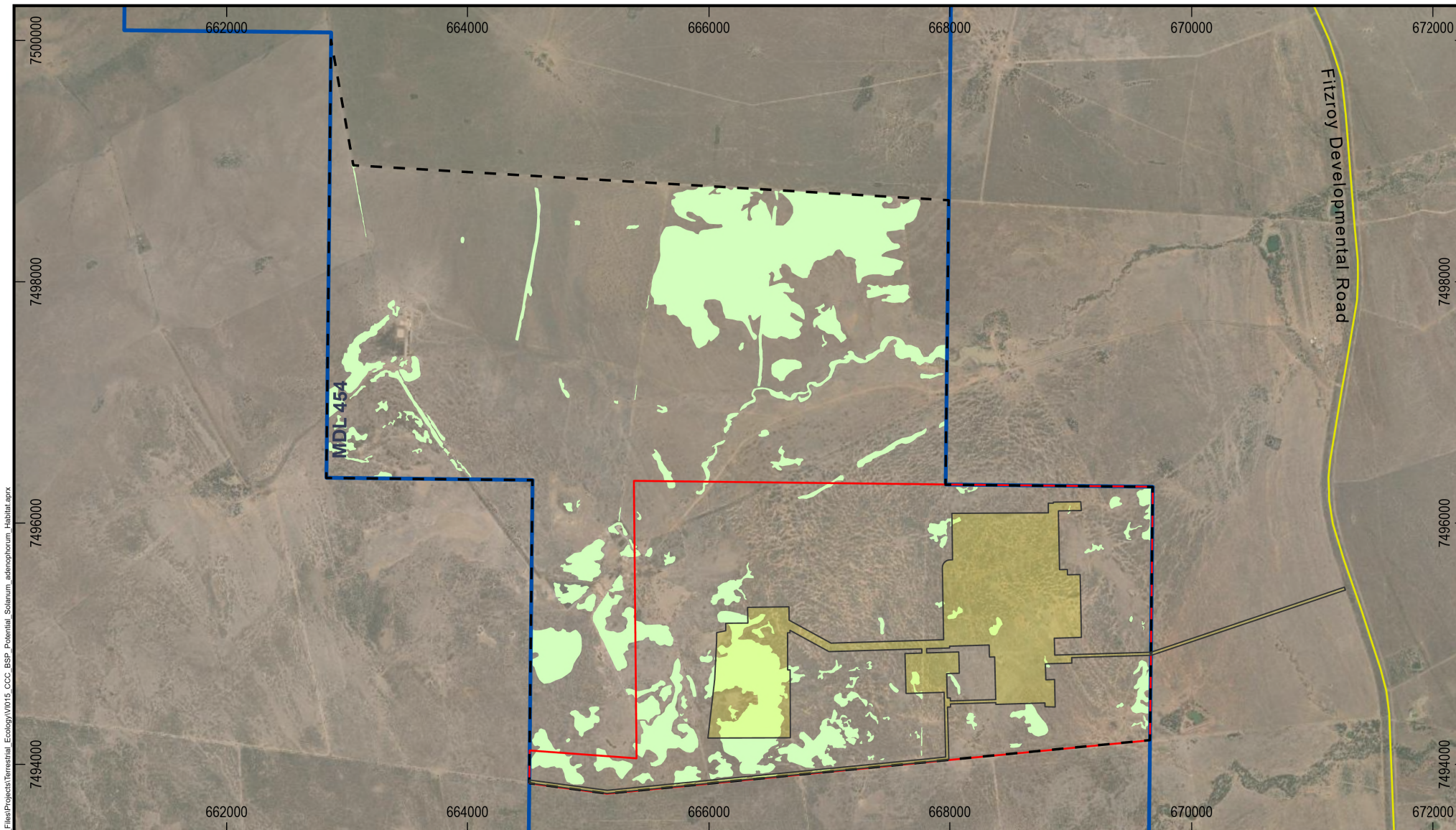
18/12/2024



Datum: GDA2020
Projection: MGA55

FIGURE 4-21





Path: S:\Projects\MDL454\GIS\ArcGIS\Project_Files\Projects\Terrestrial_Ecology\MDL454_CCC_BSP_Potential_Solanum_adenophorum_Habitat.aprx

Legend

- QLD Roads
- MDL 454
- Survey Area
- Project Area
- Clearing Footprint
- Solanum adenophorum* Habitat

Source: State of Queensland (Department of Resources) 2021, Callan Coking Coal 2024, METServe 2024, Maxar.

Callan Coking Coal BSP Potential *Solanum adenophorum* Habitat



Scale: 1:45,000 (A4)

18/12/2024



Datum: GDA2020
Projection: MGA55

FIGURE 4-23



END OF ENVIRONMENTAL AUTHORITY