Attachment 1

Proposed Conditions and Commitments

WINCHESTER SOUTH PROJECT

Environmental Impact Statement

Response to Submissions

WHITEHAVEN COAL

Resource Strategies

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1 PROPOSED CONDITIONS AND COMMITMENTS

1.1 PROPOSED ENVIRONMENTAL AUTHORITY CONDITIONS

This section includes the proposed conditions for an environmental authority for a resource activity, including environmentally relevant activity (ERA) 13 – mining black coal and ancillary activities, 8 – chemical storage, ERA 16 – extractive and screening activities, ERA 31 – mineral processing and ERA 63 – sewage treatment under the *Environmental Protection Act 1994* (EP Act), stated under section 47C of the *State Development and Public Works Organisation Act 1971* (SDPWO Act). The administering authority for conditions in this section is the Department of Environment and Science.

SCHEDULE A: GENERAL	
Number	**Condition**
A1	This environmental authority authorises environmental harm referred to in the conditions. Where there is no condition or this environmental authority is silent on a matter, the lack of a condition or silence does not authorise environmental harm.
A2	The holder of this environmental authority is approved for an extraction rate of up to 17 Mtpa (million tonnes per annum) of ROM (run-of-mine) coal.
A3	In carrying out the mining activity authorised by this environmental authority, disturbance of land (**Figure A1 – Land Disturbance**): (a) may occur in the areas marked 'A'; and (b) subject to **Condition H6**, must not occur in the areas marked 'B'.
A4	The holder of this environmental authority must: (a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; (b) maintain such measures, plant and equipment in a proper and efficient condition; (c) operate such measures, plant and equipment in a proper and efficient manner; and (d) ensure all instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority are properly calibrated.
A5	**Monitoring** Except where specified otherwise in another condition of this environmental authority, all monitoring records or reports required by this environmental authority must be kept for a period of no less than five years.
A6	**Sensitive Location Agreement** The environmental authority holder may enter into agreements with the owners of sensitive places (e.g. non-residency agreements) identified in the relevant management plan.
A7	The environmental authority holder must notify the administering authority of any agreement upon commencement, amendment, transfer, continuation or conclusion of the agreement.
A8	Where the owner of a sensitive place enters into an agreement (e.g. non-residency agreement), that place is not treated as a sensitive place.
A9	**Risk Management** The holder of this environmental authority must develop and implement a risk management system for mining activities which mirrors the content requirement of the Standard for Risk Management (ISO31000:2018), or the latest edition of an Australian Standard for risk management.
A10	**Notification of Emergencies, Incidents and Exceptions** The holder of this environmental authority must notify the administering authority by written notification within 24-hours, or within the timeframe outlined in the relevant condition of this environmental authority, after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with, the conditions of this environmental authority.

SCHEDULE A: GENERAL	
Number	**Condition**
A11	Within 10 business days, or within the timeframe outlined in the relevant condition of this environmental authority, following the initial notification of an emergency or incident, or receipt of monitoring results, whichever is the latter, further written advice must be provided to the administering authority, including the following: (a) results and interpretation of any samples taken and analysed; (b) outcomes of actions taken at the time to prevent or minimise unlawful environmental harm; and (c) proposed actions to prevent a recurrence of the emergency or incident.
A12	**Complaints** The holder of this environmental authority must record all environmental complaints received about the mining 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) the person responsible for resolving the complaint.
A13	The holder of this environmental authority must, when requested by the administering authority, undertake relevant specified monitoring within a reasonable timeframe nominated or agreed to by the administering authority to investigate any complaint of environmental harm. The results of the investigation (including an analysis and interpretation of the monitoring results) and abatement measures, where implemented, must be provided to the administering authority within 10 business days of completion of the investigation, or no later than 10 business days after the end of the timeframe nominated by the administering authority to undertake the investigation.
A14	**Third-party Reporting** The holder of this environmental authority must: (a) within one year of the commencement of this environmental authority, obtain from an 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-yearly intervals, from the completion of the report referred to above; and (c) provide each report to the administering authority within 90 business days of its completion.
A15	Where a condition of this environmental authority requires compliance with a standard, policy or guideline published externally to this environmental authority and the standard is amended or changed subsequent to the issue of this environmental authority, the holder of this environmental authority must: (a) comply with the amended or changed standard, policy or guideline within two years of the amendment or change being made, unless a different period is specified in the amended standard or relevant legislation, or where the amendment or change relates specifically to regulated structures referred to in **Condition I29** the time specified in that condition; and (b) until compliance with the amended or changed standard, policy or guideline is achieved, continue to remain in compliance with the corresponding provision that was current immediately prior to the relevant amendment or change.

SCHEDULE B: AIR	
Number	**Condition**
B1	**Dust Nuisance** The environmental authority holder shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the dust and particulate matter emissions generated by the mining activities do not cause exceedances of the following levels when measured at any sensitive or commercial place: (a) Dust deposition of 120 milligrams per square metre per day (mg/m^2/day), averaged over one month, when monitored in accordance with the most recent version of AS3580.10.1 *Methods for sampling and analysis of ambient air – Determination of particulate matter – Deposited matter – Gravimetric method.* (b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometres (PM_{10}) suspended in the atmosphere of 50 micrograms per cubic metre (µg/m^3) over a 24-hour averaging time[1], for no more than five exceedances recorded each year, when monitored in accordance with the most recent version of either: (i) AS3580.9.6 *Methods for sampling and analysis of ambient air— Determination of suspended particulate matter— PM_{10} high volume sampler with size-selective inlet – Gravimetric method*; or (ii) AS3580.9.9 *Methods for sampling and analysis of ambient air— Determination of suspended particulate matter— PM_{10} low volume sampler—Gravimetric method.* (c) A concentration of particulate matter with an aerodynamic diameter of less than 2.5 micrometres ($PM_{2.5}$) suspended in the atmosphere of 25 µg/m^3 over a 24-hour averaging time, when monitored in accordance with the most recent version of AS/NZS3580.9.10 *Methods for sampling and analysis of ambient air—Determination of suspended particulate matter— $PM_{2.5}$ low volume sampler—Gravimetric method*. (d) A concentration of particulate matter suspended in the atmosphere of 90 µg/m^3 over a one year averaging time, when monitored in accordance with the most recent version of AS/NZS3580.9.3:2003 *Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—Total suspended particulate matter (TSP)—High volume sampler gravimetric method*. [1] Any exceedance of 50 µg/m^3 (24-hour average) is not considered a breach of this condition if the holder of this environmental authority demonstrates that it is caused by natural events such as bushfires and dust storms.
B2	When requested by the administering authority or as a result of a complaint (which is not frivolous, vexatious and/or based on mistaken belief in the opinion of the authorised officer), dust and particulate monitoring (including dust deposition, total suspended particulates [TSP], PM_{10} and $PM_{2.5}$) must be undertaken, and the results thereof must be notified to the administering authority within 10 business days following completion of monitoring. This includes providing interim reports if the monitoring lasts for more than one month. Monitoring must be carried out at a place(s) relevant to the potentially affected dust sensitive place (unless an agreement is in place). Monitoring must be conducted in accordance with the appropriate standards.
B3	If the monitoring carried out in accordance with **Condition B2** indicates an exceedance of the relevant limits in **Condition B1**, then the holder of this environmental authority must investigate whether the exceedance is due to emissions from the mining activity. If the mining activity is found to be the cause of the exceedance, then the holder of this environmental authority must: (a) address the complaint including the use of appropriate dispute resolution if required; and (b) immediately implement dust abatement measures so that emissions of dust from the mining activity do not result in further environmental nuisance.
B4	The holder of this environmental authority must notify the administering authority within 10 business days of an exceedance identified under **Condition B3** and in accordance with the relevant limits in **Condition B1**.
B5	**Air Quality Management Plan** An Air Quality Management Plan must be developed and implemented by an appropriately qualified person. The Air Quality Management Plan must be submitted to the administering authority.

SCHEDULE B: AIR	
Number	**Condition**
B6	The Air Quality Management Plan required by **Condition B5** must include: (a) a preventative management system for dust control; (b) a Trigger Action Response Program; (c) site background (contextual information); (d) proposed works and potential impacts and impact analysis; (e) a risk assessment of mining activities; (f) design of an internal operational monitoring program including objectives, separate from any compliance monitoring or limits/levels required by **Condition B2**; (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) reporting.
B7	The holder of this environmental authority must monitor air quality for the mining activity, which must include, but not be limited to: (a) meteorological monitoring (including at least temperature, wind speed and direction) at a single location representative of the approved place; (b) the monitoring locations must comply with the AS/NZS 3580.1.1:2016 *Methods for siting and analysis of ambient air. Part 1.1: Guide to siting air monitoring equipment*; (c) regular reporting of the measured dust deposition rates and PM_{10} concentrations; and (d) investigation of all measured exceedances to determine the influence of emissions from the mining site.
B8	To ensure that the air quality monitoring program remains effective and well-targeted through the life of the Project, the monitoring locations must be reviewed periodically. The periodic review should consider: (a) the frequency and cause of any exceedances of air quality objectives measured by the monitoring program over a period of at least two years; (b) dust complaints; (c) future progression of the mining activity; (d) locations of sensitive receptors relative to the mining activity; and (e) mining activity modes.

SCHEDULE C: WASTE MANAGEMENT	
Number	**Condition**
C1	Unless otherwise permitted by the conditions of this environmental authority or with prior approval from the administering authority and in accordance with a relevant standard operating procedure, waste must not be burnt.
C2	The holder of this environmental authority may burn vegetation cleared in the course of carrying out extraction activities provided the mining activity does not cause environmental harm at any sensitive place or commercial place.
C3	**Waste Management Program** A Waste Management Program must be developed that describes the handling and disposal wastes associated with the Project, including waste rock, coal rejects and other wastes generated by the Project. The Waste Management Program must describe: a) objectives and measures for reducing potential impacts associated with waste; b) a methodology for containment of coal rejects and associated management measures; c) the management of seepage and leachates both during operations and the foreseeable future; d) the control of fugitive emissions to air; e) the management of highly sodic and/or dispersive waste rock (if identified); f) a program of progressive sampling and characterisation to identify acid producing potential and metal concentrations of co-disposed coal rejects; g) a program for monitoring, auditing and reducing waste, including implementation of a waste recycling program for the Project to promote and encourage recycling of materials such as paper, cardboard and scrap metal; h) a methodology for maintaining records of the relative locations of any other waste stored within the coal reject emplacement areas; i) the rehabilitation strategy; and j) monitoring of rehabilitation, research and/or trials to verify the requirements and methods for decommissioning and final rehabilitation of co-disposed coal reject areas, including the prevention and management of acid mine drainage, erosion minimisation and establishment of vegetation cover.
C4	**Storage of Tyres** Tyres must be stored and disposed of in accordance with the *Operational Policy – Disposal and storage of scrap tyres at mine sites* (DES, 2014).
C5	Where no feasible recycling or waste-to-energy options are available, disposing of scrap tyres resulting from the authorised mining activities in waste rock emplacements is acceptable, provided tyres are placed as deep in the waste rock as reasonably practicable. A record must be kept of the number and location for tyres disposed.
C6	Scrap tyres resulting from the authorised mining activities disposed within the operational land must not impede saturated aquifers or compromise the stability of the final landform.

SCHEDULE D: NOISE	
Number	**Condition**
D1	**Noise Limits** Noise resulting from the mining activity must not cause an environmental nuisance at any sensitive place.
D2	**Monitoring and Reporting** When requested by the administering authority as a result of a complaint regarding noise at a noise sensitive place (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the administering authority) noise monitoring must be undertaken and the results must be notified within 10 business days to the administering authority following completion of monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected noise sensitive place as agreed upon with the administering authority.

SCHEDULE D: NOISE	
Number	**Condition**
D3	All noise monitoring which is conducted as per **Condition D2** must be completed in accordance with the following noise monitoring requirements: (a) all noise monitoring must be conducted in accordance with the administering authority's most recent version of the Noise Measurement Manual; (b) source noise levels must be expressed as component noise levels for the purposes of comparison with noise limits; and (c) all noise monitoring devices must be calibrated in accordance with AS/NZS IEC 61672.1-2019 *Electroacoustics – Sound level meters specifications*.
D4	If monitoring conducted under **Condition D2** reveals that noise caused by the mining activity exceeds the limits in **Table D1 – Noise Limits**, then the holder of this environmental authority must: (a) address the relevant complaint; and (b) implement noise abatement measures so that emissions of noise from the mining activity do not result in further environmental nuisance.
D5	**Airblast Overpressure Nuisance** The holder of this environmental authority must ensure that blasting does not cause the limits for peak particle velocity and air blast overpressure in **Table D2 – Blasting Noise Limits** to be exceeded at a sensitive place.
D6	The holder of this environmental authority must develop and implement a blast monitoring program to monitor compliance with **Table D2 – Blasting Noise Limits** for: (a) at least 20% of all blasts undertaken on this site in each year at the nearest sensitive place; and (b) all blasts conducted during any time period specified by the administering authority at the nearest sensitive place.

Table D1
Noise Limits

Noise Level dB(A) Measured As:	Noise Measured at a Sensitive Place					
	Monday to Saturday			Sundays and Public Holidays		
	7.00 am to 6.00 pm	6.00 pm to 10.00 pm	10.00 pm to 7.00 am	9.00 am to 6.00 pm	6.00 pm to 10.00 pm	10.00 pm to 9.00 am
$L_{Aeq,\ adj,\ 15\ mins}$	40	35	35	40	35	35
$L_{A1,\ adj,\ 15\ mins}$	40	40	40	40	40	40

Note: Where an owner of a sensitive place has entered into an agreement (e.g. non-residency agreement), that place is not considered to be a sensitive place and the limits described in Table D1 – Noise Limits do not apply.

Table D2
Blasting Noise Limits

Blasting Noise Limits	Sensitive Place Limits	
	7.00 am to 6.00 pm	6.00 pm to 7.00 am
Airblast overpressure	115 decibels (dB) (Linear) Peak for 9 out of 10 consecutive blasts initiated and not greater than 120 dB (Linear) Peak at any time	Either no blasting or limits justified by the holder of the environmental authority not less stringent than 7.00 am to 6.00 pm
Ground vibration peak particle velocity	5 mm/s peak particle velocity for 9 out of 10 consecutive blasts and not greater than 10 mm/s peak particle velocity at any time	Either no blasting or limits justified by the holder of the environmental authority not less stringent than 7.00 am to 6.00 pm

Note: Where an owner of a sensitive place has entered into an agreement (e.g. non-residency agreement), that place is not considered to be a sensitive place and the limits described in Table D1 – Noise Limits do not apply.

mm/s = millimetres per second.

SCHEDULE E: GROUNDWATER	
Number	**Condition**
E1	The holder of this environmental authority must not release contaminants to groundwater.
E2	**Groundwater Monitoring Program** The holder of this authority must develop and implement a groundwater monitoring program.
E3	Groundwater monitoring and analysis must be performed by an appropriately qualified person.
E4	The groundwater monitoring program must: (a) be in accordance with **Table E1 – Groundwater Monitoring Locations and Frequency**; (b) identify potential sources of contamination to groundwater from the mining activity; (c) identify potential groundwater impacts due to the mining activity; (d) document a sampling, monitoring and data analysis methodology designed to achieve the following objectives: (i) establish baseline datasets from existing monitoring bores; (ii) detect any impacts to groundwater levels due to the mining activity; (iii) detect any impacts to groundwater quality due to the mining activity; (iv) determine trends in groundwater quality; and (v) determine trends in groundwater level; (e) include an appropriate quality assurance and quality control program; (f) include a conceptual numerical groundwater model; and (g) include a review process to improve the program.
E5	The baseline datasets, as referred to in **Condition E4** of this environmental authority, are to consist of at least eight values collected over a minimum of at least 12 months prior to commencement of mining activities.
E6	**Groundwater Quality** Groundwater quality must be monitored at the locations and frequencies to be defined in **Table E1 - Groundwater Monitoring Locations and Frequency** (shown on **Figure E1 – Water Quality Monitoring Locations**), for quality characteristics identified in **Table E2 - Groundwater Quality Limits**.
E7	Groundwater quality measured at monitoring bores identified in **Table E1 – Groundwater Monitoring Locations and Frequency** must not exceed the limits specified in **Table E2 – Groundwater Quality Limits** on any three consecutive sampling occasions.
E8	In the event groundwater quality measured at any monitoring bore exceeds the corresponding limits in **Table E2 – Groundwater Quality Limits** on any single sampling occasion, the environmental authority holder must resample the underground water within the monitoring bore for the parameter exceeded, within 10 business days of receipt of the results. Where the results of the resampling event exceeds for the same parameter, a further resample is not required for that sampling occasion.
E9	In the event that groundwater quality exceedance results are confirmed by resampling, as specified in **Condition E8**, the holder of this environmental authority must: (a) notify the administering authority via Water Tracking and Reporting System (WaTERS) or subsequent updated system within 10 business days of receiving the resampling result; and (b) within three months of receiving the result, complete, and submit via WaTERS, an investigation undertaken by a suitably qualified person including: (i) details of the investigations carried out; (ii) whether the result is directly associated with mining activities of the Project, and, if so; (1) whether environmental harm has occurred; and (2) any action required to mitigate environmental harm. (iii) a review of the groundwater quality limits specified in **Table E2 – Groundwater Quality Limits**, and, if the exceedance was not a result of mining activities of the Project, provide a revised groundwater quality limit for the relevant parameter for ongoing monitoring and update in **Table E2 – Groundwater Quality Limits** for approval by the administering authority.

SCHEDULE E: GROUNDWATER	
Number	**Condition**
E10	**Groundwater Levels** Groundwater levels when measured at the monitoring locations and frequency specified in **Table E3 – Groundwater Level Monitoring** (shown on **Figure E2 – Water Resource Monitoring Locations**) must not exceed the groundwater level trigger thresholds specified in **Table E3 – Groundwater Level Monitoring**, unless otherwise agreed in writing with the administering authority.
E11	In the event that groundwater fluctuations in excess of the groundwater level trigger thresholds specified in **Table E3 – Groundwater Level Monitoring** are detected, the holder of this environmental authority must: (a) notify the administering authority via WaTERS within 24-hours; (b) undertake an investigation within 10 business days of detection to determine the cause of fluctuations; and (c) undertake a review of the groundwater level trigger thresholds specified in **Table E3 – Groundwater Level Monitoring**, and, if the exceedance was not a result of mining activities of the Project, provide a revised groundwater level trigger threshold for ongoing monitoring and update in **Table E3 – Groundwater Level Monitoring** for approval by the administering authority.
E12	In the event that groundwater fluctuations are found to have been influenced by mining activities the holder of this environmental authority must meet the notification requirement of **Condition E11** of this environmental authority.
E13	The exceedance investigation under **Condition E11** must be completed and submitted to the administering authority via WaTERS within three months of notifying the administering authority.
E14	**Groundwater Monitoring** Results of groundwater quality and level monitoring must be submitted to the administering authority via WaTERS each calendar year.
E15	The groundwater monitoring program must be reviewed on an annual basis by an appropriately qualified person to determine if it continues to meet the requirements stated in **Condition E4**.
E16	The groundwater numerical model must be reviewed and validated (including boundary and recharge conditions) to incorporate groundwater monitoring data and measured mine dewatering volumes from the groundwater monitoring program in **Condition E4**. The review must be conducted within two years of commencement of any mining operations and at least every five years thereafter, or at other intervals specified by the administering authority in writing.
E17	**Bore Construction, Maintenance and Decommissioning** The construction, maintenance, management and decommissioning of groundwater bores (including groundwater monitoring bores) must be undertaken in a manner that prevents or minimises impacts to the environment and ensures the integrity of the bores to obtain accurate and reliable data collection.
E18	Where the removal of a bore will occur as a direct result of the mining activity, the impact on the monitoring program must be evaluated and a replacement bore must be constructed in a similar location, for continuity and to ensure that groundwater monitoring continues to meet the requirements in **Condition E4**.

Table E1
Groundwater Monitoring Locations and Frequency

Monitoring Point		Latitude (GDA2020)	Longitude (GDA2020)	Approximate Elevation (mAHD)	Screen Depth (mbgl)	Monitoring Frequency	Target Aquifer
Existing Monitoring Bores							
C2105R		-22.223470	148.306460	209.09	57.0 – 60.0	D/Q	Leichhardt Seam
C2136		-22.175047	148.277810	199.39	62.6 – 65.6	D/Q	Leichhardt Seam
G2304R		-22.211711	148.292722	216.24	53.0 – 56.0	D/Q	Vermont Seam
G2307		-22.169684	148.269412	194.42	78.0 – 81.0	D/Q	Vermont Seam
R2008		-22.217293	148.269820	220.32	31.5 – 33.0	D/Q	Leichhardt Seam
R2009R		-22.215100	148.274195	220.24	77.0 – 83.0	D/Q	Rangal Coal Measures Interburden
R2010R		-22.212739	148.278035	216.67	60.0 – 63.0	D/Q	Leichhardt Seam
R2032		-22.187696	148.265830	205.31	78.1 – 81.1	D/Q	Leichhardt Seam
R2034R		-22.192343	148.257171	221.60	36.0 – 39.0	D/Q	Rangal Coal Measures Interburden
R2035		-22.194568	148.253233	223.54	34.4 – 37.4	D/Q	Vermont Seam
R2054		-22.167432	148.253477	203.60	79.5 – 82.5	D/Q	Rangal Coal Measures Interburden
R2055		-22.169669	148.249211	207.46	64.9 – 67.9	D/Q	Vermont Seam
Knob Hill 1‡*		-22.115211	148.270125	191	-	Q	Isaac River Alluvium
Knob Hill 2‡*		-22.113565	148.264546	193	-	D/Q	Isaac River Alluvium
Winnet Bore*		-22.149704	148.307145	187	-	D/Q	Isaac River Alluvium
VWP1	Sensor 1	-22.152207	148.283131	192.81	50.0	D	Fort Cooper Coal Measures overburden
	Sensor 2				90.0		Fort Cooper Coal Measures coal seam
	Sensor 3				150.0		Fort Cooper Coal Measures underburden
VWP2	Sensor 1	-22.182743	148.316373	201.68	50.0	D	Fort Cooper Coal Measures overburden
	Sensor 2				90.0		Fort Cooper Coal Measures overburden
	Sensor 3				150.0		Fort Cooper Coal Measures coal seam
Proposed Monitoring Bores							
NB_1R#		-22.162189	148.296681	200	22 – 25	D/Q	Regolith
NB_2P#		-22.156908	148.242950	207	122 – 125	D/Q	Leichhardt Seam
NB_3P#		-22.229013	148.320230	202	82 – 85	D/Q	Leichhardt Seam

D = daily level monitoring using automatic logger; Q = quarterly water quality sampling. ‡ Privately-owned bore, inclusion in monitoring network dependent on continued approval to access the bore from bore owner.
* Any additional monitoring bores in alluvium may replace these bores. # Approximate location.

Table E2
Groundwater Quality Limits

Bore	Field pH	EC (µS/cm)	Parameter (mg/L)																
			Al	Ca	Cl	Mg	Mn	Na	SO_4	Zn	As	Cd	Cr	Co	Cu	Pb	Hg	Ni	Se	Ag
Existing Monitoring Bores																				
C2105R	6.3 – 8.5	32,380		970	11,340	1,020	1.9[1]	5,416	12	3[2]		0.002[3]	0.05[3]		1[2]	0.01[3]			0.05[4]	
C2136		16,940		416	5,863	494	0.1[2]	2,868	127	0.008[1]		0.0002[2]	0.001[2]		0.0014[1]	0.0034[1]			0.01[3]	
G2304R		29,760		751	10,700	748	0.32	5,190		0.049	0.01[3]	0.002[3]	0.05[3]		1[2]	0.01[3]			0.05[4]	
G2307		16,110		338	5,819	259	0.04	3,040	250[2]	0.025										
R2008		16,730		259	5,784	210	0.1[2]	3,485		0.028		0.0002[2]	0.001[2]	0.1[4]	0.0014[1]	0.0034[1]		0.011[1]	0.01[3]	
R2009R		12,725		131	4,233	67	0.42	2,695	155	0.008[1]	0.03									
R2010R		27,860		403	10,155	466	0.59	5,754		3[2]	0.06	0.002[3]	0.05[3]		1[2]	0.01[3]			0.05[4]	
R2032	6.5 – 8.5[1]	11,820	0.055[1]	324	4,086	124	0.004	2,346	250[2]	0.044	0.01[3]				0.0014[1]		0.0006[1]			0.1[3]
R2034R		18,640		630	4,360	465	1.48	3,842	3,980	0.108	0.03			0.02	1[2]			0.04		
R2035		4,884		144	1,240	68	0.14	919		0.008[1]										
R2054		8,422		156	2,673	36	0.003	1,733	250[2]	0.016	0.01[3]	0.0002[2]	0.001[2]	0.1[4]	0.0014[1]	0.0034[1]			0.01[3]	
R2055		8,447		218	2,675	121	0.01	1,593		0.027								0.011[1]		
Knob Hill 1		8,208		302	2,312	267	0.71	1,069	582	0.008[1]				0.002	1[2]					
Knob Hill 2		995		51	154	36	1.21	116	21	0.008[1]	0.003			0.004	0.0014[1]					
Winnet		3,111		124	774	115	0.45	374	99	0.017	0.01[3]			0.1[4]				0.003		
Proposed Monitoring Bores																				
NB_1R	6.5 – 8.5[1]	7,500[5]	0.055[1]	1,000[5]	250[5]	2,000[5]	0.1[2]	180[5]	250[2]	0.008[1]	0.01[3]	0.0002[2]	0.001[2]	0.1[4]	0.0014[1]	0.0034[1]	0.0006[1]	0.011[1]	0.01[3]	0.1[3]
NB_2P		30,640		912	11,200	966	0.56	5,470	118	0.04	0.04	0.0005	0.005	0.005	0.005	0.005		0.007	0.05	0.005
NB_3P																				

1 Isaac River Sub-basin Environmental Values and Water Quality Objectives – Aquatic 95% (Department of Environment and Heritage Protection [DEHP], 2011).
2 Australian Drinking Water Guidelines – Aesthetic (National Health and Medical Research Council [NHMRC], 2022).
3 Australian Drinking Water Guidelines – Health (NHMRC, 2022).
4 Isaac River Sub-basin Environmental Values and Water Quality Objectives – Irrigation (DEHP, 2011).
5 Isaac River Sub-basin Environmental Values and Water Quality Objectives – Stock (DEHP, 2011).

Table E3
Groundwater Level Monitoring

Monitoring Point		Level Trigger Threshold
Existing Monitoring Bores		
C2105R		> 17.0 metres beyond baseline data ranges
C2136		> 42.6 metres beyond baseline data ranges
G2304R		> 24.0 metres beyond baseline data ranges
G2307		> 62.0 metres beyond baseline data ranges
R2008		> 2 metres beyond baseline data ranges
R2009R		> 2 metres beyond baseline data ranges
R2010R		> 2 metres beyond baseline data ranges
R2032		> 27.6 metres beyond baseline data ranges
R2034R		> 2 metres beyond baseline data ranges
R2035		> 2 metres beyond baseline data ranges
R2054		> 79.2 metres beyond baseline data ranges
R2055		> 7.5 metres beyond baseline data ranges
Knob Hill 1‡*		> 2 metres beyond baseline data ranges
Knob Hill 2‡*		> 2 metres beyond baseline data ranges
Winnet Bore*		> 2 metres beyond baseline data ranges
VWP1	Sensor 1	> 2 metres beyond baseline data ranges
	Sensor 2	> 2 metres beyond baseline data ranges
	Sensor 3	> 2 metres beyond baseline data ranges
VWP2	Sensor 1	> 2 metres beyond baseline data ranges
	Sensor 2	> 2 metres beyond baseline data ranges
	Sensor 3	> 2 metres beyond baseline data ranges
Proposed Monitoring Bores		
NB_1R		> 2.1 metres beyond baseline data ranges
NB_2P		> 10.0 metres beyond baseline data ranges
NB_3P		> 20.6 metres beyond baseline data ranges

‡ Privately-owned bore, inclusion in monitoring network dependent on continued approval to access the bore from bore owner.

* Any additional monitoring bores in alluvium may replace these bores.

SCHEDULE F: WATER	
Number	**Condition**
F1	Contaminants that will, or have the potential to, cause environmental harm must not be released directly or indirectly to any waters as a result of the authorised mining activities, except as permitted under the conditions of this environmental authority.
F2	Unless otherwise permitted under the conditions of this environmental authority, the controlled release of mine-affected water to waters must only occur from the release points to be specified in **Table F1 – Mine-affected Water Release Points, Sources and Receiving Waters**.
F3	The controlled release of mine-affected water to internal water management infrastructure installed and operated in accordance with a water management plan that complies with **Condition F29** is permitted.
F4	The controlled release of mine-affected water to waters in accordance with **Condition F2** must not exceed the release limits stated in **Table F2 – Mine-affected Water Release Limits** when measured at the monitoring points specified in **Table F1 – Mine-affected Water Release Points, Sources and Receiving Waters** for each quality characteristic.
F5	The controlled release of mine-affected water to waters from the release points must be monitored at the locations specified in **Table F1 – Mine-affected Water Release Points, Sources and Receiving Waters** for each quality characteristic and at the frequency specified in **Table F2 – Mine-affected Water Release Limits, Table F3 – Release Contaminant Trigger Investigation Levels, Potential Contaminants** and **Table F4 – Mine-affected Water Release During Flow Events**.
F6	If quality characteristics of the release exceed any of the trigger levels specified in **Table F3 – Release Contaminant Trigger Investigation Levels, Potential Contaminants** during a release event, the environmental authority holder must compare the downstream results in the receiving waters to the trigger values specified in **Table F3 – Release Contaminant Trigger Investigation Levels, Potential Contaminants** and: (a) where the trigger values are not exceeded then no action is to be taken; or (b) where the downstream results exceed the trigger values specified **Table F3 – Release Contaminant Trigger Investigation Levels, Potential Contaminants** for any quality characteristic, compare the results of the downstream site to the data from background monitoring sites and: (i) if the result is less than or equal to the background monitoring site data, then no action is to be taken; or (ii) if the result is greater than the background monitoring site data, complete an investigation into the potential for environmental harm and provide a written report to the administering authority within 90 business days of receiving the result, including: (1) details of the investigations carried out; and (2) actions taken to prevent environmental harm. Note, where an exceedance of a trigger level has occurred and is being investigated, in accordance with **Condition F6(b)(ii)**, no further reporting is required for subsequent trigger events for that quality characteristic.
F7	If an exceedance in accordance with **Condition F6(b)(ii)** is identified, the holder of the environmental authority must notify the administering authority in writing within 24 hours of receiving the result.
F8	**Mine-affected Water Release Events** The holder must ensure a stream flow gauging station is available to determine and record stream flows at the locations and flow recording frequency specified in **Table F4 – Mine-affected Water Release During Flow Events**.
F9	Notwithstanding, any other condition of this environmental authority, the release of mine-affected water to waters in accordance with **Condition F2** must only take place during periods of natural flow in accordance with the receiving water (e.g. Isaac River) flow criteria for discharge specified in **Table F4 – Mine-affected Water Release During Flow Events** for the release point(s) specified in **Table F1 – Mine-affected Water Release Points, Sources and Receiving Waters**.
F10	The release of mine-affected water to waters in accordance with **Condition F2** must not exceed the Maximum Release Rate (for all combined release point flows) for each receiving water flow criterion for discharge specified in **Table F4 – Mine-affected Water Release During Flow Events** when measured at the monitoring points specified in **Table F1 – Mine-affected Water Release Points, Sources and Receiving Waters**.
F11	The daily quantity of mine-affected water released from each release point must be measured and recorded.
F12	Releases to waters must be undertaken so as not to cause erosion of the bed and banks of the receiving waters, or cause a material build-up of sediment in such waters.

SCHEDULE F: WATER	
Number	**Condition**
F13	**Notification of Release Event** The environmental authority holder must notify the administering authority as soon as practicable and no later than 24-hours after commencing to release mine-affected water to the receiving environment. Notification must include the submission of written advice to the administering authority of the following information: (a) release commencement date/time; (b) details regarding the compliance of the release with the conditions of this environmental authority (i.e. contaminant limits, natural flow, discharge volume); (c) release point/s; (d) release rate; (e) release salinity; and (f) receiving water/s including the natural flow rate. Note, notification to the administering authority must be addressed to the manager of the local administrating authority via email.
F14	The environmental authority holder must notify the administering authority as soon as practicable and nominally no later than 24-hours after cessation of a release event notified under **Condition F13** and within 20 business days provide the following information in writing: (a) release cessation date/time; (b) natural flow rate in receiving water; (c) volume of water released; (d) details regarding the compliance of the release with the conditions of this environmental authority (i.e. contaminant limits, natural flow, discharge volume); (e) all *in-situ* water quality monitoring results; and (f) any other matters pertinent to the water release event. Note, successive or intermittent releases occurring within 24-hours of the cessation of any individual release can be considered part of a single release event and do not require individual notification for the purpose of compliance with **Conditions F13 and F14**.
F15	**Notification of Release Event Exceedance** If the release limits defined in **Table F2 – Mine-affected Water Release Limits** are exceeded, the holder of the environmental authority must notify the administering authority within 24-hours of receiving the results.
F16	The environmental authority holder must, within 20 business days of receiving results that show a release is not compliant with the conditions of this environmental authority, provide a report to the administering authority detailing: (a) the reason for the release; (b) the location of the release; (c) the total volume of the release and which (if any) part of this volume was non-compliant; (d) the total duration of the release and which (if any) part of this period was non-compliant; (e) all water quality monitoring results (including all laboratory analyses); (f) identification of any environmental harm as a result of the non-compliance; (g) all calculations; and (h) any other matters pertinent to the water release event.

SCHEDULE F: WATER	
Number	**Condition**
F17	**Monitoring of Water Storage Quality** Water storages stated in **Table F5 – Water Storage Monitoring** (shown on **Figure E1 – Water Quality Monitoring Locations**) must be monitoring quarterly for: (a) the water quality characteristics specified in **Table F2 – Mine Affected Water Release Limits** and **Table F3 – Release Contaminant Trigger Investigation Levels** at the monitoring locations and at the monitoring frequency specified in **Table F5 – Water Storage Monitoring;** (b) if water storage quality monitoring identifies an exceedance of the water quality characteristic specified in **Table F2 – Mine Affected Water Release Limits** and **Table F3 – Release Contaminant Trigger Investigation Levels**, an investigation should be undertaken to identify the reason for the exceedance and any actions undertaken to rectify and/or manage the exceedance in the water storage; and (c) the approximate volume of water held in each of the water storages listed in **Table F5 – Water Storage Monitoring**.
F18	**Receiving Environment Monitoring and Contaminant Trigger Levels** The quality of the receiving waters must be monitored at the monitoring points specified in **Table F6 – Receiving Water Background Sites and Monitoring Points** for each quality characteristic and at the monitoring frequency stated in **Table F7 – Receiving Waters Contaminant Trigger Levels**.
F19	If quality characteristics of the receiving water at the downstream monitoring points exceed any of the trigger levels specified in **Table F7 – Receiving Waters Contaminant Trigger Levels** during a release event the environmental authority holder must compare the downstream results to the upstream results in the receiving waters and: (a) where the downstream result is equal to or lower than the upstream value for the quality characteristic, then no action is to be taken; or (b) where the downstream results exceed the upstream results, complete an investigation into the potential for environmental harm and provide a written report to the administering authority in the next annual return, outlining: (i) details of the investigations carried out; and (ii) actions taken to prevent environmental harm. (c) undertake a review of the receiving water contaminant trigger levels specified in **Table F7 – Receiving Waters Contaminant Trigger Levels**, and, if the exceedance was not a result of mining activities of the Project, provide a revised receiving water contaminant trigger level for ongoing monitoring and update in **Table F7 – Receiving Waters Contaminant Trigger Levels** for approval by the administering authority. Note, where an exceedance of a trigger level has occurred and is being investigated, in accordance with **Condition F19(b)**, no further reporting is required for subsequent trigger events for that quality characteristic.
F20	All determinations of water quality and biological monitoring must be performed by an appropriately qualified person.
F21	**Receiving Environment Monitoring Program** The environmental authority holder must develop and implement a Receiving Environment Monitoring Program (REMP) to monitor, identify and describe any adverse impacts to surface water environmental values, quality and flows due to the authorised mining activity. This must include monitoring the effects of the Project on the receiving environment periodically (under natural flow conditions) and while mine-affected water is being discharged from the site. For the purposes of the REMP, the receiving environment is the waters of the Isaac River and connected or surrounding waterways within approximately 10 km downstream of the release. The REMP should encompass any sensitive receiving waters or environmental values downstream of the authorised mining activity that will potentially be directly affected by an authorised release of mine-affected water.

SCHEDULE F: WATER	
Number	**Condition**
F22	The REMP must: (a) assess the condition or state of receiving waters, including upstream conditions, spatially within the REMP area, considering background water quality characteristics based on accurate and reliable monitoring data that takes into consideration temporal variation (e.g. seasonality); (b) describe applicable environmental values and water quality objectives (i.e. as scheduled pursuant to the *Environmental Protection (Water and Wetland Biodiversity) Policy 2019* [Water and Wetland EPP]); (c) be designed to facilitate assessment against water quality objectives for the relevant environmental values that need to be protected; (d) include monitoring from background reference sites (e.g. upstream or background) and downstream sites from the release (as a minimum, the locations specified in **Table F6 – Receiving Water Background Sites and Monitoring Points**); (e) specify the frequency and timing of sampling required in order to reliably assess ambient conditions and to provide sufficient data to derive site specific background reference values in accordance with the Water and Wetland EPP. This should include monitoring during periods of natural flow irrespective of mine or other discharges; (f) include monitoring and assessment of all water quality parameters listed in **Table F2 – Mine-affected Water Release Limits** and **Table F3 – Release Contaminant Trigger Investigation Levels, Potential Contaminants**; (g) include, where appropriate, monitoring of metals/metalloids in sediments (in accordance with site-specific trigger levels, ANZG [2018], ANZECC & ARMCANZ [2000], BATLEY and/or the most recent version of AS5667.1 *Guidance on Sampling of Bottom Sediments*) and include a comparison with trigger values; (h) include, where appropriate, monitoring of macroinvertebrates in accordance with the AUSRiVAS methodology and comparison with the *Environmental Protection (Water) Policy 2009 Fitzroy River Sub-basin Environmental Values and Water Quality Objectives Basin No. 130 (part) including all waters of the Fitzroy River Sub-basin* macroinvertebrate water quality objective triggers (including taxa richness, PET taxa richness, SIGNAL index and % tolerant taxa); (i) apply procedures and/or guidelines from ANZG (2018), ANZECC & ARMCANZ (2000) and other relevant guideline documents; (j) describe sampling and analysis methods and quality assurance and control; and (k) incorporate stream flow and hydrological information in the interpretations of water quality and biological data.
F23	A REMP that addresses the associated requirements must be prepared and made available to the administering authority upon request.
F24	A report outlining the findings of the REMP, required under **Conditions F21 and F22**, including all monitoring results and interpretations must be prepared annually and made available on request to the administering authority. This must include an assessment of background reference water quality, the condition of downstream water quality compared against water quality objectives and/or site-specific trigger levels, and the suitability of current discharge limits to protect downstream environmental values.
F25	**Water Re-use** Mine-affected water and raw water may be piped or trucked or transferred by some other means that does not contravene the conditions of this environmental authority and deposited into artificial water storage structures, such as water storages, farm dams or tanks, or used directly at properties owned by the environmental authority holder or a third party (with the consent of the third party).
F26	**Overland Flow Water Take** The environmental authority holder may take overland flow water to satisfy the requirements for the activities authorised under this environmental authority.

SCHEDULE F: WATER	
Number	**Condition**
F27	**Annual Water Monitoring Reporting** The following information must be recorded in relation to all water monitoring required under the conditions of this environmental authority and submitted to the administering authority in the specified format: (a) the date on which the sample was taken; (b) the time at which the sample was taken; (c) the monitoring point at which the sample was taken; (d) the measured or estimated daily quantity of mine-affected water released from all release points; (e) the release flow rate at the time of sampling for each release point; (f) the results of all monitoring and details of any exceedances of the conditions of this environmental authority; and (g) water quality monitoring data must be provided to the administering authority in the specified electronic format upon request.
F28	**Temporary Interference with Watercourses** Destroying native vegetation, excavating, or placing fill in a watercourse, lake or spring necessary for and associated with mining operations must be undertaken in accordance with DRDMW (or its successor) *Guideline – Activities in a Watercourse, Lake or Spring associated with Mining Activities.*
F29	**Water Management Plan** A Water Management Plan must be developed by an appropriately qualified person, in consultation with the administering authority and the relevant Commonwealth government agency (e.g. Office of Water Science within the Department of Climate Change, Energy, the Environment and Water), and approved prior to the commencement of coal extraction.
F30	The Water Management Plan must: (a) provide for effective water management of actual and potential environmental impacts resulting from water management associated with the mining activities carried out under this environmental authority; and (b) be developed in accordance with the administering authority's most recent version of the guideline for *Preparation of water management plans for mining activities* (EM324) or any updates that become available from time to time and must include at least the following components: (i) study of the source on contaminants; (ii) a water balance model for the site; (iii) details of catchment areas and environmental values; (iv) a water management system for the site; (v) details of locations and design standards of water management infrastructure; (vi) measures to manage and prevent saline drainage; (vii) measures to manage and prevent acid rock drainage; (viii) contingency procedures for incidents and emergencies; and (ix) a program for monitoring and review of the effectiveness of the water management plan.
F31	A written review of the Water Management Plan must be undertaken each calendar year. The review must: (a) include a statement that the Water Management Plan has been prepared by an appropriately qualified person; (b) assess the plan against the requirements under **Condition F30**; (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 Water Management Plan.
F32	A copy of the Water Management Plan must be provided to the administering authority on request.
F33	**Stormwater and Water Sediment Controls** An Erosion and Sediment Control Plan must be developed by an appropriately qualified person and implemented prior to the commencement of mining activities, to minimise erosion and the release of sediment to receiving waters and contamination of stormwater.

SCHEDULE F: WATER	
Number	**Condition**
F34	The Erosion and Sediment Control Plan must: (a) demonstrate how erosion and sediment control measures adequately minimise the release of sediment to receiving waters and must include at least the following: (i) assessment of all catchment areas; (ii) assessment of soil types, including sodic dispersive soils; and (iii) specify design criteria for erosion and sediment control structures; (b) detail the locations and descriptions of all erosion and sediment control measures; and (c) provide an audit schedule to ensure erosion and sediment controls are being maintained.
F35	A written review of the Erosion and Sediment Control Plan must be undertaken each calendar year. The review must: (a) include a statement that the Erosion and Sediment Control Plan has been prepared by an appropriately qualified person; (b) assess the plan against the requirements under **Condition F34**; (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.
F36	A copy of the Erosion and Sediment Control Plan must be provided to the administering authority on request.
F37	Water and sediments, other than mine-affected water, is permitted to be released to waters from: (a) erosion and sediment control structures that are installed and operated in accordance with the Erosion and Sediment Control Plan required by **Conditions F33 and F34**; and (b) water management infrastructure that is installed and operated, in accordance with a Water Management Plan that complies with **Conditions F29 and F28**, for the purpose of ensuring water does not become mine-affected water.

Table F1
Mine-affected Water Release Points, Sources and Receiving Waters

Release Point	Latitude (GDA2020)	Longitude (GDA2020)	Mine-affected Water Source and Location	Monitoring Point	Receiving Waters Description
RP1	-22.154581	148.290224	MWD	Pipe Outlet	Isaac River via unnamed drainage line
RP2	-22.152906	148.285622	CC Dam	Pipe Outlet	Isaac River via unnamed drainage line
RP3	-22.135072	148.255544	Railway Pit	Pipe Outlet	Isaac River via unnamed drainage line

Table F2
Mine-affected Water Release Limits

Quality Characteristic	Release Limits	Release Limits
Electrical Conductivity (µS/cm)	Release limits specified in **Table F4 – Mine-affected Water Release During Flow Events** for variable flow criteria.	Daily during release (the first sample must be taken within two hours of commencement of release).
pH (pH Unit)	6.5 (minimum) 9.0 (maximum)	
Sulphate (SO_4^{2-})	Release limits specified in **Table F4 – Mine-affected Water Release During Flow Events** for variable flow criteria.	
Total Suspended Solids (TSS)	Release limits specified in **Table F4 – Mine-affected Water Release During Flow Events** for variable flow criteria.	

Table F3
Release Contaminant Trigger Investigation Levels, Potential Contaminants

Quality Characteristic[1]	Trigger Levels (µg/L)	Comment on Trigger Level	Monitoring Frequency
Aluminium	116	80th percentile value for local dataset	Commencement of release (first sample taken within two hours) and weekly during releases thereafter.
Arsenic (total)	13	For aquatic ecosystem protection, based on slightly to moderately disturbed ecosystems (ANZG, 2018)[2]	
Cadmium (total)	0.2	For aquatic ecosystem protection, based on based on slightly to moderately disturbed ecosystems (ANZG, 2018)[2]	
Chromium	1	For aquatic ecosystem protection, based on based on slightly to moderately disturbed ecosystems (ANZG, 2018)[2]	
Copper	1.4	For aquatic ecosystem protection, based on based on slightly to moderately disturbed ecosystems (ANZG, 2018)[2]	
Iron	380	80th percentile value for local dataset	
Lead	3.4	For aquatic ecosystem protection, based on based on slightly to moderately disturbed ecosystems (ANZG, 2018)[2]	
Mercury	0.2	For aquatic ecosystem protection, based on LOR for ICP-MS[3]	
Nickel	11	For aquatic ecosystem protection, based on based on slightly to moderately disturbed ecosystems (ANZG, 2018)[2]	
Zinc	8	For aquatic ecosystem protection, based on based on slightly to moderately disturbed ecosystems (ANZG, 2018)[2]	
Boron	940	For aquatic ecosystem protection, based on based on slightly to moderately disturbed ecosystems (ANZG, 2020)[5]	
Cobalt	90	For aquatic ecosystem protection, based on low reliability guideline (ANZG, 2018)[4]	
Manganese	1,900	For aquatic ecosystem protection, based on based on slightly to moderately disturbed ecosystems (ANZG, 2018)[2]	
Molybdenum	34	For aquatic ecosystem protection, based on low reliability guideline (ANZG, 2018)[4]	
Selenium	5	For aquatic ecosystem protection, based on based on slightly to moderately disturbed ecosystems (ANZG, 2018)[2]	
Silver	0.5	For aquatic ecosystem protection, based on LOR for ICP-MS[3]	
Uranium	1	For aquatic ecosystem protection, based on LOR for ICP-MS[3]	
Vanadium	10	For aquatic ecosystem protection, based on LOR for ICP-MS[3]	
Ammonia	900	For aquatic ecosystem protection, based on based on slightly to moderately disturbed ecosystems (ANZG, 2018)[2]	
Nitrate (TN)	1,100	For aquatic ecosystem protection, based on ambient *Queensland Water Quality Guidelines* (EPA, 2006) for TN[6]	
Petroleum Hydrocarbons ($C_6 – C_9$)	20	For aquatic ecosystem protection, based on LOR for GC-MS[3]	
Petroleum Hydrocarbons ($C_{10} – C_{36}$)	100	For aquatic ecosystem protection, based on LOR for GC-MS[3]	
Fluoride (total)	2,000	Protection of livestock and short-term irrigation guideline (ANZECC and ARMCANZ, 2000)[7]	
Sodium	188,000	80th percentile value for Isaac River at Goonyella gauge	

LOR = limit of reporting; ICP-MS = Inductively Coupled Plasma mass spectrometry; GC-MS = gas-chromatography mass spectrometry; ANZG = Australian and New Zealand Governments; EPA = Queensland Environmental Protect Agency.

1 All metals and metalloids must be measured as total (unfiltered) and dissolved (<0.45 µm filtered). Contaminant limits for metals and metalloids are only considered to be exceeded if the results for dissolved metal or metalloid exceed the trigger level.

2 Table 3.4.1 of ANZG (2018): trigger values for slightly to moderately disturbed systems, (95% level of protection). For Selenium, 99% level of protection.

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

4 Low reliability guideline – refers to Section 8.3.7 of ANZG (2018): low reliability guideline.

5 Based on 95% level of protection in Toxicant default guideline values for aquatic ecosystem protection: Boron in fresh water (ANZG, 2020).

6 Based on ambient WQGs (2006) for total nitrogen –standard trigger value for contemporary environmental authorities in Bowen Basin.

7 Based on short-term trigger value in irrigation water for fluoride (ANZECC and ARMCANZ, 2000).

Table F4
Mine-affected Water Release During Flow Events

Receiving Water/Stream	Release Point (RP)	Gauging Station	Gauging Station Latitude (GDA2020)	Gauging Station Longitude (GDA2020)	Receiving Water Flow Recording Frequency	Receiving Water Flow Criteria for Discharge (m^3/s)	Maximum Release Rate (for all combined RPs)	Release Limits[1]
Isaac River	MWD (RP1) CC Dam (RP2) Railway Pit (RP3)	130410A Isaac River at Deverill[2]	-22.170765	148.384174	Continuous (minimum daily)	**Medium Flow**		
						4 m^3/s	0.5 m^3/s	1,000 µS/cm 300 mg/L SO_4^{2-} 55 mg/L TSS
						10 m^3/s	1.0 m^3/s	1,200 µS/cm 300 mg/L SO_4^{2-} 200 mg/L TSS
						High Flow		
						50 m^3/s	2.0 m^3/s	4,000 µS/cm 400 mg/L SO_4^{2-} 200 mg/L TSS
						100 m^3/s	3.0 m^3/s	6,000 µS/cm 400 mg/L SO_4^{2-} 300 mg/L TSS
						Very High Flow		
						300 m^3/s	5.0 m^3/s	10,000 µS/cm 400 mg/L SO_4^{2-} 400 mg/L TSS

1 If upstream levels of SO_4^{2-} and TSS are above the release limits, mine-affected water release limits may be increased to the levels of SO_4^{2-} and TSS upstream with monitoring on a minimum frequency of daily to provide sufficient evidence for compliance and no exceedances of the receiving water contaminant trigger levels in **Table F7 – Receiving Waters Contaminant Trigger Levels**.

2 If gauging station 130410A Isaac River at Deverill is not available, a gauging station downstream of the release points in a similar location may be used for monitoring purposes.

Table F5
Water Storage Monitoring

Water Storage Description	Latitude (GDA2020)	Longitude (GDA2020)	Monitoring Location	Frequency of Monitoring
MWD	-22.154581	148.290224	Dam wall	Quarterly
CC Dam	-22.152906	148.285622	Dam wall	Quarterly
MIA Dam	-22.139702	148.280798	Dam wall	Quarterly
Railway Pit Storage	-22.135072	148.255544	-	Quarterly
RWD	-22.135946	148.273093	Dam wall	Quarterly
SD01	-22.149218	148.291069	Dam wall	Quarterly
SD02	-22.155898	148.286610	Dam wall	Quarterly
SD03	-22.156432	148.280629	Dam wall	Quarterly
SD04	-22.148188	148.249901	Dam wall	Quarterly
SD05	-22.140346	148.264702	Dam wall	Quarterly
SD06	-22.137318	148.241813	Dam wall	Quarterly
SD07	-22.185521	148.325958	Dam wall	Quarterly
SD08	-22.168349	148.261141	Dam wall	Quarterly
SD09	-22.185856	148.268010	Dam wall	Quarterly
SD10	-22.223946	148.294046	Dam wall	Quarterly
SD11	-22.170820	148.306359	Dam wall	Quarterly
SD12	-22.162640	148.292068	Dam wall	Quarterly
SD13	-22.198556	148.260956	Dam wall	Quarterly
SD14	-22.159876	148.282060	Dam wall	Quarterly
SD15	-22.230925	148.343778	Dam wall	Quarterly
SD16	-22.168039	148.235944	Dam wall	Quarterly

Table F6
Receiving Water Background Sites and Monitoring Points

Monitoring Points	Receiving Waters Location Description	Latitude (GDA2020)	Longitude (GDA2020)
Upstream Monitoring Point			
SW4	Isaac River	-22.114402	148.269078
Downstream Monitoring Point			
SW5	Isaac River – downstream of RP1, RP2 and RP3	-22.153447	148.328597
Background Sites			
SW2	Unnamed tributary of Isaac River	-22.158708	148.318067
SW3	Unnamed tributary of Isaac River	-22.125102	148.270803
SW6	Ripstone Creek	-22.246762	148.284223
SW7	Ripstone Creek	-22.216853	148.222996
SW8	Unnamed tributary of Isaac River	-22.183646	148.332025
SW9	Unnamed tributary of Ripstone Creek	-22.245291	148.302170

Table F7
Receiving Waters Contaminant Trigger Levels

Quality Characteristic	Trigger Level	Monitoring Frequency
pH (pH units) (range)[1]	6.5 – 8.5	Daily during the releases from RP1, RP2 and RP3
Electrical Conductivity	1,000 µS/cm	
Sulphate (SO_4^{2-})	250 mg/L	
Total Suspended Solids[2]	1,901 mg/L	

1 Based on the Isaac River Sub-basin Water Quality Objectives.
2 Based on the 80th percentile value from the Goonyella and Deverill gauging stations.

SCHEDULE G: SEWAGE TREATMENT	
Number	**Condition**
G1	The only contaminant permitted to be released to land is treated sewage effluent in compliance with the release limits stated in **Table G1 – Contaminant Limits for Sewage Effluent**.
G2	Treated sewage effluent may only be released to land in accordance with the conditions of this approval at the mine-affected water management system or other land for the purpose of dust suppression and/or firefighting.
G3	The application of treated effluent to land must be carried out in a manner such that: (a) vegetation is not damaged; (b) there is no surface ponding of effluent; and (c) there is no run-off of effluent.
G4	All sewage effluent released to land must be monitored at the frequency and for the parameters specified in **Table G1 – Contaminant Limits for Sewage Effluent**.
G5	The daily volume of effluent released to land must be measured and records kept of the volumes of effluent released.
G6	When circumstances prevent the beneficial reuse of treated sewage effluent such as during or following rain events, waters must be directed to a wet weather storage or alternative measures must be taken to store/lawfully dispose of effluent.
G7	Treated sewage effluent must only be supplied to another person or organisation that has a written plan detailing how the user of the treated sewage effluent will comply with their general environmental duty under section 319 of the EP Act whilst using the treated sewage effluent.

Table G1
Contaminant Limits for Sewage Effluent

Contaminant	Unit	Release Limit	Limit Type	Frequency
5 day Biochemical Oxygen Demand (BOD)	mg/L	20	Maximum	Monthly
Total Suspended Solids	mg/L	30	Maximum	Monthly
Nitrogen	mg/L	30	Maximum	Monthly
Phosphorus	mg/L	15	Maximum	Monthly
E-coli	Organisms/100 ml	1,000	Maximum	Monthly
pH	pH units	6.0 – 9.0	Range	Monthly

SCHEDULE H: LAND AND REHABILITATION	
Number	**Condition**
H1	Land disturbed by mining must be rehabilitated in accordance with **Table H1 – Proposed Completion Criteria for the PMLU Rehabilitation Areas** and **Figure H1 – Conceptual Final Landform and Post-mining Land Use.** Note**,** upon receipt of a notice given under section 754 of the EP Act, a Progressive Rehabilitation and Closure Plan (PRCP) and schedule will be developed for the Project in accordance with the requirements for 'mining EA applicants' under the EP Act and consistent with the land outcomes provided in **Table H1 – Proposed Completion Criteria for the PMLU Rehabilitation Areas**.
H2	Rehabilitation must commence progressively in accordance with the approved PRCP.

SCHEDULE H: LAND AND REHABILITATION	
Number	**Condition**
H3	**Contaminated Land** Before applying for surrender of a mining lease, the holder must (if applicable) provide to the administering authority a site investigation report under the EP Act, in relation to any part of the mining lease which has been used for notifiable activities or which the 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 the final land use.
H4	Before applying for progressive rehabilitation certification for an area, the holder must (if applicable) provide to the administering authority a site investigation report under the EP Act, in relation to any part of the area the subject of the application which has been used for notifiable activities or which the 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 under **Condition H1**.
H5	**Impacts to Prescribed Environmental Matters** Significant residual impacts to prescribed environmental matters are not authorised under this environmental authority or the *Environmental Offsets Act 2014* (EO Act) unless the impact(s) is specified in **Table H2 – Significant Residual Impacts to Prescribed Environmental Matters** and located within the 'Indicative Surface Disturbance Extent' shown on the following: • **Figure H2 – Location of Significant Residual Impact to Matters of State Environmental Significance**; • **Figure H3 – Location of Significant Residual Impact of Habitat for Ornamental Snake**; • **Figure H4 – Location of Significant Residual Impact of Habitat for Squatter Pigeon (southern subspecies)**; • **Figure H5 – Location of Significant Residual Impact of Habitat for Koala (combined populations of QLD, NSW and the ACT)**; and • **Figure H6 – Location of Significant Residual Impact of Habitat for Greater Glider**.
H6	Records demonstrating impact to prescribed environmental matters not listed in **Table H2 – Significant Residual Impacts to Prescribed Environmental Matters**, did not, or is not likely to, result in a significant residual impact, to that matter must be: (a) completed by an appropriately qualified person; and (b) kept for the life of the environmental authority.
H7	An environmental offset made in accordance with the EO Act and *Queensland Environmental Offsets Policy (Version 1.11)*, as amended from time to time, must be undertaken for the maximum extent of disturbance to each offsetable prescribed environmental matter authorised in **Table H2 – Significant Residual Impacts to Prescribed Environmental Matters**, unless a lesser extent of the disturbance has been approved in accordance with **Condition H5** (for staged offsets).
H8	The significant residual impacts to a prescribed environmental matter authorised in **Condition H5** for which an environmental offset is required by **Condition H7** may be carried out in stages. An environmental offset can be delivered for each stage of the disturbance to prescribed environmental matters.
H9	Prior to the commencement of each stage, a report completed by an appropriately qualified person, which includes an analysis of the following must be provided to the administering authority: (a) for the forthcoming stage—the estimated significant residual impacts to each prescribed environmental matter; and (b) for the previous stage, if applicable, the actual significant residual impacts to each prescribed environmental matter, to date.
H10	The report required by **Condition H9** must be approved by the administering authority before a notice of election for the forthcoming stage, if applicable, is given to the administering authority.
H11	A notice of election for the staged environmental offset referred to in **Condition H10**, must be provided to the administering authority no less than three months before the proposed commencement of that stage, unless a lesser timeframe has been agreed to by the administering authority. The offset requirements for Stage 1 must be consistent with the quantity and location of the Stage 1 offset areas described in *Winchester South Project – Offset Management Strategy* (Whitehaven WS, 2022) for each of the relevant prescribed environmental matters requiring offsets.
H12	Within six months from the completion of the final stage of the Project, a report completed by an appropriately qualified person, which includes the following matters, must be provided to the administering authority: (c) an analysis of the actual disturbance of prescribed environmental matters resulting from the final stage; and (d) if applicable, a notice of election to address any outstanding offset debits for the authorised impacts.
H13	**Exploration** Land subject to exploration activities must be rehabilitated in accordance with the *Eligibility Criteria and Standard Conditions for Mining Lease Activities* Version 2 (ESR/2016/2241).

Table H1
Proposed Completion Criteria for the PMLU Rehabilitation Areas

Rehabilitation Area	Rehabilitation Milestone	Rehabilitation Objective	Performance Indicator	Completion Criteria
Infrastructure Areas (RA1)	Safe (RM1)	Potential safety risks (e.g. risks associated with retained infrastructure) are identified and appropriately addressed so the site is safe.	Safety assessment (including risk assessment) prepared by a suitably qualified person. The safety assessment forms a part of the Project Post-mining Management Report.	The safety assessment concludes that the rehabilitated infrastructure areas and any retained infrastructure do not pose any unacceptable safety risks.
	Stable (RM2)	Landform water management features functioning as designed and minimal presences of erosion.	Erosion monitoring data (erosion rates and sheets, rills and gully formation). Erosion monitoring data forms a part of the Project Post-mining Management Report.	Erosion monitoring data demonstrates the following for two years post-rehabilitation: • Soil loss rates are comparable to relevant rehabilitation reference monitoring sites. • Erosion maintenance requirements are comparable to relevant rehabilitation reference monitoring sites.
			Surface water quality monitoring data (e.g. pH, EC, heavy metal content, etc.). Surface water quality monitoring data forms a part of the Project Post-mining Management Report.	Receiving water quality monitoring results comply with the EA surface water quality criteria, for a period of at least two years post-rehabilitation.
	Non-polluting (RM3)	Potentially contaminated areas are remediated and are safe.	Contaminated land assessment prepared in accordance with the *Queensland auditor handbook for contaminated land* (DES, 2018) by a suitably qualified person. The contaminated land assessment forms a part of the Project Post-mining Management Report.	No contaminated land exists within the Project final landform.

Table H1 (Continued)
Proposed Completion Criteria for the PMLU Rehabilitation Areas

Rehabilitation Area	Rehabilitation Milestone	Rehabilitation Objective	Performance Indicator	Completion Criteria
Infrastructure Areas (RA1) (Continued)	Able to sustain proposed PMLU (RM4)	Establish low-intensity cattle grazing land use. The post-mining Land Suitability Class is the same class as pre-mining.	Rehabilitation monitoring (e.g. erosion, soil physical and chemical parameters, organic matter and nutrient presence, cycling and vegetation dynamics, and habitat complexity and quality for woodland patches). Monitoring data forms a part of the Project Post-mining Management Report.	Rehabilitation monitoring demonstrates that: • Physical, chemical and biological properties of the growth media are similar to relevant rehabilitation reference monitoring sites. • Pasture vegetation comprises grass species suitable for grazing and comparable to relevant rehabilitation reference monitoring sites (e.g. Buffel Grass [*Cenchrus ciliaris*], Wiregrass [*Aristida sp*] and Kangaroo Grass [*Themeda triandra*]). • Woodland patches comprise vegetation species diversity (and demonstrate generational succession) comparable to relevant rehabilitation reference monitoring sites, including monitoring sites within woodland patches of comparable low-intensity grazing land uses. • Vegetation cover and densities are comparable to relevant rehabilitation monitoring reference sites for a period of at least two years post-rehabilitation. • Weed diversity and abundance is comparable to relevant rehabilitation monitoring reference sites. • Pests do not occur in substantial numbers (i.e. are not greater than relevant reference sites) or visibly affect the pasture and woodland vegetation development. • The post-mining Land Suitability Class is the same class as pre-mining.
			Cattle stocking rate. Cattle stocking rate monitoring data forms a part of the Project Post-mining Management Report.	Cattle stocking rate monitoring demonstrates target stocking rate is approximately 0.4 adult equivalents per hectare (AE/ha) consistent with pre-mining stocking rates.

Table H1 (Continued)
Proposed Completion Criteria for the PMLU Rehabilitation Areas

Rehabilitation Area	Rehabilitation Milestone	Rehabilitation Objective	Performance Indicator	Completion Criteria
Infrastructure Areas (RA1) (Continued)	Able to sustain proposed PMLU (RM4) (Continued)	Reinstatement of portions of the northern unnamed waterway.	Reinstated portions of the northern unnamed waterway contain features similar to pre-existing conditions and will allow for fish passage.	The reinstated portions of the northern unnamed waterway will provide for passage of fish and include the following features: • functionality and longevity of the riparian corridor, including revegetation and management of the riparian vegetation; • a waterway gradient of no more than 5%; • conditions within the waterway (depth and velocities) are suitable to provide adequate fish passage during 1, 2 and 5 year Average Recurrence Intervals (ARIs); • habitat and geomorphic features include material such as woody debris to create habitat diversity within the waterway; and • natural features such as pools and meanders, bed and bank profiles, and providing a mix of suitable substrate types.
Waste Rock Emplacements (RA2)	Safe (RM1)	Potential safety risks are identified and appropriately addressed so the site is safe.	Safety assessment (including risk assessment) prepared by a suitably qualified person. The safety assessment forms a part of the Project Post-mining Management Report.	The safety assessment concludes that the rehabilitated waste rock emplacements do not pose any unacceptable safety risks.
	Stable (RM2)	Rehabilitated waste rock emplacements within the final landform are geotechnically stable.	Geotechnical assessment of the rehabilitated waste rock emplacements prepared by a suitably qualified person. The geotechnical assessment forms a part of the Project Post-mining Management Report.	The geotechnical assessment concludes: • Waste rock emplacement final landform slopes are approximately 10° or lower. • The toe of out-of-pit waste rock emplacements is set back by an appropriate distance from the crest of residual voids and drainage systems installed to exclude surface water runoff from reporting to the residual voids. • The final landform demonstrates the level of stability as specified in the design.
		Landform water management features functioning as designed and minimal presence of erosion.	Erosion monitoring data (erosion rates and sheets, rills and gully formation). Erosion monitoring data forms a part of the Project Post-mining Management Report.	Erosion monitoring data demonstrates the following for two years post-rehabilitation: • Soil loss rates are comparable to relevant rehabilitation reference monitoring sites. • Erosion maintenance requirements are comparable to relevant rehabilitation reference monitoring sites.

Table H1 (Continued)
Proposed Completion Criteria for the PMLU Rehabilitation Areas

Rehabilitation Area	Rehabilitation Milestone	Rehabilitation Objective	Performance Indicator	Completion Criteria
Waste Rock Emplacements (RA2) (Continued)	Non-polluting (RM3)	Runoff and seepage from rehabilitated waste rock emplacements are a low risk of causing environmental harm.	Surface and groundwater quality monitoring data (e.g. sediment load, pH, heavy metal content, etc.). Surface and groundwater quality monitoring data forms a part of the Project Post-mining Management Report.	Receiving water quality monitoring results comply with EA water quality criteria, for a period of at least two years post-rehabilitation.
			Environmental risk assessment prepared by a suitably qualified person. The environmental risk assessment forms a part of the Project Post-mining Management Report.	The environmental risk assessment concludes that there is a low risk of environmental harm.
		Potentially contaminated areas are remediated and are safe.	Contaminated land assessment prepared in accordance with the *Queensland auditor handbook for contaminated land* (DES, 2018) by a suitably qualified person. The contaminated land assessment forms a part of the Project Post-mining Management Report.	No contaminated land exists within the Project final landform.

Table H1 (Continued)
Proposed Completion Criteria for the PMLU Rehabilitation Areas

Rehabilitation Area	Rehabilitation Milestone	Rehabilitation Objective	Performance Indicator	Completion Criteria
Waste Rock Emplacements (RA2) (Continued)	Able to sustain proposed PMLU (RM4)	Establish low-intensity cattle grazing land use. The post-mining Land Suitability Class is Class 3 to 4 for Grazing and Class 5 for Cropping.	Rehabilitation monitoring (e.g. erosion, soil physical and chemical parameters, organic matter and nutrient presence, cycling and vegetation dynamics, and habitat complexity and quality for woodland patches). Monitoring data forms a part of the Project Post-mining Management Report.	Rehabilitation monitoring demonstrates that: • Physical, chemical and biological properties of the growth media are similar to relevant rehabilitation reference monitoring sites. • Pasture vegetation comprises grass species suitable for grazing and comparable to relevant rehabilitation reference monitoring sites (e.g. Buffel Grass [*Cenchrus ciliaris*], Wiregrass [*Aristida sp*] and Kangaroo Grass [*Themeda triandra*]). • Woodland patches comprise vegetation species diversity (and demonstrate generational succession) comparable to relevant rehabilitation reference monitoring sites, including monitoring sites within woodland patches of comparable low-intensity grazing land uses. • Vegetation cover and densities are comparable to relevant rehabilitation monitoring reference sites for a period of at least two years post-rehabilitation. • Weed diversity and abundance is comparable to relevant rehabilitation monitoring reference sites. • Pests do not occur in substantial numbers (i.e. not greater than relevant reference sites) or visibly affect the pasture and woodland vegetation development. • The post-mining Land Suitability Class is Class 3 to 4 for Grazing and Class 5 for Cropping.
			Cattle stocking rate. Cattle stocking rate monitoring data forms a part of the Project Post-mining Management Report.	Cattle stocking rate monitoring demonstrates target stocking rate is approximately 0.4 AE/ha consistent with pre-mining stocking rates.

Table H1 (Continued)
Proposed Completion Criteria for the PMLU Rehabilitation Areas

Rehabilitation Area	Rehabilitation Milestone	Rehabilitation Objective	Performance Indicator	Completion Criteria
Residual Voids (RA3)	Safe (RM1)	Potential safety risks are identified and appropriately addressed so the site is safe.	Safety assessment (including risk assessment) prepared by a suitably qualified person. The safety assessment forms a part of the Project Post-mining Management Report.	The safety assessment concludes: • Safety perimeter bunding or fencing is installed around the crest of highwalls to prevent access by native fauna, livestock and people. • The residual voids do not pose any unacceptable safety risks.
	Stable (RM2)	Residual voids within the final landform are geotechnically stable.	Geotechnical assessment of the residual voids prepared by a suitably qualified person. The geotechnical assessment forms a part of the Project Post-mining Management Report.	The geotechnical assessment concludes: • Residual void highwalls have been constructed as designed and are stable. • In-pit waste rock emplacements that are not re-graded and rehabilitated as part of the PMLU have been constructed as designed and are stable. • The toe of out-of-pit waste rock emplacements is set back by an appropriate distance from the crest of residual voids. Drainage systems are installed to design. • The distance of the safety perimeter bunding or fencing installed around the crest of highwalls accommodates potential for degradation or slope failure over time. • The final landform demonstrates the level of stability as specified by the design.
	Non-polluting (RM3)	Residual Voids are isolated from the Isaac River floodplain.	Flood assessment prepared by a suitably qualified person. The flood assessment forms a of the Project Post-mining Management Report.	The flood assessment concludes that the residual voids are isolated from all flood events, up to and including a Probable Maximum Flood (PMF) event.
		Residual voids act as groundwater sinks.	Monitoring of residual void water levels and surrounding groundwater levels.	Monitoring of water levels demonstrates that there is a hydraulic gradient towards the residual voids at least two years post-rehabilitation.
		Residual void water bodies have a low risk of environmental harm.	Surface water and groundwater quality monitoring data (e.g. EC, pH, etc). Surface water and groundwater quality monitoring data forms a part of the Project Post-mining Management Report.	Water quality monitoring results continue to comply with relevant water quality limits in Schedules E and F of this environmental authority.

Table H1 (Continued)
Proposed Completion Criteria for the PMLU Rehabilitation Areas

Rehabilitation Area	Rehabilitation Milestone	Rehabilitation Objective	Performance Indicator	Completion Criteria
Residual Voids (RA3) (Continued)	Non-polluting (RM3) (Continued)	Residual void water bodies have a low risk of environmental harm.	Groundwater assessment prepared by a suitably qualified person. The groundwater assessment forms a part of the Project Post-mining Management Report.	The groundwater assessment concludes that the residual voids are acting as groundwater sinks, preventing the migration of potentially saline water into adjacent aquifers and watercourses.
			Residual void water balance prepared by a suitably qualified person. The residual void water balance forms a part of the Project Post-mining Management Report.	The residual void water balance concludes that the residual void lakes would equilibrate below the point at which they would spill to the surrounding environment.
			Environmental risk assessment prepared by a suitably qualified person. The environmental risk assessment forms a part of the Project Post-mining Management Report.	The environmental risk assessment concludes that there is a low risk of environmental harm.
	Able to sustain proposed PMLU (RM4)	Residual voids provide water supply for agriculture or other purposes. Establish low-intensity cattle grazing land use on low walls.	Surface water and groundwater quality monitoring data (e.g. EC, pH, etc). Rehabilitation monitoring (e.g. erosion, soil physical and chemical parameters, organic matter and nutrient presence, cycling and vegetation dynamics, and habitat complexity and quality for woodland patches). Monitoring data forms a part of the Project Post-mining Management Report.	For residual void water bodies, the water quality monitoring results indicate water quality is suitable for the PMLU for a period of at least two years post-rehabilitation. Rehabilitation monitoring demonstrates that low walls outside of the residual void water body demonstrates the RM4 completion criteria for Waste Rock Emplacements (RA2).

Table H2
Significant Residual Impacts to Prescribed Environmental Matters

Prescribed Environmental Matter	Maximum Extent of Disturbance	State Environmental Offset Required
Regulated Vegetation		
Endangered Regional Ecosystem – RE 11.3.1	64.5 ha	Yes
Endangered Regional Ecosystem – RE 11.4.8	2.4 ha	Yes
Endangered Regional Ecosystem – RE 11.4.9	23.1 ha	Yes
Endangered Regional Ecosystem – RE 11.9.5	17.7 ha	Yes
Of Concern Regional Ecosystem – RE 11.3.2*	9.6 ha*	No*
Of Concern Regional Ecosystem – RE 11.3.3c	6.9 ha	Yes
Of Concern Regional Ecosystem – RE 11.3.4	39.8 ha	Yes
Regional ecosystem within the defined distance of a vegetation management watercourse – RE 11.3.1	1.3 ha	Yes
Regional ecosystem within the defined distance of a vegetation management watercourse – RE 11.4.4*	0.1 ha*	No*
Regional ecosystem within the defined distance of a vegetation management watercourse – RE 11.9.3	3.1 ha	Yes
Essential habitat (not in an urban area) for vulnerable wildlife – Ornamental Snake (*Denisonia maculata*)*	1,834.2 ha*	No*
Connectivity Areas		
Connectivity area that is a regional ecosystem (not in urban area) – RE 11.3.3c, RE 11.3.4, RE 11.3.2, RE 11.5.3, RE 11.9.2, RE 11.3.1, RE 11.4.8, RE 11.4.9, RE 11.9.5, RE 11.4.4, RE 11.9.3	569.3 ha	Yes
Protected Wildlife Habitat#		
Habitat for a plant that is endangered wildlife – *Solanum adenophorum*	0.2 ha	Yes
Habitat for an animal that is vulnerable wildlife – Ornamental Snake (*Denisonia maculata*)*	1,834.2 ha*	No*
Habitat for an animal that is vulnerable wildlife – Squatter Pigeon (southern subspecies) (*Geophaps scripta scripta*)*	115.5 ha*	No*
Habitat for an animal that is vulnerable wildlife – Koala (combined populations of QLD, NSW and the ACT) (*Phascolarctos cinereus*)*	168.9 ha*	No*
Habitat for an animal that is vulnerable wildlife – Greater Glider (*Petauroides volans*)*	132.8 ha*	No*
Habitat for an animal that is special least concern wildlife – Short-beaked Echidna (*Tachyglossus aculeatus*)	2,049.3 ha	No^
Waterway Providing for Fish Passage		
Fish passage (not in an urban area) – Waterways Providing for Fish Passage Mapped by the Department of Agriculture and Fisheries (2023)	6.8 ha	Yes

* This matter will be offset under the EPBC Act approval conditions.

\# The REs and species habitats overlap (i.e. the REs and species habitats are not mutually exclusive).

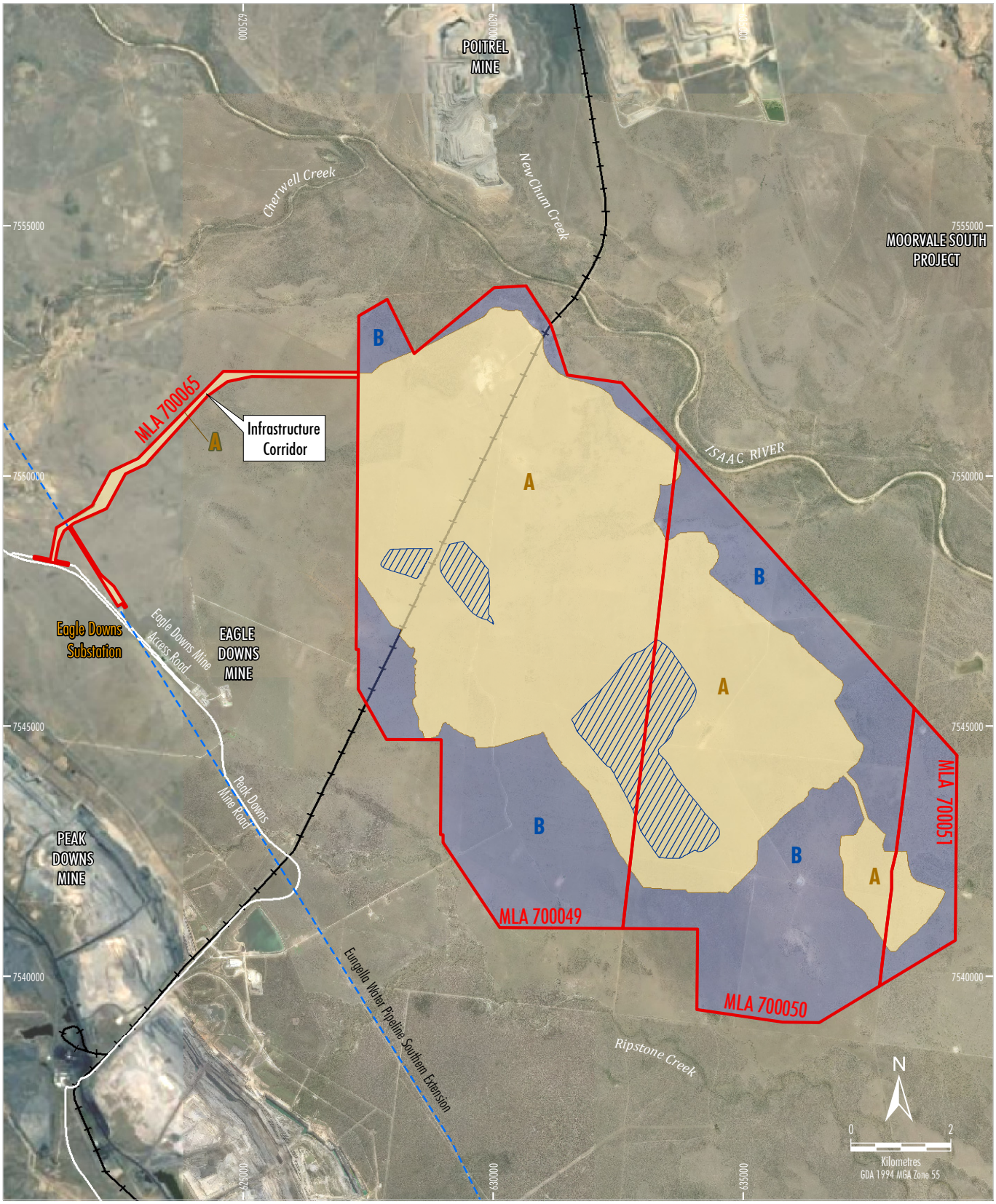
^ Offset not required as there would not be a significant residual impact.

RE = regional ecosystem; ha = hectares.

SCHEDULE I: REGULATED STRUCTURES	
Number	**Condition**
I1	**Assessment of Consequence Category** The consequence category of any structure must be assessed by a suitably qualified and experienced person in accordance with the *Manual for assessing consequence categories and hydraulic performance of structures*, at the following times: (a) prior to the design and construction of the structure, if it is not an existing structure; or (b) prior to any change in its purpose or the nature of its stored contents.
I2	A consequence assessment report and certification must be prepared for each structure assessed and the report may include a consequence assessment for more than one structure.
I3	Certification must be provided by the suitably experienced and qualified person who undertook the assessment, in the form set out in the *Manual for assessing consequence categories and hydraulic performance of structures* (ESR/2016/1933).
I4	**Design and Construction of a Regulated Structure** All regulated structures must be designed by, and constructed under the supervision of, a suitably experienced and qualified person in accordance with the requirements of the *Manual for assessing consequence categories and hydraulic performance of structures* (ESR/2016/1933).
I5	Construction of a regulated structure is prohibited unless: (a) the holder has submitted a consequence category assessment report and certification to the administering authority; and (b) certification for the design, design plan and the associated operating procedures has been certified by a suitably qualified and experienced person in compliance with the relevant condition of this authority.
I6	Certification must be provided by the suitably qualified and experienced person who oversees the preparation of the design plan in the form set out in the *Manual for assessing consequence categories and hydraulic performance of structures* (ESR/2016/1933), and must be recorded in the Register of Regulated Structures (**Condition I29**).
I7	Regulated structures must: (a) be designed and constructed in compliance with the *Manual for assessing consequence categories and hydraulic performance of structures* (ESR/2016/1933); (b) be designed and constructed with due consideration given to ensuring that the design integrity would not be compromised on account of: (i) floodwaters from entering the regulated dam from any watercourse or drainage line; (ii) wall failure due to erosion by floodwaters arising from any watercourse or drainage line; and (c) have the floor and sides of the dam designed and constructed to prevent or minimise the passage of the wetting front and any entrained contaminants through either the floor or sides of the dam during the operational life of the dam and for any period of decommissioning and rehabilitation of the dam.
I8	Certification by the suitably qualified experienced and qualified person who supervises the construction must be submitted to the administering authority on the completion of construction of the regulated structure, and state that: (a) the 'as constructed' drawings and specifications meet the original intent of the design plan for that regulated structure; and (b) construction of the regulated structure is in accordance with the design plan.
I9	**Notification of Affected Persons** All affected persons must be provided with a copy of the emergency action plan in place for each regulated structure: (a) for existing structures that are regulated structures, within 10 business days of this condition taking effect; (b) prior to the operation of the new regulated structure; and (c) if the emergency action plan is amended, within five business days of it being amended.

SCHEDULE I: REGULATED STRUCTURES	
Number	**Condition**
I10	**Operation of a Regulated Structure** Operation of a regulated structure, except for an existing structure, is prohibited unless the holder has submitted to the administering authority in respect of the regulated structure, all of the following: (a) one paper copy and one electronic copy of the design plan and certification of the 'design plan' in accordance with **Condition I5**; (b) a set of 'as constructed' drawings and specifications; (c) certification of the 'as constructed drawings and specifications' in accordance with **Condition I8**; (d) where the regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the Design Storage Allowance (DSA) volume across the system, a copy of the certified system design plan; (e) the requirements of this authority relating to the construction of the regulated structure have been met; (f) the holder has entered the details required under this authority, into a Register of Regulated Structures; and (g) there is a current operational plan for the regulated structure.
I11	For existing structures that are regulated structures: (a) where the existing structure that is a regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the DSA volume across the system, the holder must submit to the administering authority within 12 months of the commencement of this condition a copy of the certified system design plan including that structure; and (b) there must be a current operational plan for the existing structures.
I12	Each regulated structure must be maintained and operated, for the duration of its operational life until decommissioned and rehabilitated, in compliance with the current operational plan and, if applicable, the current design plan and associated certified 'as constructed' drawings.
I13	**Mandatory Reporting Level** **Conditions I14 to I17** inclusive only apply to Regulated Structures which have not been certified as low consequence category for 'failure to contain – overtopping'.
I14	The Mandatory Reporting Level (MRL) must be marked on a regulated dam in such a way that during routine inspections of that dam, it is clearly observable.
I15	The holder must, as soon as practicable but within 48-hours of becoming aware, notify the administering authority when the level of the contents of a regulated dam reaches the MRL.
I16	The holder must, immediately on becoming aware that the MRL has been reached, act to prevent the occurrence of any unauthorised discharge from the regulated dam.
I17	The holder must record any changes to the MRL in the Register of Regulated Structures.
I18	**Design Storage Allowance** The holder must assess the performance of each regulated dam or linked containment system over the preceding November to May period based on actual observations of the available storage in each regulated dam or linked containment system, taken prior to 1 July of each year.
I19	By 1 November of each year, storage capacity must be available in each regulated dam (or network of linked containment systems with a shared DSA volume), to meet the DSA volume for the dam (or network of linked containment systems).
I20	The holder must, as soon as practicable but within 48-hours of becoming aware that the regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on 1 November of any year, notify the administering authority.
I21	The holder must, immediately on becoming aware that a regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on a nominated date of any year, act to prevent the occurrence of any unauthorised discharge from the regulated dam or linked containment systems.
I22	**Annual Inspection Report** Each regulated structure must be inspected each calendar year by a suitably qualified and experienced person.

SCHEDULE I: REGULATED STRUCTURES	
Number	**Condition**
I23	At each annual inspection, the condition and adequacy of all components of the regulated structure must be assessed and a suitably qualified and experienced person must prepare an annual inspection report containing details of the assessment and include a recommendations section, with any recommended actions to ensure the integrity of the regulated structure or a positive statement that no recommendations are required.
I24	The suitably qualified and experienced person who prepared the annual inspection report must certify the report in accordance with the *Manual for assessing consequence categories and hydraulic performance of structures* (ESR/2016/1933).
I25	The holder must, within 20 business days of receipt of the annual inspection report, provide to the administering authority: (a) the recommendations section of the annual inspection report; (b) if applicable, any actions being taken in response to those recommendations; and (c) if, following receipt of the recommendations and (if applicable) recommended actions, the administering authority requests a copy of the annual inspection report from the holder, provide this to the administering authority within 10 business days of receipt of the request.
I26	**Transfer Arrangements** The holder must provide a copy of any reports, documentation and certifications prepared under this environmental authority, including but not limited to any Register of Regulated Structures, consequence assessment, design plan and other supporting documentation, to a new holder on transfer of this authority.
I27	**Decommissioning and Rehabilitation** Regulated structures must not be abandoned but be either: (a) decommissioned and rehabilitated to achieve compliance with **Condition I28**; or (b) left *in-situ* for a use by the landholder provided that: (i) it no longer contains contaminants that will migrate into the environment; (ii) it contains water of a quality that is demonstrated to be suitable for its intended use(s); (c) the holder of the environmental authority and the landholder agree in writing that the: (i) regulated structure will be used by the landholder following the cessation of the environmentally relevant activities; and (ii) landholder is responsible for the regulated structure, on and from an agreed date.
I28	Before surrendering this environmental authority, the site must be rehabilitated to achieve the rehabilitation requirements in **Table H1 – Proposed Completion Criteria for the PMLU Rehabilitation Areas.**
I29	**Register of Regulated Structures** A Register of Regulated Structures must be established and maintained by the holder for each regulated structure.
I30	The holder must provisionally enter the required information in the Register of Regulated Structures when a design plan for a regulated dam is submitted to the administering authority.
I31	The holder must make a final entry of the required information in the Register of Regulated Structures once compliance with **Conditions I10 and I11** has been achieved.
I32	The holder must ensure that the information contained in the Register of Regulated Structures is current and complete on any given day.
I33	All entries in the Register of Regulated Structures must be approved by the chief executive officer for the holder of this environmental authority, or their delegate, as being accurate and correct.
I34	The holder must supply to the administering authority a copy of the records contained in the Register of Regulated Structures, in the electronic format required by the administering authority.



WHC-18-62_P EA Con_201A

LEGEND

- Mining Lease Application Boundary
- Railway
- Eungella Water Pipeline Southern Extension
- A — Land Disturbance May Occur
- B — Land Disturbance Must Not Occur*
- Indicative Residual Void Crest

* 'Land Disturbance Must Not Occur' only applies to disturbance that forms part of the Project approved under this environmental authority. Any disturbance associated with existing or approved activities (e.g. existing land use) or exploration are not the subject of this environmental authority.

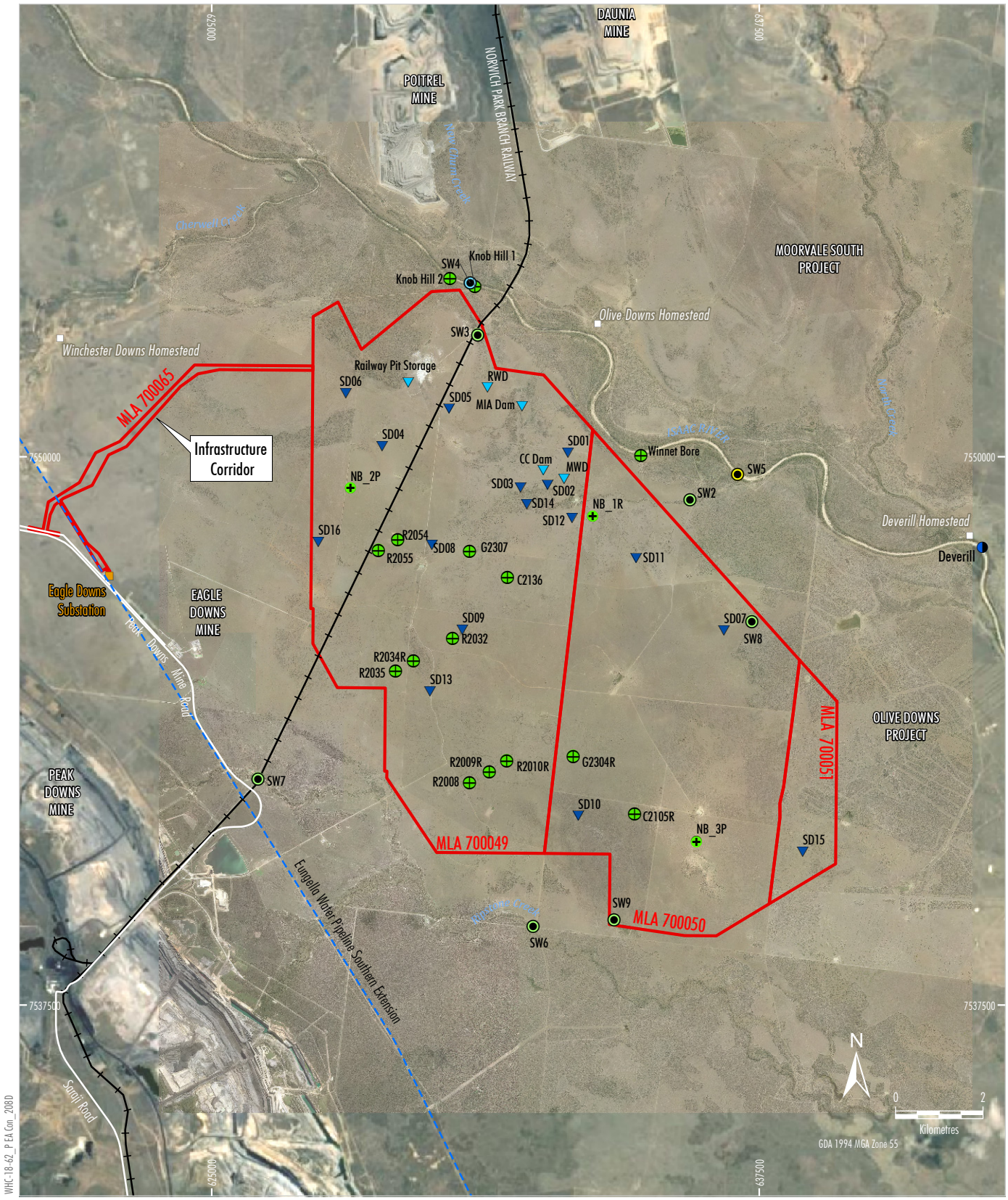
Source: The State of Queensland (2018 - 2020); Whitehaven (2022); Orthophoto: Google Image (2019); Whitehaven (2017)

WHITEHAVEN COAL

WINCHESTER SOUTH PROJECT

Land Disturbance

Figure A1



LEGEND

- Mining Lease Application Boundary
- Eungella Water Pipeline Southern Extension
- Railway
- Substation

Project Monitoring Network

- Standpipe
- Proposed Standpipe

Water Storage for Monitoring

- Sediment Dam
- Mine-affected Water Storage

DRDMW Monitoring Network

- Deverill Gauging Station

Surface Water Monitoring Network

- Background Site
- Downstream Monitoring Point
- Upstream Monitoring Point

Source: The State of Queensland (2020); SLR (2022); WRM (2022); Hydrogeologist.com.au (2022); Whitehaven (2022)
Orthophoto: Google (2019); Whitehaven (2017)

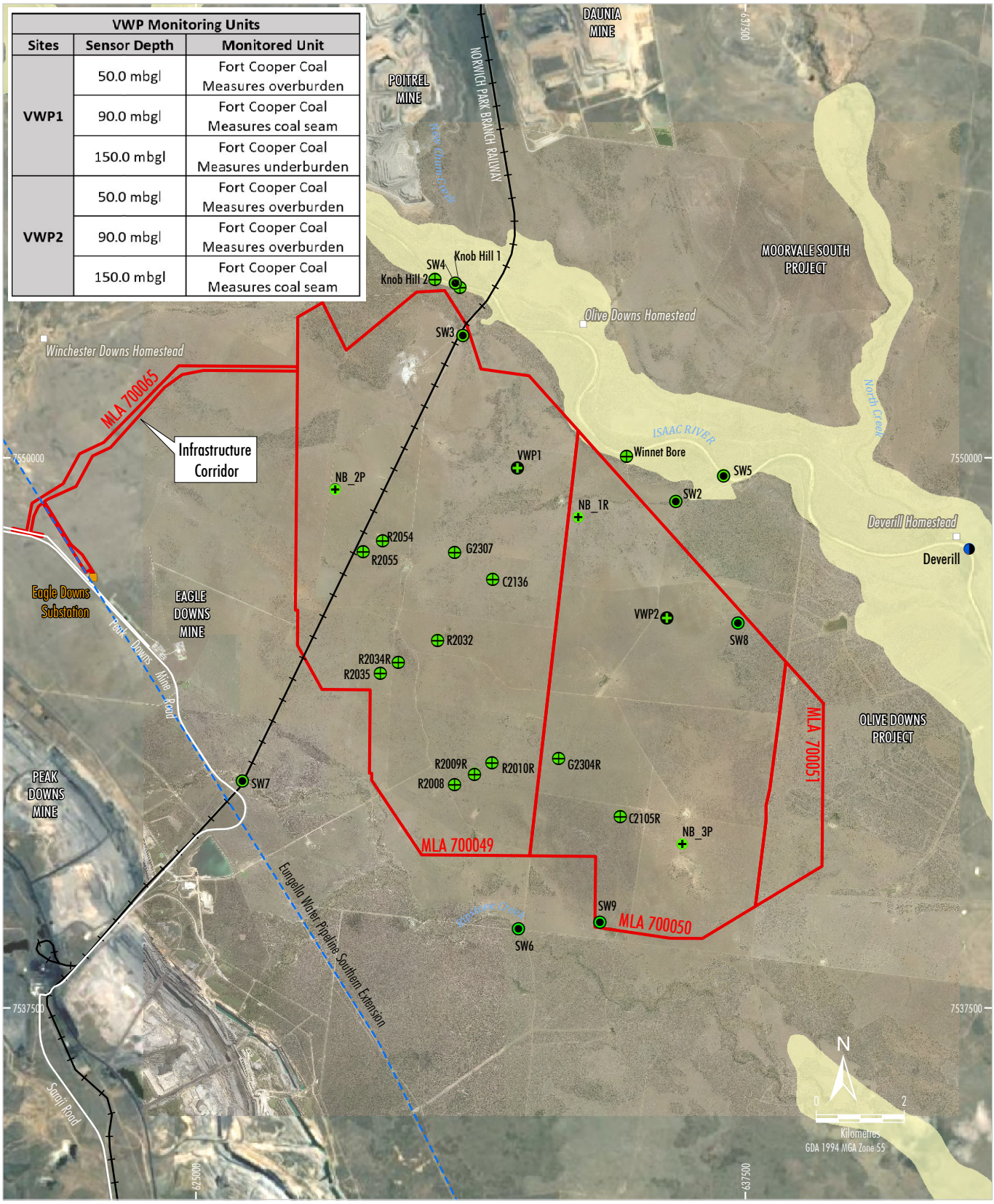
WHITEHAVEN COAL

WINCHESTER SOUTH PROJECT

Water Quality Monitoring Locations

Note: Knob Hill 1 is unable to monitoring SWL due to pump stalled, but can still sample for water quality.
Knob Hill 1 and Knob Hill 2 inclusion in monitoring network dependent on continued approval to access the bore from bore owner.

Figure E1



LEGEND

- Mining Lease Application Boundary
- Eungella Water Pipeline Southern Extension
- Railway
- Substation
- Interpreted Issac River Alluvium Extent (SLR, 2022)

Project Monitoring Network

- Surface Water Monitoring
- Standpipe
- VWP
- Proposed Standpipe

DRDMW Monitoring Network

- Deverill Gauging Station

Source: The State of Queensland (2020); SLR (2022); WRM (2022); Hydrogeologist.com.au (2022); Whitehaven (2022)
Orthophoto: Google (2019); Whitehaven (2017)

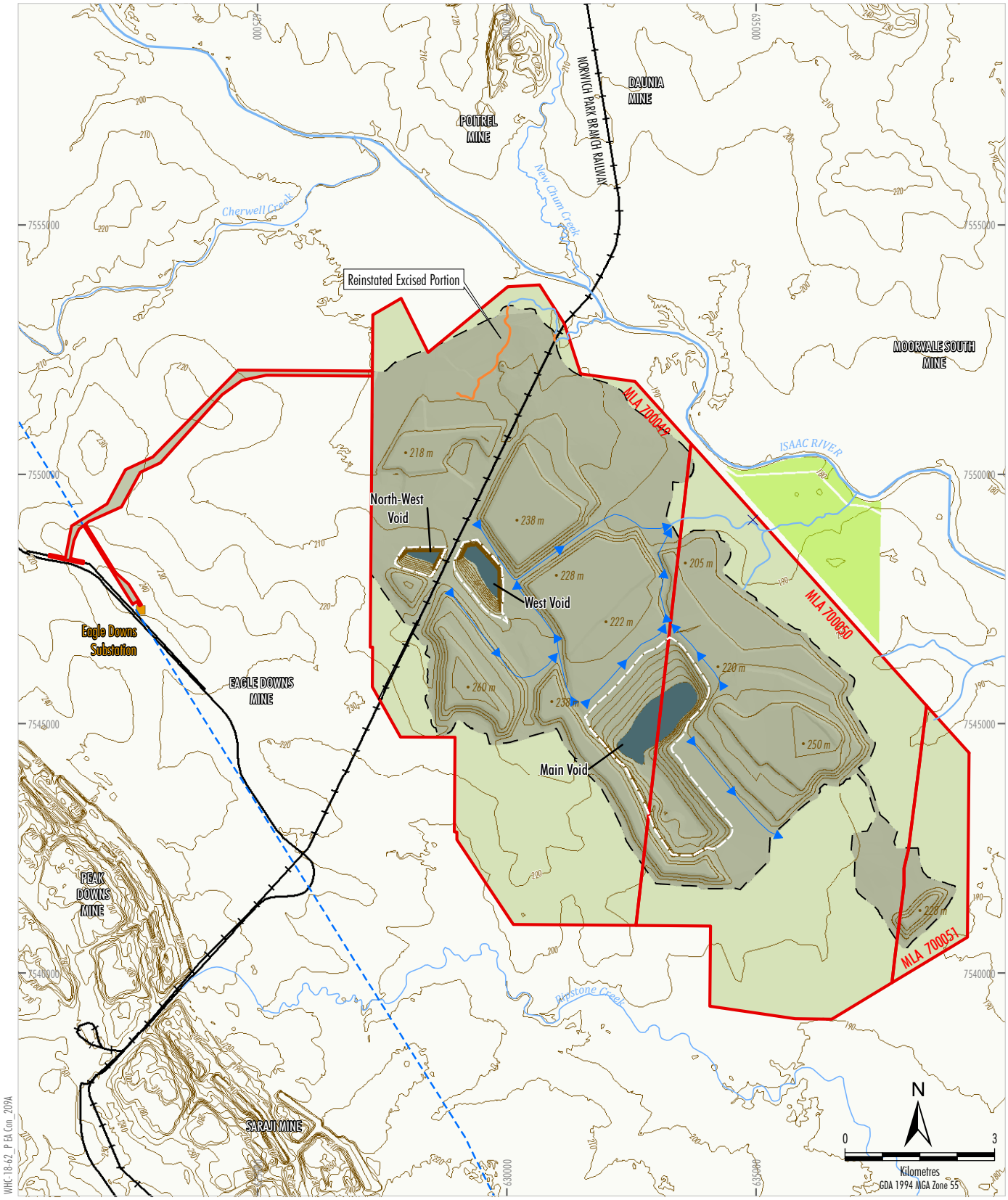
WHITEHAVEN COAL

WINCHESTER SOUTH PROJECT

Water Resource Monitoring Locations

Figure E2

Note: Knob Hill 1 is unable to monitoring SWL due to pump installed, but can still sample for water quality.
Knob Hill 1 and Knob Hill 2 inclusion in monitoring network dependent on continued approval to access the bore from bore owner.



LEGEND

- Mining Lease Application Boundary
- Indicative Surface Disturbance Extent
- Indicative Residual Void Waterbody
- Indicative Extent of Rehabilitation to Low-Intensity Grazing Post-Mining Land Use*
- Land Outside Indicative Surface Disturbance Extent with a Low-Intensity Grazing Post-Mining Land Use
- Contours (10 m)
- Indicative Extent of Water Storage for Agriculture use Post-mining Land Use
- Waterway Providing for Fish Passage Mapped by DAF (2023)
- Not Disturbed by the Project
- Indicative Surface Water Flow
- Wynette Offset Area

Matters of State Environmental Significance

- Reinstated Excised Portions of Waterways Providing for Fish Passage ^

Source: The State of Queensland (2018 - 2020); Whitehaven (2020); DAF (2023)

Note: ^ As stated in the Environmental Offsets Regulation 2014, any part of a waterway providing for passage of fish is a Matter of State Environmental Significance (MSES) only if the construction, installation or modification of waterway barrier works carried out under an authority will limit the passage of fish along the waterway.

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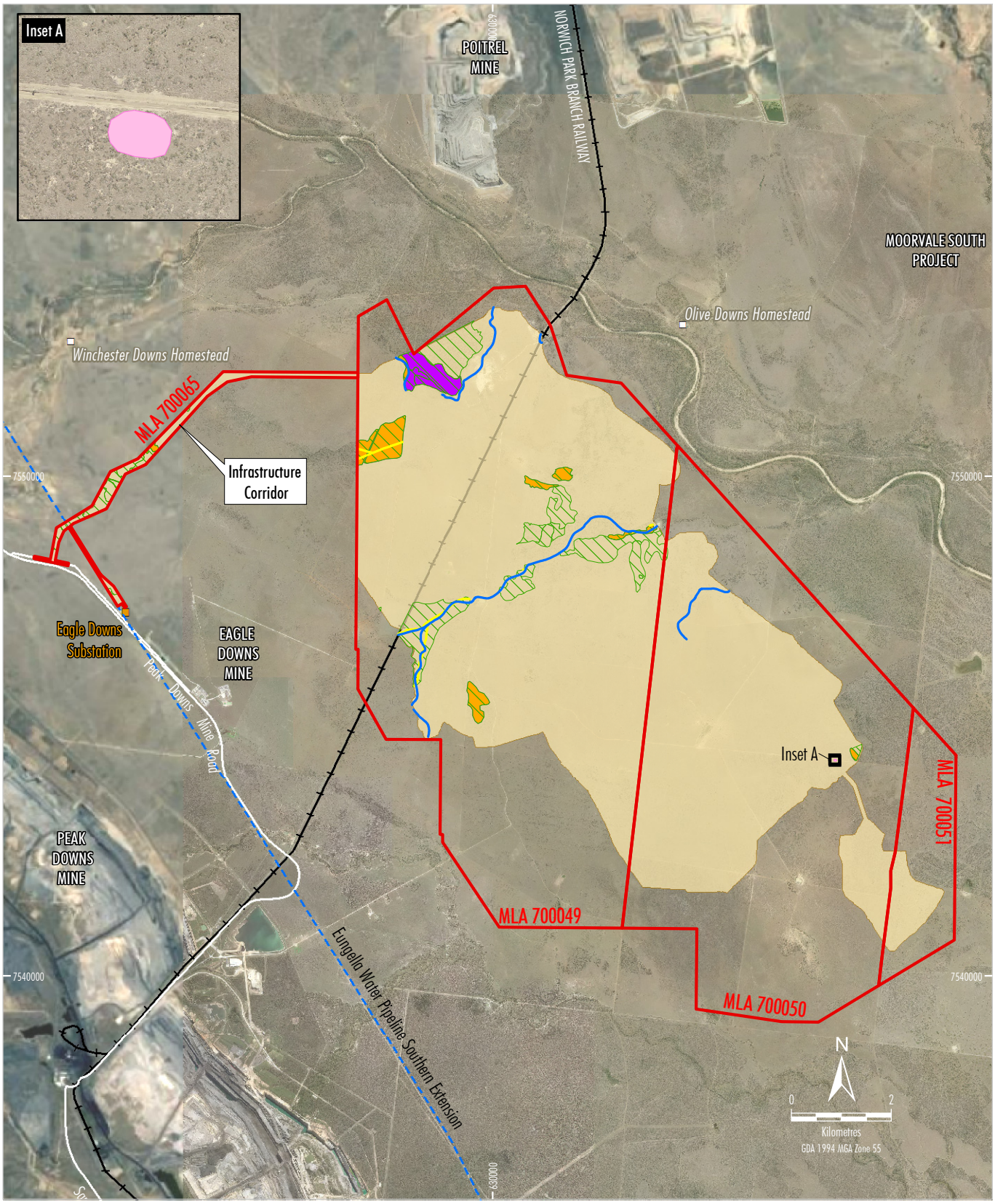
Conceptual Final Landform and Post-mining Land Use

Figure H1



LEGEND

- Mining Lease Application Boundary
- Indicative Surface Disturbance Extent
- Railway
- Substation

Matters of State Environmental Significance

Regulated Vegetation

- Endangered Regional Ecosystem (11.3.1, 11.4.8, 11.4.9 and 11.9.5)
- Of Concern Regional Ecosystem (11.3.2, 11.3.3c and 11.3.4)
- Regional Ecosystem within the Defined Distance of a Vegetation Management Watercourse

Connectivity

- Remnant Vegetation

Protected Wildlife Habitat*

- *Solanum adenophorum* Habitat

Waterway Providing for Fish Passage

- Waterway Providing for Fish Passage Mapped by DAF (2023) ^

**Note: The Protected Wildlife Habitat for species that are also Matters of National Environmental Significance (i.e. the Ornamental Snake, Squatter Pigeon, Koala and Greater Glider) are assessed and presented in Figures H3 to H6, including Essential Habitat (Protected Wildlife Habitat for the Ornamental Snake).*

^ As stated in the Environmental Offsets Regulation 2014, any part of a waterway providing for passage of fish is a Matter of State Environmental Significance (MSES) only if the construction, installation or modification of waterway barrier works carried out under an authority will limit the passage of fish along the waterway.

Source: The State of Queensland (2018 - 2020); Whitehaven (2020);DAF (2023)
Orthophoto: Google (2019); Whitehaven (2017)

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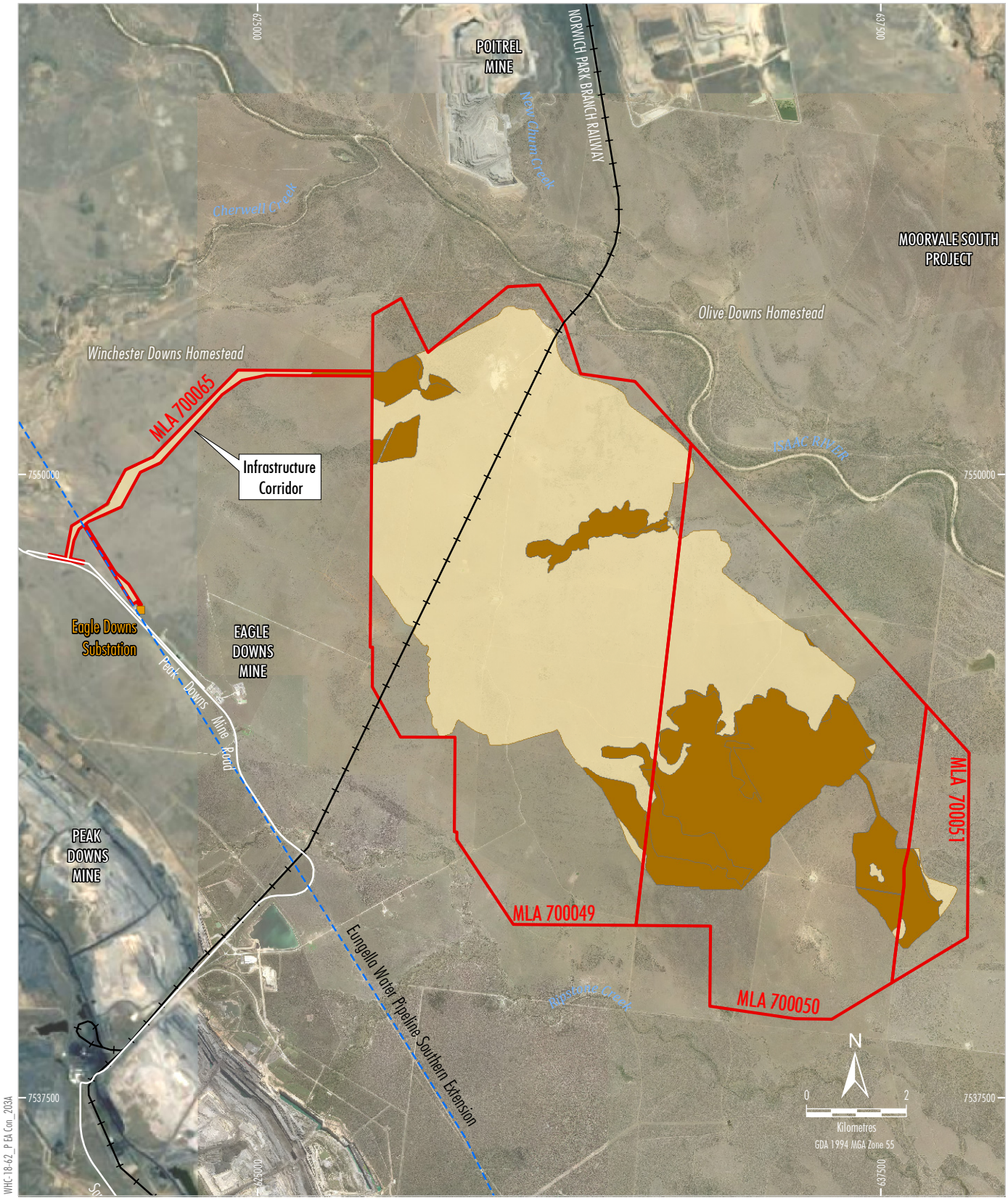
WINCHESTER SOUTH PROJECT

Location of Significant Residual Impact to Matters of State Environmental Significance

Figure H2



LEGEND

- Mining Lease Application Boundary
- Indicative Surface Disturbance Extent
- Eungella Water Pipeline Southern Extension
- Railway
- Substation

Potential Habitat

- Ornamental Snake Important Habitat

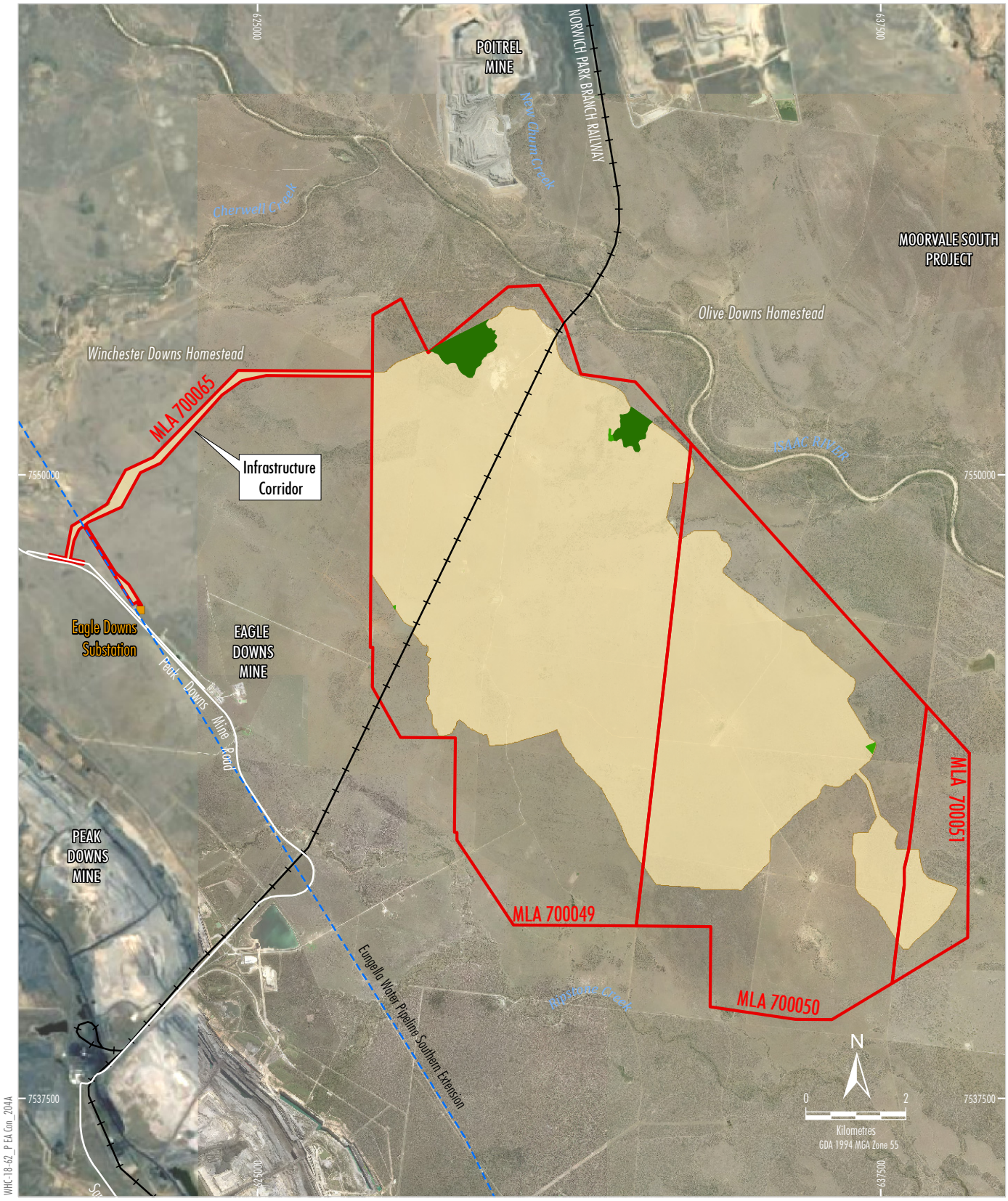
Source: The State of Queensland (2018 - 2020); Whitehaven (2020); E2M (2021)
Orthophoto: Google (2019); Whitehaven (2017)

WHITEHAVEN COAL

WINCHESTER SOUTH PROJECT

Location of Significant Residual Impact of Habitat for Ornamental Snake

Figure H3



LEGEND

- Mining Lease Application Boundary
- Indicative Surface Disturbance Extent
- Eungella Water Pipeline Southern Extension
- Railway
- Substation

Potential Habitat

- Squatter Pigeon Breeding and Foraging Habitat
- Squatter Pigeon Foraging Habitat

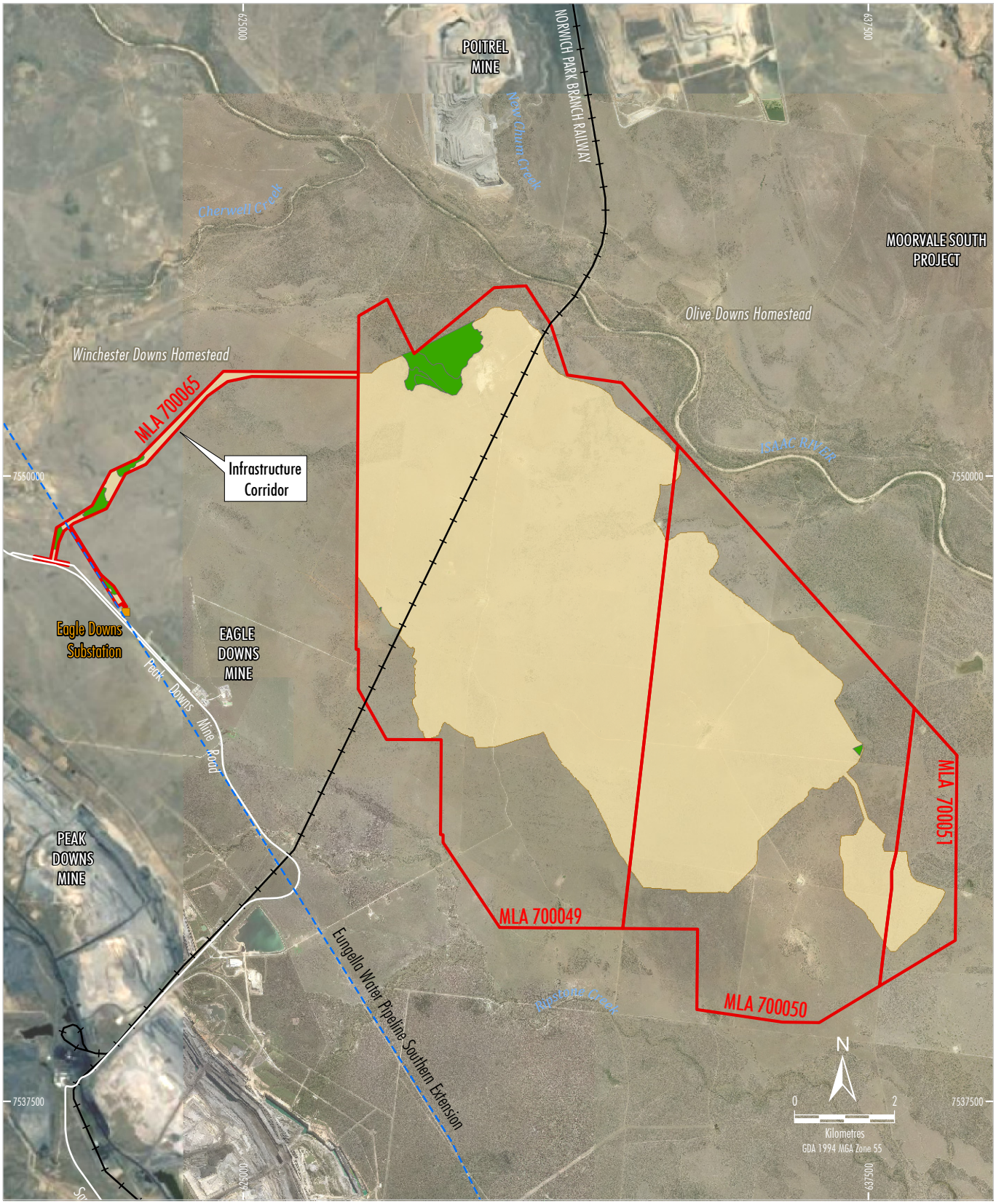
Source: The State of Queensland (2018 - 2020); Whitehaven (2020); E2M (2021)
Orthophoto: Google (2019); Whitehaven (2017)

WHITEHAVEN COAL

WINCHESTER SOUTH PROJECT

Location of Significant Residual Impact of Habitat for Squatter Pigeon (southern subspecies)

Figure H4



LEGEND

- Mining Lease Application Boundary
- Indicative Surface Disturbance Extent
- Eungella Water Pipeline Southern Extension
- Railway
- Substation

Potential Habitat

- Koala Habitat (Potential Breeding and Foraging)

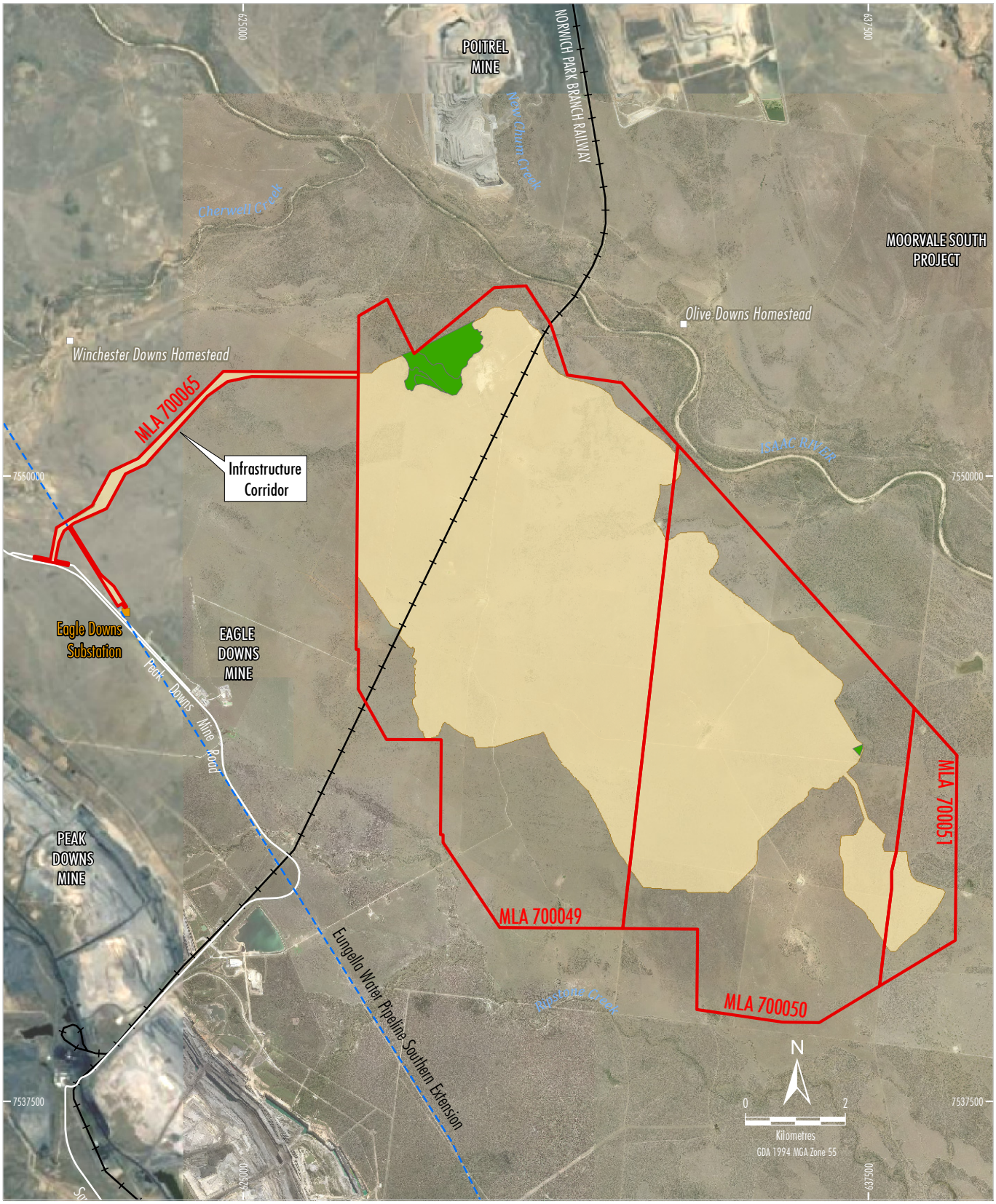
Source: The State of Queensland (2018 - 2020); Whitehaven (2021); EZM (2021)
Orthophoto: Google (2019); Whitehaven (2017)

WHITEHAVEN COAL

WINCHESTER SOUTH PROJECT

Location of Significant Residual Impact of Habitat for Koala (combined populations of Queensland, NSW and the ACT)

Figure H5



LEGEND

- Mining Lease Application Boundary
- Indicative Surface Disturbance Extent
- Eungella Water Pipeline Southern Extension
- Railway
- Substation

Potential Habitat

- Greater Glider Habitat (Potential Breeding and Foraging)

Source: The State of Queensland (2018 - 2020); Whitehaven (2020); E2M (2021)
Orthophoto: Google (2019); Whitehaven (2017)

WHITEHAVEN COAL

WINCHESTER SOUTH PROJECT

Location of Significant Residual Impact of Habitat for Greater Glider

Figure H6

DEFINITIONS

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

'administering authority' is the agency or department 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).

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

1. against recommendations contained in previous annual inspections reports;
2. against recognised dam safety deficiency indicators;
3. for changes in circumstances potentially leading to a change in consequence category;
4. for conformance with the conditions of this authority;
5. for conformance with the 'as constructed' drawings;
6. for the adequacy of the available storage in each regulated dam, based on an actual observation or observations taken after a nominated date each year but prior to six months following that date, of accumulated sediment, state of the containment barrier and the level of liquids in the dam (or network of linked containment systems);
7. for evidence of conformance with the current operational plan.

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

'aquifer' a sub-surface rock formation containing water in recoverable quantities.

'assessed' or 'assessment' by a 'suitably qualified and experienced person' in relation to a consequence assessment of a dam, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit of the assessment:

1. exactly what has been assessed and the precise nature of that determination;
2. the relevant legislative, regulatory and technical criteria on which the assessment has been based;
3. the relevant data and facts on which the assessment has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
4. the reasoning on which the assessment has been based using the relevant data and facts, and the relevant criteria.

'background' with reference to the water schedule means the average of samples taken prior to the commencement of mining from the same waterway that the current sample has been taken.

'baseline' with reference to the groundwater schedule, means the average of samples taken prior to the commencement of mining from the same groundwater monitoring bores.

'blasting' means the use of explosive materials to fracture:

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

'catchment' the entire land area from which water (e.g. rainfall drains to a specific watercourse or water body).

'certification' means assessment and approval must be undertaken by a suitably qualified and experienced person in relation to any assessment or documentation required by the Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933), including design plans, 'as constructed' drawings and specifications, construction, operation or an annual report regarding regulated structures, undertaken in accordance with the Board of Professional Engineers of Queensland Policy Certification by RPEQs (ID: 1.4 (2A)).

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

1. exactly what is being certified and the precise nature of that certification;
2. the relevant legislative, regulatory and technical criteria on which the certification has been based;
3. the relevant data and facts on which the certification has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
4. the reasoning on which the certification has been based using the relevant data and facts, and the relevant criteria.

'commercial place' means a workplace used as an office or for business or commercial purposes, which is not part of the mining activity and does not include employees' accommodation or public roads.

'consequence' in relation to a structure as defined, means the potential for environmental harm resulting from the collapse or failure of the structure to perform its primary purpose of containing, diverting or controlling flowable substances.

'consequence category' means a category, either low, significant or high, into which a dam is assessed as a result of the application of tables and other criteria in the Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933).

'consecutive sampling occasion' means consecutive sequential sampling occasions regardless of frequency.

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

'dam' means a land-based structure or a void that contains, diverts or controls flowable substances, and includes any substances that are thereby contained, diverted or controlled by that land-based structure or void and associated works.

'decommissioning' removal or reuse of infrastructure.

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

'design storage allowance or DSA' means an available volume, estimated in accordance with the Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933) published by the administering authority, must be provided in a dam as of 1 November each year in order to prevent a discharge from that dam to an annual exceedance probability (AEP) specified in that manual.

'disturbance' 'disturbance' of land includes:

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

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

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

'ecosystem' an interacting system of animals, plants, other organisms and non-living parts of the environment.

'electrical conductivity' the ability of a substance (either solid, liquid or gas) to transmit electricity.

'emergency action plan' means documentation forming part of the operational plan held by the holder of this environmental authority or a nominated responsible officer, which identifies emergency conditions that sets out procedures and actions that will be followed and taken by the dam owner and operating personnel in the event of an emergency. The actions are to minimise the risk and consequences of failure, and ensure timely warning to downstream communities and the implementation of protection measures. The plan must require dam owners to annually update contact information.

'EP Act' means *Environmental Protection Act 1994*.

'essential habitat' as defined in the *Vegetation Management Act 1999*.

'existing structure' means a structure that meets any or both of the following, a structure:

1. with a design that is in accordance with the Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933) and that is considerably in progress;
2. that is under considerable construction or that is constructed.

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

'holder of this environmental authority' means:

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

'hydraulic performance' means the capacity of a regulated dam to contain or safely pass flowable substances based on the design criteria specified for the relevant consequence category in the Manual for Assessing Hazard Categories and Hydraulic Performance of Dams.

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

'$L_{A1\ adj,15\ mins}$' means the A-weighted sound pressure level, adjusted for noise character, measured in the presence of the noise under investigation and exceeded for one per cent of the time period of fifteen minutes, using Fast response.

'$L_{Aeq\ adj,15\ mins}$' means the equivalent continuous A-weighted sound pressure level, adjusted for noise character, measured in the presence of the noise under investigation over a time period of fifteen minutes, using Fast response.

'*in-situ*' a term used to distinguish material (e.g. soils, minerals, fossils, etc.) found in its original position of formation, deposition, or growth, as opposed to transported material.

'leachate' means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the operational land which contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

'mandatory reporting level' or 'MRL' means a warning and reporting level determined in accordance with the criteria in the Manual for assessing consequence categories and hydraulic performance of structures published by the administering authority.

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

'milestones' means criteria to ensure progressive rehabilitation and closure activities are completed.

'mine-affected water' means the following types of water:

1. pit water, tailings dam water, processing plant water;
2. water contaminated by a mining activity which would have been an environmentally relevant activity under Schedule 2 of the Environmental Protection Regulation 2008 if it had not formed part of the mining activity;
3. rainfall runoff which has been in contact with any areas disturbed by mining activities which have not yet been rehabilitated, excluding rainfall runoff discharging through release points associated with erosion and sediment control structures that have been installed in accordance with the standards and requirements of an Erosion and Sediment Control Plan to manage runoff containing sediment only, provided that this water has not been mixed with pit water, tailings dam water, processing plant water or workshop water;
4. groundwater which has been in contact with any areas disturbed by mining activities which have not yet been rehabilitated;
5. groundwater from the mine's dewatering activities; vi) a mix of mine affected water (under any of points 1 to 5) and other water.

'mining activity' or 'mining activities' means mining coal from the coal measures, including the removal of overburden and dependent water-related activities from the mining of coal, and rehabilitation activities, on the mining tenures stated in Environmentally Relevant Activity and location details of this environmental authority.

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

'non-polluting' means having no adverse impacts upon the receiving environment.

'operational plan' includes:

1. normal operating procedures and rules (including clear documentation and definition of process inputs in the DSA);
2. contingency and emergency action plans including operating procedures designed to avoid and/or minimise environmental impacts including threats to human life resulting from any overtopping or loss of structural integrity of the regulated structure.

'overland flow water take' is take of water collected from rainfall and runoff across the site for the Project that was assessed to satisfy the requirements for the activities authorised under this environmental authority.

'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).

'pH' a measure of the degree of acidity or alkalinity of a solution; expressed numerically (logarithmically) on a scale of 1 to 14, on which 1 is most acidic, 7 is neutral, and 14 is most basic (alkaline).

'Queensland Environmental Offsets Policy' means the *Queensland Environmental Offsets Policy (Version 1.11)* (DES, 2021).

'recharge' the addition of water to an aquifer, directly from the surface, indirectly from the unsaturated zone, or by discharge from overlying or underlying aquifer systems.

'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):

1. a watercourse;
2. groundwater; and
3. an area of land that is not specified in this environmental authority.

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

'Receiving Environment Monitoring Program' or 'REMP' means a monitoring program designed to monitor and assess the potential impacts of controlled and/or uncontrolled releases of contaminants to the environment from the activity.

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

'reference sites' means sites that must:

1. have a similar hydrology regime;
2. be from the same bio-geographic region;
3. have similar biodiversity, soil types and topography; and
4. not be so close to the affected sites that any disturbance to monitoring sites also results in a change at the reference site.

'register of regulated structure' includes:

1. date of entry in the register;
2. name of the structure, its purpose and intended/actual contents;
3. the consequence category of the dam as assessed using the 'Manual for assessing consequence categories and hydraulic performance of structures';
4. dates, names, and reference for the design plan plus dates, names, and reference numbers of all document(s) lodged as part of a design plan for the dam;
5. name and qualifications of the suitably qualified and experienced person who certified the design plan and 'as constructed' drawings;
6. for the regulated dam, other than in relation to any levees;
7. the dimensions (metres) and surface area (hectares) of the dam measured at the footprint of the dam;
    a) coordinates (latitude and longitude in GDA94) within five metres at any point from the outside of the dam including its storage area;
    b) dam crest volume (megalitres);
    c) spillway crest level (metres AHD).
    d) maximum operating level (metres AHD); vi) storage rating table of stored volume versus level (metres AHD);
    e) design storage allowance (megalitres) and associated level of the dam (metres AHD); and
    f) mandatory reporting level (metres AHD);
8. the design plan title and reference relevant to the dam;
9. the date construction was certified as compliant with the design plan;
10. the name and details of the suitably qualified and experienced person who certified that the constructed dam was compliant with the design plan;
11. details of the composition and construction of any liner;
12. the system for the detection of any leakage through the floor and sides of the dam;
13. dates when the regulated dam underwent an annual inspection for structural and operational adequacy, and to ascertain the available storage volume for any year;
14. dates when recommendations and actions arising from the annual inspection were provided to the administering authority; and
15. dam water quality as obtained from any monitoring required under this authority each year.

'regulated structure' means any structure in the significant or high consequence category as assessed using the Manual for assessing consequence categories and hydraulic performance of structures published by the administering authority. A regulated structure does not include:

1. a fabricated or manufactured tank or container, designed and constructed to an Australian Standard that deals with strength and structural integrity of that tank or container;
2. a sump or earthen pit used to store residual drilling material and drilling fluid only for the duration of drilling and well completion activities;
3. a flare pit.

'rehabilitation' the restoration of a landscape and especially the vegetation following its disturbance.

'release event' means a surface water discharge from mine-affected water storages or contaminated areas on the licensed place meaning the mining activities carried out at the mining tenements detailed in this environmental authority.

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

'resample' means the resampling that is required to take place within 10 business days of the exceedance of a sampling occasion to verify the result.

'runoff' a portion of precipitation (rain, hail and snow) that flows across the ground surface as water.

'saline drainage' means the movement of waters, contaminated with salts, as a result of the mining activity.

'salinity' the total content of dissolved solids in groundwater or surface water, commonly expressed as parts of dissolved solids per million parts of solution, or milligrams of dissolved solids per litre of solution (mg/L).

'sampling occasion' means the collection of a sample undertaken in accordance with the sampling frequency specified, and where an exceedance is recorded the sampling occasion together with the resample.

'sensitive place' means, that is not subject of a sensitive location agreement (e.g. non-residency agreement):

1. a dwelling, residential allotment, mobile home or caravan park, residential marina or other occupied residential premises; or
2. a motel, hotel or hostel; or
3. an educational institution; or
4. a medical centre or hospital; or
5. a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
6. a public park or gardens.

Note: The definition of 'sensitive place' and 'commercial place' is based on Schedule 1 of EPP Noise. That is, a sensitive place is inside or outside on a dwelling; library;, educational institution; childcare; kindergarten; school; playground; hospital, surgery or other medical institution; commercial and retail activities; 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 not 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.

An unoccupied residence or dwelling located on the mining tenement is not a sensitive place.

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.

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

'stakeholder' any individual, group or organisation that can affect, be affected by, or perceive itself to be affected by the behaviour of a company or an organisation.

'suitably qualified and experienced person' in relation to regulated structures means a person who is a Registered Professional Engineer of Queensland (RPEQ) under the provisions of the *Professional Engineers Act 2002*, and has demonstrated competency and relevant experience:

1. for regulated dams, an RPEQ who is a civil engineer with the required qualifications in dam safety and dam design.
2. for regulated levees, an RPEQ who is a civil engineer with the required qualifications in the design of flood protection embankments.

Note: It is permissible that a suitably qualified and experienced person obtain subsidiary certification from an RPEQ who has demonstrated competence and relevant experience in either geomechanics, hydraulic design or engineering hydrology.

'system design plan' a plan that manages an integrated containment system that shares the required DSA volume across the integrated containment system.

'the Project' the Winchester South Project.

'total suspended particulates (TSP)' the mass of all particulate matter suspended in a solution (e.g. the air).

'total suspended solids (TSS)' a common measure used to determine suspended solids concentrations in a waterbody and expressed in terms of mass per unit volume (e.g. milligrams per litre).

'µS/cm' means micro siemens per centimetre.

'void' means an area of land to be excavated in the carrying out of a mining activity.

'waste rock emplacements' means landforms made up of waste rock material.

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

'watercourse' is defined under the *Water Act 2000*.

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

'waters' includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters, stormwater channel, stormwater 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.

1.2 PROPOSED CONDITIONS UNDER THE STRONG AND SUSTAINABLE RESOURCE COMMUNITIES ACT 2017

This section includes conditions stated by the Coordinator-General under section 11(2) of the *Strong and Sustainable Resource Communities Act 2017* (SSRC Act). All the conditions in this section take effect from the date of this Coordinator-General's report. The entity with jurisdiction for conditions in this section is the Coordinator-General.

PROPOSED CONDITIONS UNDER THE SSRC ACT
Proposed Condition 1 – General Conditions (a) The proponent must advise the Coordinator-General in writing that construction of the Project has commenced within five business days of construction commencing. (b) The proponent must advise the Coordinator-General in writing that operation of the Project has commenced within five business days of operation commencing.
Proposed Condition 2 – Social Impact Management Plan (a) The proponent must review (and revise if necessary) the existing Social Impact Management Plan (Attachment 11 of the Revised Draft EIS) (Whitehaven WS, 2022) to manage the potential social impacts of the project identified in the social impact assessment (SIA) through ongoing community and stakeholder engagement. (b) The proponent must submit to the Coordinator-General for approval a revised Social Impact Management Plan prior to commencement of construction. (c) The revised Social Impact Management Plan must be prepared in consultation with the Isaac Regional Council. (d) The revised Social Impact Management Plan must include the following plans: (i) community and stakeholder engagement plan in accordance with **Condition 3**; (ii) workforce management plan in accordance with **Condition 4**; (iii) workforce housing and accommodation plan in accordance with **Condition 5**; (iv) local business and industry procurement plan in accordance with **Condition 6**; and (v) health and community wellbeing plan in accordance with **Condition 7**. (e) The revised Social Impact Management Plan must include a monitoring and evaluation strategy that ensures the Social Impact Management Plan is reviewed, and if necessary revised, every two years for the first four years of the Project and every three years up to Year 10 of the Project. (f) The proponent must publish the revised Social Impact Management Plan on their website within one month of the Coordinator-General's approval of the plan. The proponent must notify the Coordinator-General within five business days of the Social Impact Management Plan being made publicly available on proponent's website.

PROPOSED CONDITIONS UNDER THE SSRC ACT

Proposed Condition 3 – Community and Stakeholder Engagement Plan

(a) The proponent must engage with all relevant stakeholders to ensure they are informed about the project and that identified potential social impact issues are effectively managed and monitored.

(b) The proponent must prepare a community and stakeholder engagement plan that is to be submitted as part of the Social Impact Management Plan to the Coordinator-General for approval, in accordance with **Condition 2**.

(c) The community and stakeholder engagement plan must address the construction and operation phases of the Project, and include:

  (i) objectives and key performance indicators;

  (ii) an analysis of key stakeholders and stakeholder issues;

  (iii) action plans for ongoing engagement including details of proposed communication tools, timeframes for activities and roles and responsibilities for engagement;

  (iv) processes for incorporating stakeholder feedback into the further development of project-specific management measures;

  (v) details of any stakeholder agreements to be negotiated, including agreements with state and local government agencies;

  (vi) a complaints management process; and

  (vii) monitoring and reporting protocols.

(d) The community and stakeholder engagement plan must:

  (i) be consistent with the community and stakeholder engagement management plan outlined in Section 7.6 of Attachment 11 of the Revised Draft EIS (Whitehaven WS, 2022); and

  (ii) incorporate the proponent's commitments listed in the Coordinator-General's Evaluation Report for the Project.

(e) The community and stakeholder engagement plan must provide details for:

  (i) providing advanced notice to directly-affected landholders and residents of nearby homesteads of project works that may potentially impact on the amenity and activities of the properties;

  (ii) consulting with emergency service providers to develop an emergency response procedure for the Project; and

  (iii) consulting with Isaac Regional Council, local service providers and relevant state agencies about potential impacts from the Project on primary healthcare, childcare and social housing and measures to manage potential impacts.

Proposed Condition 4 – Workforce Management Plan

(a) The proponent must prioritise recruitment of workers from local and regional communities and those who would relocate to regional communities and minimise the proportion of fly-in, fly-out (FIFO) workers.

(b) The proponent must support the health and wellbeing of the Project workforce.

(c) The proponent must prepare a workforce management plan that is to be submitted as part of the Social Impact Management Plan to the Coordinator-General for approval, in accordance with **Condition 2**.

(d) The workforce management plan must address the construction and operational phases of the project, and include:

  (i) objectives and key performance indicators;

  (ii) summary workforce profile, including the estimated proportions of new local and FIFO workers;

  (iii) roster arrangements for local and FIFO workers;

  (iv) measures that implement the recruitment strategy described in the Winchester South Project SIMP;

  (v) measures to enhance potential employment opportunities for local communities including Indigenous people, and mitigate potential negative social impacts;

  (vi) proposed training and development initiatives to improve local and regional skills including initiatives for traditionally underrepresented groups;

  (vii) programs to support the physical and mental health and wellbeing of workers;

  (viii) the level of on-site health services to be provided for workers;

  (ix) details of any workforce code of conduct to govern worker interactions with local communities; and

  (x) monitoring and reporting protocols.

(e) The workforce management plan must:

  (i) be consistent with the workforce management plan outlined in Section 7.2 of Attachment 11 of the Revised Draft EIS (Whitehaven WS, 2022); and

  (ii) incorporate the proponent's commitments listed in the Coordinator-General's Evaluation Report for the Project.

PROPOSED CONDITIONS UNDER THE SSRC ACT

Proposed Condition 5 – Housing and Accommodation Plan

(a) The proponent must limit or mitigate negative social impacts of the Project to housing and accommodation affordability and availability in local and regional communities.

(b) The proponent must prepare a workforce housing and accommodation plan that is to be submitted as part of the Social Impact Management Plan to the Coordinator-General for approval, in accordance with **Condition 2**.

(c) The housing and accommodation plan must address the construction and operational phases of the project, and include:

  (i) objectives and key performance indicators;

  (ii) measures to enhance potential benefits for project workers and the community;

  (iii) measures to mitigate potential negative social impacts;

  (iv) policies regarding housing and accommodation support to be provided to project workers and their families who wish to move to the local communities; and

  (v) monitoring and reporting protocols.

(d) The housing and accommodation plan must:

  (i) be consistent with the housing and accommodation plan outlined in Section 7.3 of Attachment 11 of the Revised Draft EIS (Whitehaven WS, 2022); and

  (ii) incorporate the proponent's commitments listed in the Coordinator-General's Evaluation Report for the Project.

(e) The housing and accommodation plan must be developed in consultation with Isaac Regional Council and provide:

  (i) an updated assessment of local housing availability and demand;

  (ii) analysis of the likelihood of unoccupied housing becoming available for project workers to buy or rent; and

  (iii) the housing register to be made available for construction workers and their families who wish to reside in the local communities.

Proposed Condition 6 – Local Business and Industry Procurement Plan

(a) The proponent must ensure that opportunities for local businesses to provide goods and services for the project are maximised during the construction and operational phases.

(b) The proponent must prepare a local business and industry procurement plan that is to be submitted as part of the Social Impact Management Plan to the Coordinator-General for approval, in accordance with **Condition 2**.

(c) The local business and industry procurement plan must address the construction and operational phases of the project, and include:

  (i) objectives and key performance indicators;

  (ii) procurement strategies and initiatives for local and regional suppliers, including Aboriginal and Torres Strait Islander owned businesses, and actions to facilitate participation;

  (iii) proposed policies and programs to build local and regional capacity and capability, and reduce barriers to entry;

  (iv) processes that embed the local business and industry procurement strategies into the contracting model for the Project;

  (v) measures to mitigate any potential negative social impacts on local industries;

  (vi) details of any established industry guidelines or codes of practice which the proponent has committed to compliance; and

  (vii) monitoring and reporting protocols.

(d) The local business and industry procurement plan must:

  (i) be consistent with the local business and industry procurement management plan outlined in Section 7.4 of Attachment 11 of the Revised Draft EIS (Whitehaven WS, 2022); and

  (ii) incorporate the proponent's commitments listed in the Coordinator-General's Evaluation Report for the Project.

PROPOSED CONDITIONS UNDER THE SSRC ACT

Proposed Condition 7 – Health and Community Well-being Plan

(a) The proponent must limit or mitigate negative social impacts of the Project and capitalise on opportunities to improve the health and well-being of local and regional communities.

(b) The proponent must limit or mitigate adverse impacts of the Project on the level of service (social services, facilities and infrastructure) currently provided to local communities.

(c) The proponent must prepare a health and community well-being plan that is to be submitted as part of the Social Impact Management Plan to the Coordinator-General for approval, in accordance with **Condition 2**.

(d) The health and community well-being plan must address the construction and operational phases of the Project, and include:

  (i) objectives and key performance indicators;

  (ii) measures to ensure that the level of service provided to the local community by existing social services, facilities and infrastructure is not reduced;

  (iii) measures to mitigate potential health and well-being impacts on local communities, and enhance potential benefits;

  (iv) emergency response arrangements and management measures agreed with emergency service providers, for incidents associated with the Project, both on and off the Project site;

  (v) details of any community development programs to be implemented, and the outcomes to be achieved; and

  (vi) monitoring and reporting protocol.

(e) The health and community well-being plan must:

  (i) be consistent with the preliminary health and community well-being plan outlined in Section 7.5 of Attachment 11 of the Revised Draft EIS (Whitehaven WS, 2022); and

  (ii) incorporate the proponent's commitments listed in the Coordinator-General's Evaluation Report for the Project.

(f) The health and community well-being plan must provide details for the following matters:

  (i) measures developed in consultation with Isaac Regional Council and the Department of Communities, Housing and Digital Economy to limit potential adverse impacts of the Project on the level of childcare service provided to the local community;

  (ii) measures developed in consultation with Isaac Regional Council, Queensland Health and primary healthcare providers, including local General Practitioners, to limit potential adverse impacts of the Project on the level of primary healthcare service provided to the local community; and

  (iii) measures developed in consultation with Isaac Regional Council, Emergency and Long-term Accommodation Moranbah and Isaac Affordable Housing Trust to limit potential adverse impacts of the Project on the level of social housing service provided to the local community.

Proposed Condition 8 – Reporting on the Implementation and Effectiveness of Measures in the Social Impact Management Plan

(a) The Social Impact Management Plan would be reviewed, and if necessary revised, every two years for the first four years of the Project and then every three years up to Project Year 10, to ensure the effectiveness and relevancy of the proposed social management measures.

(b) The revised Social Impact Management Plan must be submitted to the Coordinator-General and must be publicly available on the proponent's website. The proponent must notify the Coordinator-General when the Social Impact Management Plan is made publicly available on proponent's website.

DEFINITIONS

'commencement of construction' is defined as the commencement of construction of the mine access road connecting to Eagle Downs Mine Access Road as outlined in Section 2.4 of the Consolidated Project Description.

'commencement of operation' is defined as the commencement of removal of coal from the ground.

'FIFO worker' is a worker who does not live in one of the local or regional communities and must commute to work and stay at the workforce accommodation village while on shift.

'local community' is any community assessed as local in in the SIA for the Project, including Moranbah Dysart or Coppabella.

'local worker' is a worker who lives in one of the local communities.

'the Project' the Winchester South Project.

1.3 PROPOSED CONDITIONS FOR THE COMMONWEALTH MINISTER OF THE ENVIRONMENT

In accordance with section 87 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), the following provides recommended conditions for consideration by the Commonwealth Minister for the Environment in making an approval decision on the proposed action under of the EPBC Act.

PROPOSED CONDITIONS FOR THE MINE SITE AND ACCESS ROAD ACTION (EPBC 2019/8460)

Listed Threatened Species and Ecological Communities

Proposed Condition 1 – Maximum Disturbance Limits

The outcome sought by this condition is to ensure the approval holder does not impact on more than the maximum disturbance limits for each of the listed threatened species and ecological communities. The approval holder must not impact more than the amount of habitat for each listed threatened species or ecological communities specified in **Table 1 – Matters of National Environmental Significance – Maximum Disturbance Limits**.

Proposed Condition 2 – Offset Areas for Stage 1

The Stage 1 offset areas are provided in **Table 2 – Matters of National Environmental Significance – Stage 1 Offset Areas** and shown on **Figures 1a and 1b – Wynette Offset Area Matters of National Environmental Significance**, **Figure 2 – Ellensfield Offset Area Matters of National Environmental Significance** and **Figure 3 – Inderi Offset Area Matters of National Environmental Significance**. For any offset areas/properties that provide surplus to the offset requirements for Stage 1 disturbance (or any other offset stage), the surplus may be used for subsequent offset stages.

Proposed Condition 3 – Offset Areas for Poplar Box TEC

The Poplar Box TEC in the Wynette Offset Area (50 ha) (**Figure 1a– Wynette Offset Area Matters of National Environmental Significance**) must be used to offset the total impact to the Poplar Box TEC from the Action (9.6 ha) (**Table 1 – Matters of National Environmental Significance – Maximum Disturbance Limits**).

Proposed Condition 4 – Offset Management Plan(s) for Stage 1

The outcome sought by this condition to compensate for the residual significant impacts of Stage 1 disturbance of the Action on the listed threatened species and ecological communities identified in **Condition 1**:

(a) The approval holder must submit an Offset Management Plan(s) to the Department prior to commencing Stage 1 disturbance of the Action.

(b) The Offset Management Plan(s) must be consistent with the offsets detailed in **Condition 2**.

(c) The Offset Management Plan(s) must be prepared by a suitably qualified ecologist and include:

  (i) a description of the offset areas;

  (ii) a description of the management measures (including timing, frequency and duration) that will be implemented in the proposed offset area(s);

  (iii) a discussion of how proposed management measures take into account relevant approved conservation advice and are consistent with the measures contained in relevant recovery plans and threat abatement plans;

  (iv) completion criteria and performance targets for evaluating the effectiveness of Offset Management Plan(s) implementation, and criteria for triggering corrective actions;

  (v) a program to monitor, report on and review the effectiveness of the Offset Management Plan(s);

  (vi) a description of potential risks to the successful implementation of the proposed offset(s), and contingency measures that would be implemented to mitigate against these risks;

  (vii) a livestock management strategy to maintain the proposed offset area(s) for Squatter Pigeon (southern subspecies) and Ornamental Snake. The livestock management strategy must include provisions to ensure that suitable Squatter Pigeon (southern subspecies) and Ornamental Snake habitat is located within the proposed offset area(s) and prevents the destruction of habitat within the proposed offset area(s);

  (viii) details of additional measures that would be implemented to improve the availability of habitat for the Greater Glider within the proposed offset area(s), should the monitoring program show that Greater Gliders are not utilising the nest boxes that would be placed in the proposed offset area(s); and

  (ix) details of timing and the mechanism to legally secure the proposed offsets area(s).

(d) The approved Offset Management Plan(s) must be implemented.

PROPOSED CONDITIONS FOR THE MINE SITE AND ACCESS ROAD ACTION (EPBC 2019/8460)
Listed Threatened Species and Ecological Communities
Proposed Condition 5 – Offset Management Plan(s) for Remaining Stage(s) (other than Stage 1) The outcome sought by this condition to compensate for the residual significant impacts of the remaining stages (following Stage 1) of the Action on the listed threatened species and ecological communities identified in **Condition 1**: (a) The approval holder must provide the remaining offset stage(s) consistent with the Environmental Offsets Policy to compensate for the clearance of habitat for listed threatened species and ecological communities for the remaining stage(s) of the Action up to the limits as specified in **Condition 1**. (b) Prior to the commencement of the remaining stage(s) of the Action (other than Stage 1), the approval holder must submit an Offset Management Plan(s) for the remaining stage(s), prepared by a suitably qualified ecologist, for the written approval by the Commonwealth Minister (or delegate). (c) The approval holder must not commence the remaining stage(s) of the Action (other than Stage 1) until the associated Offset Management Plan(s) has been approved in writing by the Commonwealth Minister (or delegate). (d) The approved Offset Management Plan(s) must be implemented.
Proposed Condition 6 – Matters of National Environmental Significance Management Plan (a) The approval holder must submit a Matters of National Environmental Significance Management Plan (MNES Management Plan) to the Commonwealth Minister for approval prior to commencement of Stage 1 of the Action. (b) The approval holder must not impact on Natural Grasslands TEC, Poplar Box TEC or habitat for the Koala, Greater Glider, Squatter Pigeon (southern subspecies) and Ornamental Snake until the Commonwealth Minister has approved the MNES Management Plan. (c) The MNES Management Plan must be generally in accordance with the fauna species management plan, be prepared by a suitably qualified ecologist in accordance with the Department's Environmental Management Plan Guidelines and include: (i) measures that will be implemented to avoid, mitigate and manage impacts to EPBC Act listed threatened species and ecological communities and their habitat during vegetation clearance, construction, operation and decommissioning of the Action; (ii) a monitoring program to determine the success of management measures that inform adaptive implementation of the species management plan for the duration of this approval; (iii) details of how proposed management measures take into account relevant approved conservation advice and are consistent with the measures contained in relevant recovery plans and threat abatement plans. (d) The approved MNES Management Plan must be implemented.

Table 1
Matters of National Environmental Significance – Maximum Disturbance Limits

Listed Threatened Species or Ecological Communities	Stage 1 Disturbance	Remaining Stage(s) Disturbance	Total Disturbance
Natural Grasslands TEC	80.9 ha	0 ha	**80.9 ha**
Poplar Box TEC	0 ha	9.6 ha	**9.6 ha**
Ornamental Snake (*Denisonia maculata*)	50 ha	1,784.2 ha	**1,834.2 ha**
Squatter Pigeon (southern subspecies) (*Geophaps scripta scripta*)	53.8 ha	61.7 ha	**115.5 ha**
Koala (combined populations of Queensland, NSW and the ACT) (*Phascolarctos cinereus*)	78.2 ha	90.7 ha	**168.9 ha**
Greater Glider (*Petauroides volans*)	42.1 ha	90.7 ha	**132.8 ha**

Table 2
Matters of National Environmental Significance – Stage 1 Offset Areas

Listed Threatened Species or Ecological Communities	Available Offset Area[1]	Wynette Offset Area Used	Ellensfield Offset Area Used	Inderi Offset Area Used	Total Offset Area Used
Natural Grasslands TEC	227.7 ha	0 ha	0 ha	215 ha	215 ha
Poplar Box TEC	80.4 ha	0 ha	0 ha	0 ha	0 ha
Ornamental Snake (*Denisonia maculata*)	70.8 ha	63.5 ha	0 ha	0 ha	63.5 ha
Squatter Pigeon (southern subspecies) (*Geophaps scripta scripta*)	236.2 ha	192 ha	0 ha	0 ha	192 ha
Koala (combined populations of Queensland, NSW and the ACT) (*Phascolarctos cinereus*)	1,726.1 ha	285 ha	0 ha	0 ha	285 ha
Greater Glider (*Petauroides volans*)	305.1 ha	65 ha	88.7 ha	0 ha	153.7 ha

Note: Any offset areas/properties that provide offset areas surplus to the offset requirements for Stage 1 (or any other offset stage) may be used by Whitehaven WS for offsets in the future.

[1] Total offset area available within Wynette, Ellensfield and Inderi Offset Areas.

PROPOSED CONDITIONS FOR THE WATER PIPELINE ACTION (EPBC 2019/8459)

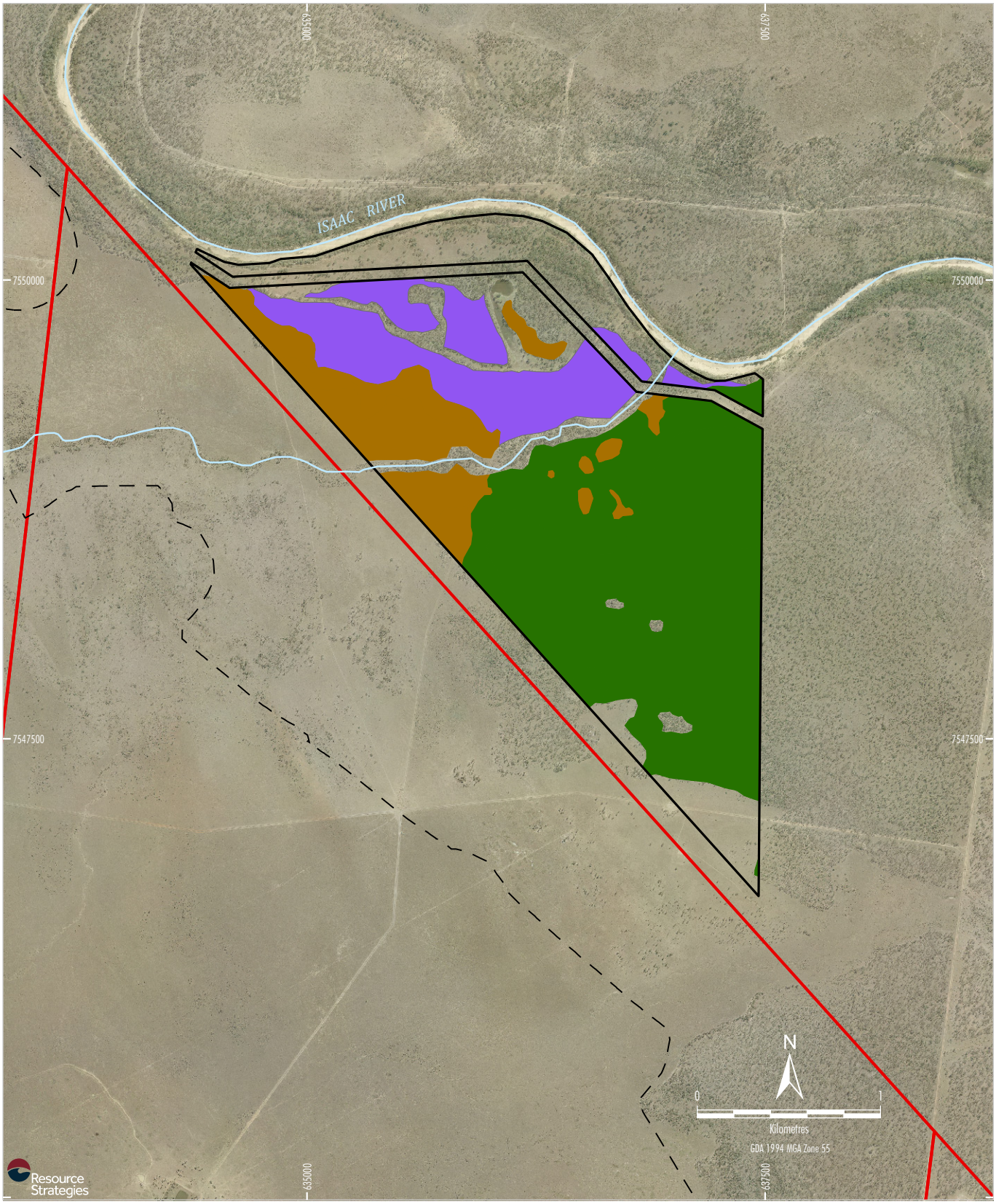
Listed Threatened Species and Ecological Communities

All disturbance associated with the Water Pipeline Action (EPBC 2019/8459) for the Project has been allocated to the Mine Site and Access Road Action (EPBC 2019/8460). Disturbance of listed threatened species and ecological communities required for the Water Pipeline Action (EPBC 2019/8459) must not commence until the Offset Management Plan for Stage 1 of the Mine Site and Access Road Action (EPBC 2019/8460) (Condition 4 of EPBC 2019/8460 Approval) has been submitted to the Department.

PROPOSED CONDITIONS FOR THE ELECTRICITY TRANSMISSION LINE ACTION (EPBC 2019/8458)

Listed Threatened Species and Ecological Communities

All disturbance associated with the Electricity Transmission Line Action (EPBC 2019/8458) for the Project has been allocated to the Mine Site and Access Road Action (EPBC 2019/8460). Disturbance of listed threatened species and ecological communities required for the Electricity Transmission Line Action (EPBC 2019/8458) must not commence until the Offset Management Plan for Stage 1 of the Mine Site and Access Road Action (EPBC 2019/8460) (Condition 4 of EPBC 2019/8460 Approval) has been submitted to the Department.



WHC-18-62_P EA Con_210A

LEGEND

Mining Lease Application Boundary

Indicative Surface Disturbance Extent

Wynette Offset Area

Threatened Ecological Community

Poplar Box community that does not currently meet the Poplar Box TEC criteria

Potential Habitat

Squatter Pigeon Breeding and Foraging Habitat

Ornamental Snake Important Habitat

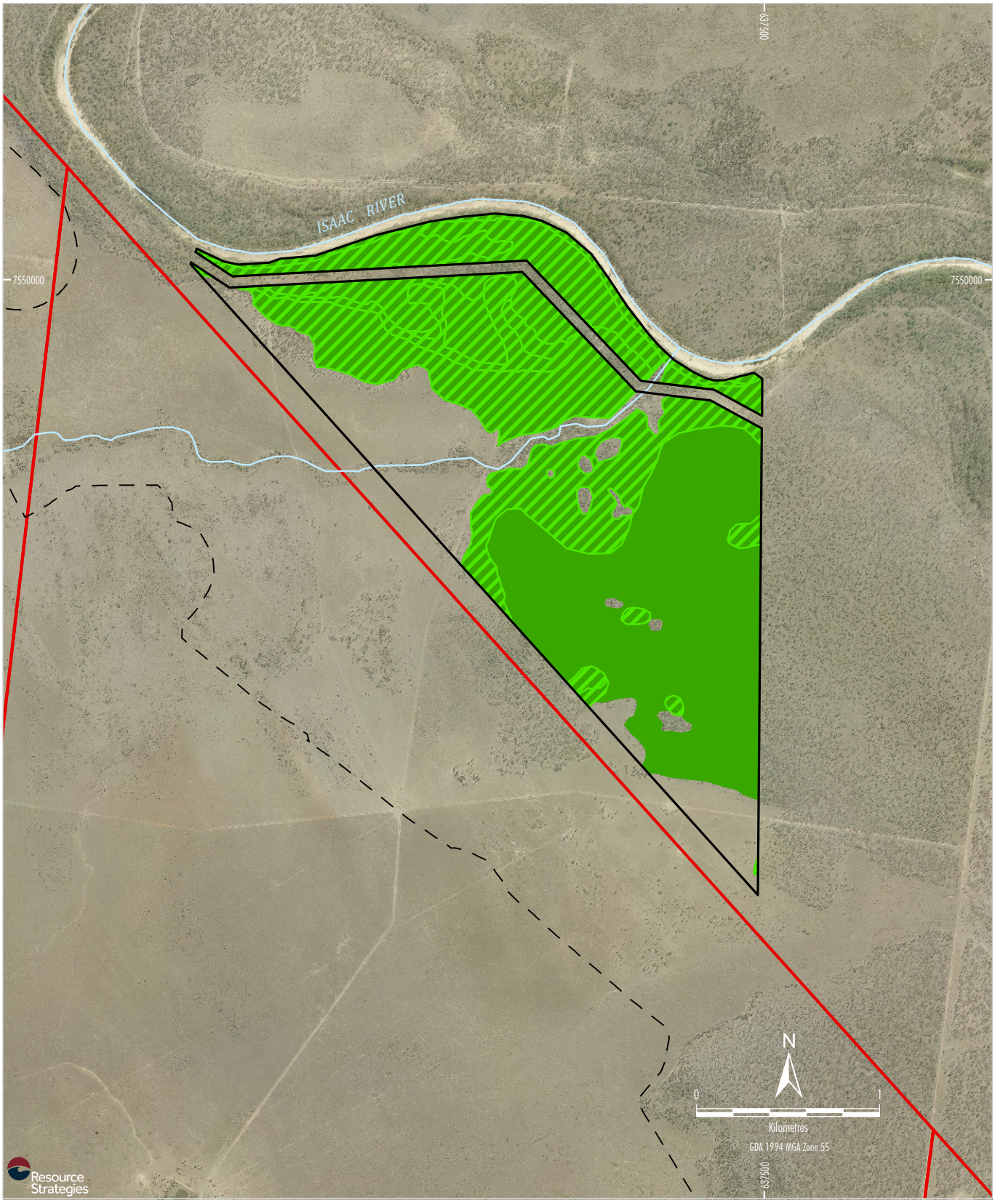
Source: The State of Queensland (2018 - 2020); Whitehaven (2020); E2M (2022)
Orthophoto: Google (2019); Whitehaven (2017)

WHITEHAVEN COAL

WINCHESTER SOUTH PROJECT

Wynette Offset Area
Matters of National Environmental Significance

Figure 1a



WHC-18-62_P EA Con_211A

LEGEND

Mining Lease Application Boundary

Indicative Surface Disturbance Extent

Wynette Offset Area

Potential Habitat

Koala Habitat (Potential Breeding and Foraging)

Greater Glider Habitat (Potential Breeding and Foraging)

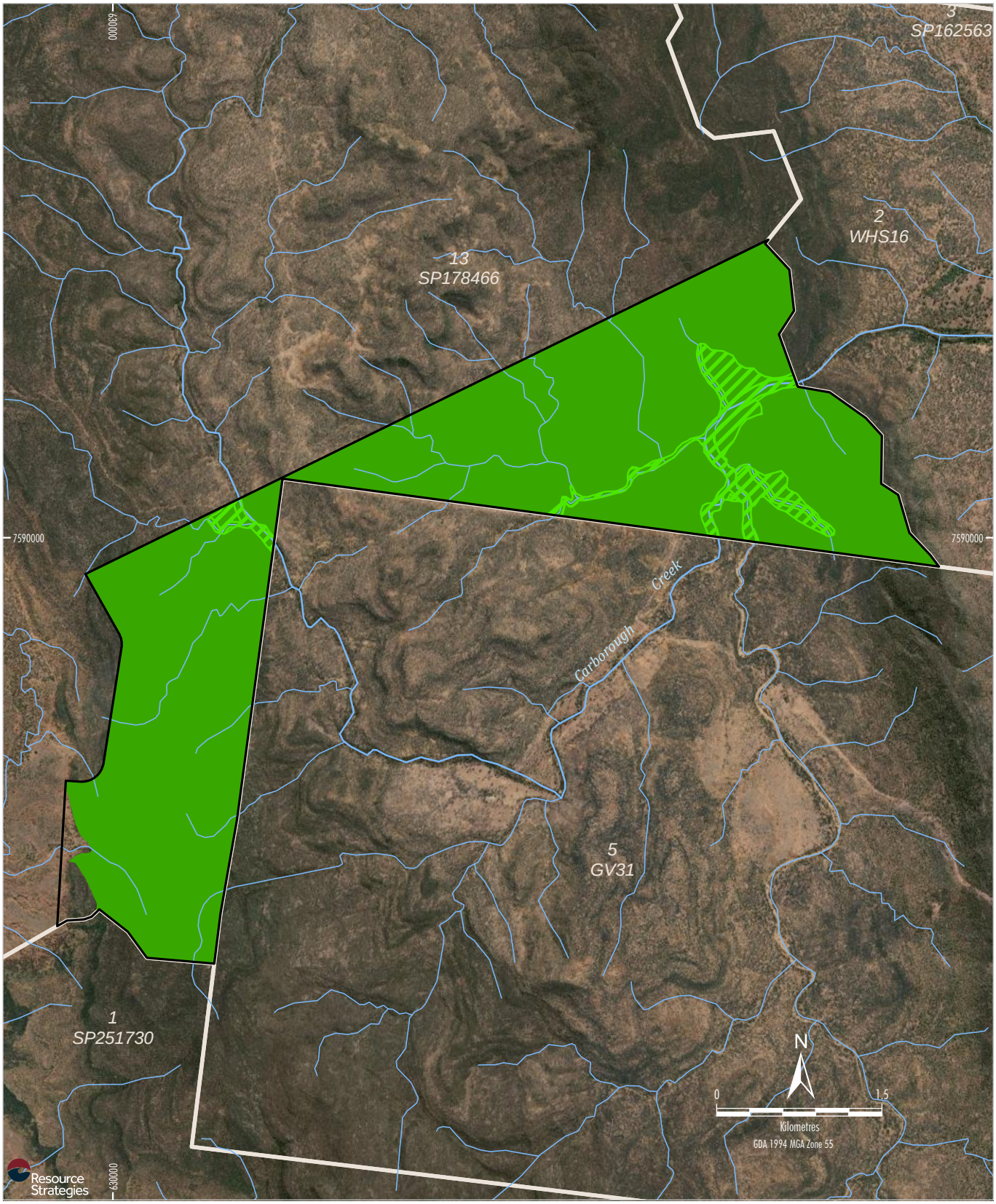
Source: The State of Queensland (2018 - 2020); Whitehaven (2020); E2M (2022)
Orthophoto: Google (2019); Whitehaven (2017)

WHITEHAVEN COAL

WINCHESTER SOUTH PROJECT

Wynette Offset Area
Matters of National Environmental Significance

Figure 1b



LEGEND

Ellensfield Offset Area

Potential Habitat

Koala Habitat (Potential Breeding and Foraging)

Greater Glider Habitat (Potential Breeding and Foraging)

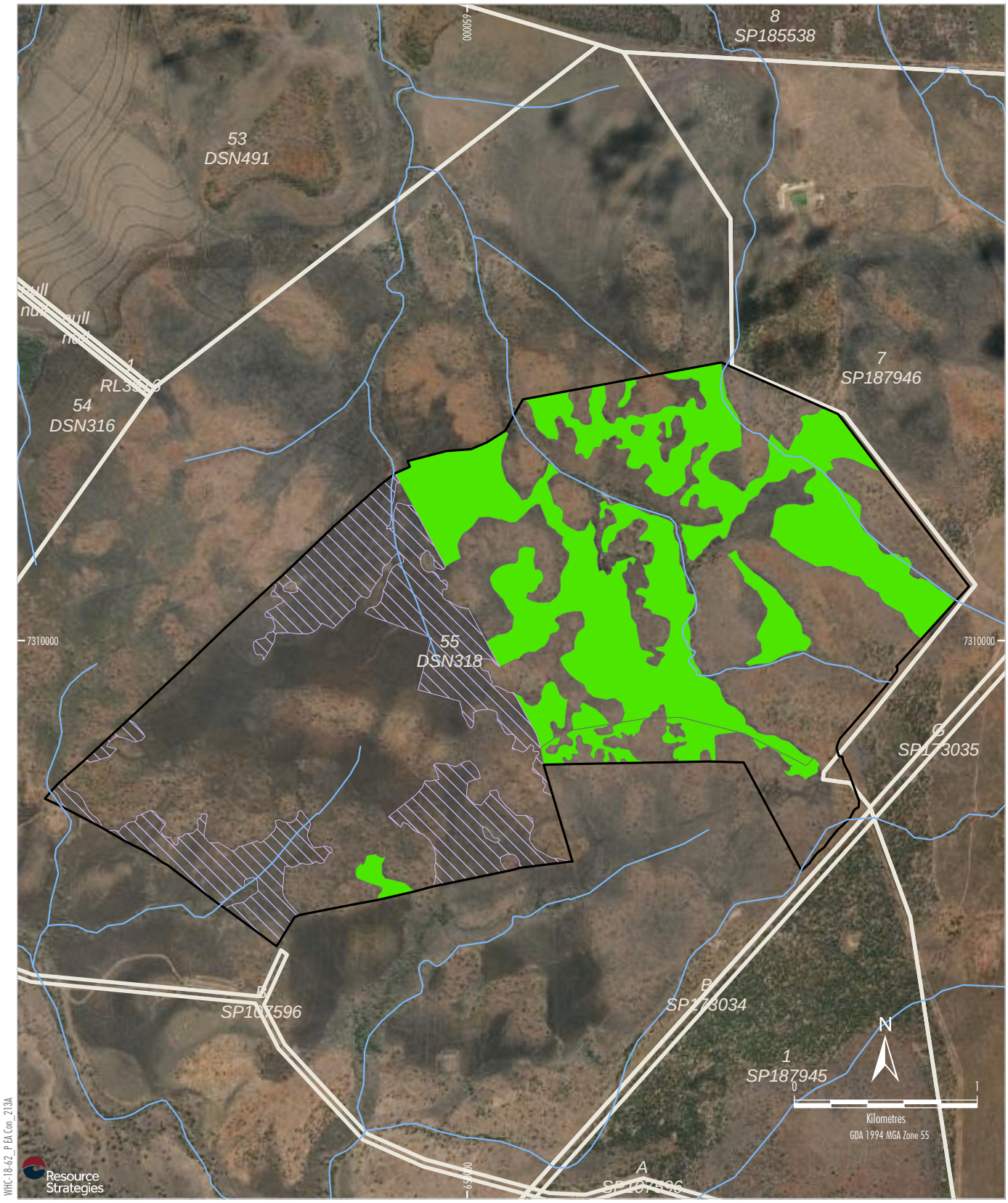
Source: The State of Queensland (2018 - 2020); Whitehaven (2020); EZM (2022) Orthophoto: Google (2019); Whitehaven (2017)

WHITEHAVEN COAL

WINCHESTER SOUTH PROJECT

Ellensfield Offset Area
Matters of National Environmental Significance

Figure 2



LEGEND

Inderi Offset Area

Threatened Ecological Community

Natural Grassland of the Queensland Central Highlands and Northern Fitzroy Basin

Poor quality grassland that does not meet the Natural Grasslands TEC criteria

Source: The State of Queensland (2018 - 2020); Whitehaven (2020); EZM (2021) Orthophoto: Google (2019); Whitehaven (2017)

WHITEHAVEN COAL

WINCHESTER SOUTH PROJECT

Inderi Offset Area
Matters of National Environmental Significance

Figure 3

DEFINITIONS

'approved conservation advice/s' means a conservation advice approved by the Commonwealth Minister under section 266B(2) of the EPBC Act.

'Commencement of Stage 1 of the Action' means the first instance of any disturbance of listed threatened species and ecological communities for Stage 1 of the Action. Commencement does not include:

- physical disturbance of areas that do not contain Matters of National Environmental Significance;
- physical disturbance necessary to undertake pre-clearance surveys or monitoring programs;
- physical disturbance necessary to install signage and/or temporary fencing to prevent unapproved use of the project site; and
- physical disturbance necessary to protect environmental and property assets from fire, weeds and pests, including erection or construction of fencing and signage, and maintenance or use of existing surface access tracks.

'Commonwealth Minister' means the Australian Government Minister administering the EPBC Act including any delegate.

'construction' means the erection of a building or structure that is or is to be fixed to the ground and wholly or partially fabricated on-site; the alteration, maintenance, repair or demolition of any building or structure; preliminary site preparation work which involves breaking of the ground (including pile driving); the laying of pipes and other prefabricated materials in the ground, and any associated excavation work; but excluding the installation of fences and signage.

'Department' means the Australian Government agency responsible for administering the EPBC Act.

'Environmental Offsets Policy' means the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy 2012* (Department of Sustainability, Environment, Water, Population and Communities, 2012).

'EPBC Act' means the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

'impacts' is defined in section 527E of the EPBC Act.

'listed threatened species and ecological communities' means a threatened fauna species and ecological communities listed under the EPBC Act for which this approval has effect, including the:

- Natural Grasslands TEC (*Natural Grasslands of the Queensland Central Highlands and Northern Fitzroy Basin* threatened ecological community).
- Poplar Box TEC (*Poplar Box Grassy Woodland on Alluvial Plains* threatened ecological community).
- Koala (*Phascolarctos cinereus*) (combined populations of Qld, NSW and the ACT).
- Greater Glider (*Petauroides volans*).
- Squatter Pigeon (southern subspecies) (*Geophaps scripta scripta*).
- Ornamental Snake (*Denisonia maculata*).

'legally secure' means to secure a legal agreement under relevant Queensland legislation, in relation to a site, to provide enduring protection for the site against development incompatible with conservation.

'Plans' means any of the documents required to be prepared and/or implemented by the approval holder and published on its website in accordance with these conditions.

'recovery plans' means a recovery plan made or adopted by the Commonwealth Minister under the EPBC Act.

'suitably qualified ecologist' means a person who has professional qualifications, training, skills and/or experience related to the nominated subject matter and can give authoritative independent assessment, advice and analysis on performance relative to the subject matter using the relevant protocols, standards, methods and/or literature.

1.4 PROPOSED RECOMMENDATIONS UNDER STATE DEVELOPMENT AND PUBLIC WORKS ORGANISATION ACT 1971

This section includes proposed recommendations, made under section 43 or 52 of the *State Development and Public Works Organisation Act 1971* (SDPWO Act) and relate to the applications for development approvals for the Project.

PROPOSED RECOMMENDATIONS

Earthworks Adjacent to the Railway Corridor

Proposed Condition 1

At all times, any extractive activity (including extraction, processing, stockpiling and associated environmental controls), excavation, filling/backfilling/compaction, retaining structures, batters, stormwater management measures and any other works involving ground disturbance must not:

(a) encroach upon or de-stabilise or cause damage to the railway corridor, including all transport infrastructure or the land supporting this infrastructure, or cause similar adverse impacts;

(b) adversely impact on the Norwich Park Branch Railway corridor through the addition or removal of loading such as but not limited to lateral, vertical or surcharge loading;

(c) adversely impact on the Norwich Park Branch Railway corridor as a result of directly or indirectly disturbing groundwater;

(d) result in vibration, structural and/or ground movement impacts on the railway corridor during excavation, drilling, blasting or similar activities or otherwise adversely impact on the structural integrity of the railway corridor; or

(e) cause obstruction, nuisance or sedimentation in the Norwich Park Branch Railway corridor as a result of stockpiling.

Proposed Condition 2

Certification from a Registered Professional Engineer of Queensland (RPEQ) must be provided to the Department of Transport and Main Roads (mackay.whitsunday.idas@tmr.qld.gov.au), confirming that the rail corridor interface and infrastructure crossing has been designed in accordance with **Condition 1**.

Proposed Condition 3

At all times, the development must be carried in accordance with **Conditions 1 and 2**.

Road Traffic Impact Assessment

Proposed Condition 4

The development must manage and mitigate its traffic impacts to maintain the safety and efficiency of the state-controlled road network.

Proposed Condition 5

The applicant must provide Traffic Impact Assessment prepared by an RPEQ in accordance with Guide to Traffic Impact Assessment (GTIA) to the Department of Transport and Main Roads (mackay.whitsunday.idas@tmr.qld.gov.au) prior to the commencement of construction and use, which considers (and includes where appropriate) the following:

(a) a Pavement Impact Assessment (PIA) that considers cumulative impacts of project-related traffic on the state-controlled road network, and identifies any mitigation measures required to manage project-related traffic impacts; and

(b) a road safety risk assessment, which includes but is not limited to:

  (i) a road safety audit of the current conditions of the state-controlled road network and identifies mitigation measures as necessary to improve road safety;

  (ii) confirms the total Project-related transport task including workforce, inputs and outputs, during the construction and operational phases (including a description of the expected volumes, weights and origins/destinations of materials, products, hazardous goods or wastes for the development);

  (iii) confirms existing pavement conditions and defects which may lead to safety issues;

  (iv) existing intersection performance from a safety perspective; and

  (v) existing state-controlled road infrastructure and impacts of project related traffic.

Proposed Condition 6

The applicant must implement the mitigation measures identified in the Road Traffic Impact Assessment to the satisfaction of Department of Transport and Main Roads and obtain all relevant approvals as required under the *Transport Infrastructure Act 1994*.

PROPOSED RECOMMENDATIONS

Road-use Management Plan

Proposed Condition 7

The operational management of the development must avoid and manage the impact of Project-related traffic on the safety, efficiency and integrity of state-controlled roads.

Proposed Condition 8

The applicant must provide a Road-use Management Plan (RMP) to the Department of Transport and Main Roads (mackay.whitsunday.idas@tmr.qld.gov.au), prior to the commencement of construction and use, which considers (and includes where appropriate) the following:

(a) haulage routes for construction and operational phases of the project;

(b) public safety at worksites;

(c) obstruction to road users;

(d) workforce management strategies to reduce traffic generation, including, but not necessarily limited to:

  (i) provision of a shuttle service for workers to reduce private vehicle usage and overall traffic generation;

  (ii) provision of a ride sharing scheme to increase worker vehicle occupancy and decrease overall traffic generation; and

  (iii) scheduling shift times and heavy vehicle movements such that Project-related traffic does not coincide with road network peak periods, where possible.

(e) management of driver behaviour minimise health and safety risks;

(f) driver fatigue management strategies;

(g) providing a system of identifying Project-related vehicles and provision of a community hotline for other road users to contact if they have concerns, queries or complaints about driver behaviour;

(h) defining responsibilities and procedures for implementation, monitoring and review of the RMP;

(i) management strategies to limit the potential impacts associated with over-size and over-mass (OSOM) loads through the National Heavy Vehicle Regulator (NHVR);

(j) management strategies for the transportation of hazardous materials such as fuels and chemicals; and

(k) ongoing monitoring for road safety impacts from development activities (e.g. dust, debris/construction materials on roads and lighting, etc.).

Proposed Condition 9

The construction and operation of the development must be in accordance with the RMP.

Earthworks and Blasting Management Plan

Proposed Condition 10

An Earthworks and Blasting Management Plan must be prepared for the development. The Earthworks and Blasting Management Plan must address potential construction and operational impacts associated with the development and establish a management and monitoring program that would be implemented to avoid adverse impacts on the Norwich Park Branch Railway, including all transport infrastructure or the land supporting this infrastructure. The Earthworks and Blasting Management Plan must address at least the following:

(a) the requirement for the applicant to undertake a RPEQ certified geotechnical assessment(s) from a geotechnical consultant with a GE3 pre-qualification including;

  (i) detailed geotechnical investigations and modelling identifying all potential failure mechanisms and justifications for the engineering properties used for each geological layer identified;

  (ii) stability analyses including kinematic stability checks; and

  (iii) identification of any changes or impacts that would adversely affect the state-controlled transport corridors.

(b) the requirement to provide RPEQ certified detailed engineering design drawings and supporting technical documentation for mine excavation;

(c) mitigation measures to manage the identified risks on the state-controlled transport network including relevant management and monitoring plans; and

(d) the requirement for the applicant to provide written notification of any issues impacting on the Norwich Park Branch Railway, including all transport infrastructure or the land supporting this infrastructure, within five business days of becoming aware of an issue.

PROPOSED RECOMMENDATIONS
Proposed Condition 11 The construction and operation of the development must be in accordance with the Earthworks and Blasting Management Plan.
Proposed Condition 12 At all times, the development should not disrupt the safety and operational integrity of the railway corridor, including all transport infrastructure or the land supporting this infrastructure, from ground movement and vibration.
Proposed Condition 13 The applicant must provide a RPEQ certified Ground Movement and Vibration Monitoring Plan to the Department of Transport and Main Roads (mackay.whitsunday.idas@tmr.qld.gov.au) prior to commencement of the relevant activities, which monitors for any construction and operational impacts associated with the development on the Norwich Park Branch Railway. The Ground Movement and Vibration Monitoring Plan must include the following: (a) details regarding pre and post dilapidation surveys of the Norwich Park Branch Railway, including all transport infrastructure or the land supporting this infrastructure; (b) details on instrumentation including types, locations and number of movement monitoring instruments/devices adjacent to and within the railway corridor; (c) details of the geological mapping procedure during the excavation of pits in order to validate the geological models assumed stability assessments; (d) relevant requirements in accordance with Section 8.6 Vibration of Transport and Main Roads Specifications MRTS51 Environmental Management (July 2020); (e) the requirement for the applicant to engage a RPEQ to establish the baseline structural and ground movement and vibration readings; (f) automated ground movement and vibration monitoring to be implemented during activities that may potentially interact with the railway corridor; (g) the provision of movement and trigger levels and accuracy of monitoring instrumentation to the satisfaction of the Department of Transport and Main Roads; (h) detail compliance protocols for exceedances of the movement and trigger levels, including specific actions to be undertaken, responsibilities, notification process, lines of communication, and stop work procedure; (i) the commitment to provide the monitoring results to the Department of Transport and Main Roads (mackay.whitsunday.idas@tmr.qld.gov.au); and (j) the requirement for the applicant to rectify any damage to the railway corridor, including all transport infrastructure or the land supporting this infrastructure, caused by the construction or operation of the development.
Proposed Condition 14 The construction and operation of the development must be in accordance with Ground Movement and Vibration Monitoring Plan. Where rectification works to the railway corridor, including all transport infrastructure or the land supporting this infrastructure, are required as a result of development-related activities (as an illustrated by the pre and post development dilapidation surveys), the applicant must: (a) undertake all necessary rectification works to the railway corridor, including all transport infrastructure or the land supporting this infrastructure, at the applicant's expense; and (b) provide RPEQ certification to the Department of Transport and Main Roads (mackay.whitsunday.idas@tmr.qld.gov.au), confirming that all necessary rectification works have been completed.

PROPOSED RECOMMENDATIONS
Dangerous Goods
Proposed Condition 15 Dangerous goods must not adversely impact on the safety or operational integrity of the railway corridor.
Proposed Condition 16 Certification from an RPEQ must be provided to the Department of Transport and Main Roads (mackay.whitsunday.idas@tmr.qld.gov.au) including the following documentation: (a) A risk assessment in accordance with Attachment 1: Risk Assessment Guide of the Guide for Development in a Transport Environment: Rail; and (b) Details of the measures that have been incorporated into the design and management of the development to minimise any identified risks, including but not limited to: (i) minimising or controlling the outbreak of fire; (ii) controlling smoke and/or gas release and dispersion; (iii) minimising heat build-up in structures; (iv) limiting the possibility of structural components being blast damaged; (v) providing stability or contingency measures in the proposed development; (vi) providing safe emergency access and egress; and (vii) ensuring effective containment and clean-up of dangerous goods incidents.
Proposed Condition 17 The development must implement dangerous goods management measures at all times during relevant activities in accordance with **Conditions 15 and 16**.
Stormwater and Flooding Management
Proposed Condition 18 Stormwater and flooding management of the development must not cause actionable nuisance to the Norwich Park Branch Railway.
Proposed Condition 19 Any works associated with the development must not, without consultation with Aurizon and/or Department of Transport and Main Roads (DTMR): (a) create any new discharge points for stormwater runoff onto the railway corridor; (b) interfere with and/or cause damage to the existing stormwater drainage on the railway corridor; (c) surcharge any existing culvert or drain on the railway corridor; (d) reduce the quality of stormwater discharge onto the railway corridor; (e) worsen the flood immunity of the Norwich Park Branch Railway associated with development activities; or (f) impede or interfere with overland flows paths and/or hydraulic conveyance on the site.

1.5 PROPOSED COMMITMENTS

This section provides a summary of proposed commitments made by Whitehaven WS throughout the EIS.

Matter	Commitment
Rehabilitation	The Project will be progressively rehabilitated to achieve the rehabilitation objectives established for each domain in accordance with the Progressive Rehabilitation and Closure Plan (PRCP). The progress of the rehabilitation will be monitored against rehabilitation milestones and completion criteria to demonstrate successful rehabilitation of the Project. The rehabilitation goals for the Project will be to create a post-mining landform that is safe, stable, non-polluting, and able to sustain a post-mining land use (PMLU).
	The rehabilitation monitoring program will be developed and carried out by an appropriately qualified and experienced person. The monitoring program will be designed to reflect the rehabilitation milestones and completion criteria and to identify the requirement for intervention and/or remedial activities.
	Waste rock emplacements have been designed with shallow slopes, approximately 10° (18%) or lower, that will be revegetated to minimise erosion and sustain low-intensity cattle grazing PMLU.
	Residual void highwalls will be designed to remain stable in the long-term, based on site-specific geological data and geotechnical modelling.
	Residual void highwalls will be bunded and fenced to prevent access.
	Disturbance due to exploration activities in areas not scheduled or authorised to be mined within two years will be rehabilitated in accordance with provisions detailed in the *Eligibility Criteria and Standard Conditions for Exploration and Mineral Development Projects* (Department of Environment and Heritage Protection, 2016).
	Residual voids are located outside the extent of predicted flooding events in the Isaac River, up to and including the Probable Maximum Flood (PMF) event.
	All of the Project area will be rehabilitated to sustain a PMLU of low-intensity grazing, consistent with the pre-mining land use within and surrounding the Project area.
	Providing a use for all remaining proposed residual voids (i.e. no Non-Use Management Areas [NUMAs]).
	All infrastructure associated with the Project will be assessed on an individual basis and either decommissioned and removed, or retained for future use as part of the PMLU. Any retained infrastructure will be commensurate with the low-intensity grazing PMLU and may include (but will not be limited to) dams, access roads and fences. Where infrastructure is decommissioned and removed, the land will be shaped, topsoiled, ripped and revegetated. Disturbed areas will be rehabilitated with an appropriate seed mix to enable revegetation.
	In accordance with the *EIS Information Guideline –Contaminated Land* (Department of Environment and Science [DES], 2020), potentially contaminated land will undergo preliminary (Stage 1) and detailed (Stage 2) site investigations by a suitably qualified person to identify any existing land contamination.
	Backfilling an additional void, the South Pit mine void.
	Whitehaven WS will re-establish excised portions of the northern waterway in the final landform and re-establish a post-mining surface water drainage that is sympathetic with the natural drainage lines.
	Whitehaven WS will amend the relevant soil structures where necessary in the Progressive Rehabilitation and Closure Plan (or other relevant management plan) and provide a soil inventory that will be maintained during the life of the Project.

Matter	Commitment
Surface Water	Key principles that will be applied for the Project include: ▪ separation of clean, sediment-laden and mine-affected water, within the limitations of operational requirements; ▪ minimisation of surface disturbance areas, thus minimising the volume of sediment-laden and mine-affected water generated by the Project; ▪ all water storage dams, structures and facilities will be designed, constructed and managed in accordance with the *Manual for assessing consequence categories and hydraulic performance of structures* (DES, 2016); ▪ water storage dams that manage mine-affected water will be designed and operated to minimise uncontrolled releases to the receiving environment; ▪ water for construction and operational purposes will be preferentially sourced from dedicated on-site water storage dams; ▪ water collected in water storage dams and sediment dams will be captured and retained for reuse on-site where possible (e.g. dust suppression, coal handling and preparation plant [CHPP] demand) and/or controlled release off-site to the receiving environment in accordance with the *Model water conditions for coal mines in the Fitzroy basin* (DES, 2013); ▪ surface runoff from rehabilitated waste rock emplacements during operation of the Project will be directed to dedicated sediment dams for settling and release to the receiving environment or to mine-affected water storages for reuse; and ▪ where feasible, sourcing external water requirements from surrounding mining operations to reduce take from the environment or raw water supplies.
	Mine-affected water will be managed through the site water management system which is designed to operate in accordance with *Guideline – Model mining conditions* (DES, 2017) and the *Model water conditions for coal mines in the Fitzroy basin* (DES, 2013).
	A Water Management Plan will be prepared cognisant of the DES guideline for the *Preparation of water management plans for mining activities* (Department of Environment and Resource Management, 2010).
	To achieve the 'no mine-affected water storage uncontrolled release' objective, the Project will be operated such that water could be temporarily stored in the active open pit if required (e.g. as a result of exceedance of the design capacity of the water management system).
	Whitehaven WS will prepare a REMP for the Project in accordance with the *Guideline – Model mining conditions* (DES, 2017).
	Conditions have been developed for potential controlled water releases to the Isaac River based on the *Guideline - Model mining conditions* (DES, 2017) and *Model water conditions for coal mines in the Fitzroy basin* (DES, 2013) and site-specific data.
	Monitoring of upstream, on-site and downstream water quality will assist in demonstrating that the site water management system is effective in meeting its objective of minimal impact on receiving water quality. Monitoring will also allow for early detection of any impacts and appropriate corrective action.
	Surface runoff and seepage from waste rock emplacements, including any rehabilitated areas during operations, will be monitored for 'standard' water quality parameters, including but not limited to pH, electrical conductivity (EC), alkalinity, major anions, major cations, total dissolved solids (TDS) and a broad suite of soluble metals/metalloids.
	Sediment dams will be designed based on the *Best Practice Erosion and Sediment Control Guideline* (International Erosion Control Association, 2018).
	Additional sediment dam management and mitigation measures associated with Isaac River flows and monitored salinities within the sediment dams.
	All water storages for the Project will be monitored for water quality and volume on a quarterly basis.
	Whitehaven WS will implement a number of mitigation and management measures for the mine-affected water dams including: ▪ operational measures that will allow for the practical limitations of being able to redistribute stored volumes across the containment system (including operability of equipment under extreme weather conditions); ▪ annual inspections to assess the condition and adequacy of all components of the regulated structures; and ▪ establishing and maintaining a register of regulated structures.

Matter	Commitment
Groundwater	Monitoring of groundwater levels from existing monitoring bores and vibrating wire piezometers (VWPs) will continue and will enable natural groundwater level fluctuations (such as responses to rainfall) to be distinguished from potential groundwater level impacts due to depressurisation resulting from proposed mining activities. Several bores within the extent of proposed mining operations will continue to be monitored until they are no longer available due to mine progression.
	Groundwater quality monitoring will continue to be undertaken on a quarterly basis. In addition to collecting field parameters (EC and pH), water samples will be submitted to a NATA accredited laboratory for analysis of: ▪ physio-chemical indicators (TDS and TSS); ▪ major ions, hardness and ionic balance; ▪ total alkalinity as $CaCO_3$, HCO_3, CO_3; ▪ total and dissolved metals; ▪ nutrients; and ▪ organics.
	Subject to accessibility, quarterly groundwater quality monitoring will continue to be conducted on privately-owned bores near to the Project.
	The groundwater quality and level limits developed in accordance with *Using monitoring data to assess groundwater quality and potential environmental impacts* (DES, 2021) will be documented in the Water Management Plan.
	An annual review of groundwater quality trends will be conducted by a suitably qualified person. The review will assess the change in groundwater quality over the year, compared to historical trends and impact assessment predictions.
	Every five years, the validity of the groundwater model predictions will be assessed and if the data indicates significant divergence from the model predictions, the groundwater model will be updated for simulation of mining.
	An Underground Water Impact Report (UWIR) will be prepared in accordance with Chapter 3 of the *Water Act 2000* and relevant guidelines.
	Additional monitoring bores for the regolith and Leichhardt Seam groundwater units in the vicinity of the Project will be installed and incorporated into the groundwater monitoring program for the Project. This allows natural groundwater level fluctuations to be distinguished from potential groundwater level impacts due to depressurisation resulting from proposed mining activities. Whitehaven WS has also committed to installing additional monitoring alluvial bores in the vicinity of the existing Winnet and Knob Hill bores.
Flood Management	Temporary flood levees will be progressively constructed as required to provide flood protection to Project operations.
	The temporary flood levees will be designed to a height that will provide protection against the peak flood height associated with a 0.1% annual exceedance probability (AEP) flood event.
	Detailed design plans of the proposed temporary flood levees together with a consequence assessment and certification by a suitably qualified and experienced person(s) will be prepared prior to construction for assessment and approval by the administering authority in accordance with proposed environmental authority conditions
	During the detailed design phase, the model results will be used to identify potential locations of high flow velocity and scour potential. This information will be used to inform the appropriate level of scour protection along the proposed temporary levees.
	Whitehaven WS will continue to consult with the Isaac Regional Council and will provide meteorological data recorded on-site, if requested, to assist with inputs into regional flood modelling and disaster management planning managed by Isaac Regional Council.
Biodiversity Offsets	Where the Project will result in a significant residual impact, Whitehaven WS will provide an environmental offset.
	Offsets will be established for the Project in stages, in accordance with the *Queensland Environmental Offsets Policy (Version 1.11)* (DES, 2021), accounting for the progressive disturbance of the Project.

Matter	Commitment
Waste Rock and Rejects	A Waste Management Program will be developed that describes the handling and disposal of wastes associated with the Project, including waste rock, coal rejects and other wastes generated by the Project.
	Where highly sodic and/or dispersive waste rock is identified, it will not report to final landform surfaces and will not be used in construction activities, wherever practicable.
	It may not be practical to selectively handle and preferentially emplace highly sodic and dispersive waste rock during operation of the Project. However, reasonable measures will be taken to identify and selectively place (or alternatively manage) highly sodic and dispersive waste rock.
	Where waste rock is used for construction activities, this will be limited (as far as practical and feasible) to unweathered Permian sandstone, as this material is widely accepted to be more suitable for construction and for use as embankment covering on final landform surfaces.
	Regardless of the waste rock type, especially where engineering or geotechnical stability is required, laboratory testing and rehabilitation field trials will be undertaken to determine the propensity for dispersion and erosion of waste rock landforms.
	Geochemical test-work validation for coal reject from the CHPP will be undertaken during development of the Project, particularly during the first two years of CHPP operation and whenever new seams/plies are being processed. Test-work will comprise a broad suite of environmental geochemical parameters, such as pH, EC, acid-base account parameters and total and soluble metals/metalloids.
Flora and Fauna	Whitehaven WS will develop and implement an Environmental Management Plan outlining (amongst other things) vegetation clearing measures, weed management and animal pest management. A monitoring program that includes weed monitoring and animal pest monitoring will be included.
	Whitehaven WS will prepare a species management program in accordance with the *Nature Conservation (Animals) Regulation 2020* for approval by the DES prior to undertaking any activities that will disturb animal breeding places.
	Pest and weed control/management measures will be implemented every six months, or as required during weather conditions which are conducive to the outbreak of weeds and feral animal populations.
	Whitehaven WS will implement artificial lighting in accordance with Australian Standards, and in a way that focuses on disturbance/work areas and minimises/avoids lighting of remnant vegetation (E2M, 2021).
	Whitehaven will implement fencing to exclude livestock from the portion of the northern unnamed waterway that is outside the development footprint and inside the mining lease.
	Vegetation clearance measures will be developed and implemented for the Project: ▪ Pre-clearance fauna surveys will be undertaken by suitably experience and qualified persons to identify individual fauna at direct risk from clearing activities. ▪ A suitably experienced and qualified fauna spotter/catcher will be present during the clearing of Matters of State Environmental Significance and Matters of National Environmental Significance habitat areas. ▪ Management of fauna identified during clearing and pre-clearance surveys will include relocating individuals to adjacent habitat or treating injuries. ▪ If a Koala is found, it will be left to move away from the clearance area on its own accord if safe to do so. ▪ Boundaries of areas to be cleared, and those not to be cleared will be clearly defined during clearing activities. ▪ Select habitat features (e.g. hollow-bearing trees, woody debris, logs and rocks) will be salvaged for re-use in rehabilitation of the Project. ▪ Land clearing will be carried out progressively over the life of the Project to allow mobile fauna species the opportunity to disperse away from clearing areas. ▪ Directional clearing towards retained vegetation will be undertaken where practical to enable the movement of fauna into retained vegetation. ▪ During construction works, work areas and excavations (trenches) will be checked for fauna that may have become trapped. ▪ If trenches remain open after daily site works have been completed, fauna ramps will be put in place.
	The following feral animal management measures will be implemented: ▪ Maintaining a clean, rubbish-free environment to deter feral animals. ▪ Engaging appropriately qualified persons to undertake biannual pest animal monitoring in the Project mining lease areas, which may include coordination with adjoining mining operations/adjacent landowners. ▪ Feral animal control strategies (e.g. baiting and trapping) within the Project mining lease areas in accordance with relevant standards and the *Isaac Regional Biosecurity Plan 2020-2023* (Isaac Regional Council, 2020a). ▪ Monitoring of feral animals will be undertaken by an appropriately qualified contractor to identify whether new or additional control measures are required.

Matter	Commitment
Flora and Fauna (Continued)	During the life of the Project, the following management measures will be implemented, to mitigate the abundance and species of weeds in the Project area and surrounds and minimise the potential for weeds to spread to adjacent areas: ▪ Bi-annual surveying of tracks, revegetation (rehabilitation) areas and soil stockpiles, etc. (or more frequently as required), to identify weeds requiring control. ▪ Washdown of machinery and vehicles when moving to/from weed infested areas. ▪ Mechanical removal of identified weeds and/or the application of approved herbicides. ▪ Weed control methods in accordance with those specified by the DAF and the *Isaac Regional Biosecurity Plan 2020-2023* (Isaac Regional Council, 2020a).
	Whitehaven WS will implement management measures to reduce impacts to fauna species due to vehicular strike such as (E2M, 2021): ▪ designating speed limits for the Project area; ▪ developing a process for the removal of roadkill to minimise the risk of attracting fauna to the roadway; and ▪ developing a process for the management of fauna injured by vehicle strike.
Social	The operational workforce for the Project will not be a 100% fly-in, fly-out (FIFO) workforce.
	A Social Impact Management Plan (SIMP) has been prepared for the Project which comprises a Workforce Management Plan, Housing and Accommodation Plan, Local Business and Industry Procurement Plan, Health and Community Wellbeing Plan, and Community and Stakeholder Engagement Plan.
	Whitehaven WS's recruitment strategy for the Project will provide equitable access to employment opportunities and prioritise local recruitment by applying the following order of priority for recruitment: 1. The 'local' towns of Moranbah, Dysart and Coppabella. 2. Nearby regional communities within a 125 km radius from the Project entrance. 3. The Isaac region as per the Isaac Regional Council Local Government Area. 4. The Mackay Whitsunday region. 5. The State of Queensland. 6. Outside the State of Queensland.
	Key commitments made by Whitehaven WS with regard to workforce management include: ▪ Implementing a recruitment hierarchy which prioritises employment of local residents. ▪ Applying the Whitehaven Equal Employment Opportunities Policy to all employment aspects of the Project. ▪ Identifying specific positions which qualify for job share/flexible shift arrangements. Such jobs may be made available as both full-time or job share/flexible shift and will be advertised in local towns as a priority. ▪ Not advertising any job opportunities as FIFO only. ▪ Collaborating with the Barada Barna Aboriginal Corporation, Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships, Department of Employment, Small Business and Training and other government agencies to design and implement programs (such as 'Skilling Queenslanders for Work') which support target groups such as youth. ▪ Providing on-site first aid facilities for workers with appropriately trained personnel available that can assist with attending to minor workforce health issues, as well as providing first response services for emergency situations and site accidents. ▪ Ongoing consultation and collaboration with police, workforce accommodation providers and other stakeholders to identify and address any antisocial or disruptive workforce behaviour in local communities. ▪ Managing workforce health and safety through implementation of the Health and Safety Management System.
	Key commitments made by Whitehaven WS with regard to housing and accommodation include: ▪ Facilitating the construction or purchase of a maximum of 34 new houses in Moranbah for Project employees. ▪ Providing a financial contribution of $500,000 over the Project life to the Isaac Affordable Housing Trust and/or Emergency and Long-Term Accommodation Moranbah Inc for the construction of additional affordable housing in Moranbah. ▪ Providing subsidised housing costs for members of the workforce who choose to live locally (equating to approximately $13,000 per annum per Project employee). ▪ Providing high quality workforce accommodation to non-resident personnel and monitoring workforce satisfaction with the provided accommodation. ▪ Providing support to members of the workforce seeking to move to local communities (e.g. providing connections to local advice and support).

Matter	Commitment
Social (Continued)	Key commitments made by Whitehaven WS with regard to local business and industry procurement include: ▪ Preparing and adopting a procurement policy and plan consistent with relevant regulations. ▪ Collaborating with the Moranbah Traders Association, Local Content Leaders Network, Regional Industry Network and any other appropriate stakeholders in establishing a local supplier listing tailored to the Project. ▪ Maximising opportunities for local businesses to provide goods and services to the Project. ▪ Facilitating and supporting delivery of a tender readiness program for Indigenous businesses, in collaboration with Barada Barna Aboriginal Corporation, Department of Employment, Small Business and Training, Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships and any other appropriate stakeholders.
	Key commitments made by Whitehaven WS with regard to health and community wellbeing include: ▪ Collaborating with the Isaac Regional Council to determine the most effective contribution which may be made to a childcare solution (maximum of $200,000 within Years 1 to 5 of the Project). ▪ Monitoring workforce demands on childcare and education services and working with the Isaac Regional Council to support solutions to cumulative demands on social services. ▪ Supporting the establishment of, and participating in, a Moranbah Cumulative Reference Group which is appropriately represented across government and industry, providing a forum for a partnered approach to cumulative effects. ▪ Support community health outcomes through partnering with the Moranbah Hospital, Moranbah District Mental Health Service and other key health service providers providing contributions as required to address identified equipment deficiencies (maximum of $50,000 within Years 1 to 5 of the Project). ▪ Providing a contribution of $30,000 per year for the life of the Project, split between local mental health, domestic violence and suicide prevention programs. ▪ Monitoring and managing dust, noise and vibration issues associated with the Project, including preparation of an Air Quality Management Plan, and regularly communicating the results with the local community. ▪ Providing shuttle buses to transport a portion of workers for the Project. ▪ Notifying stakeholders of material Project traffic related activities, such as closures due to roadworks, and implementing a complaints mechanism to identify, track and remediate (in accordance with any conditions of the environmental authority) community complaints. ▪ Developing and implementing a workforce code of conduct describing positive behavioural outcomes and prohibiting negative behaviours. ▪ Ongoing consultation and collaboration with police, workforce accommodation providers and other stakeholders to identify and address any antisocial or disruptive workforce behaviour in local communities. ▪ Providing a contribution to support community culture and well-being through the Whitehaven Community Fund which will invite community organisations to apply for annual funding.
	Key commitments made by Whitehaven WS with regard to community and stakeholder engagement include: ▪ Maintaining a Project officer as a dedicated community contact point. ▪ Continuing to engage with local and surrounding landholders to monitor overall Project impacts. ▪ Continuing to engage with local service providers including schools, health and other social services regarding Project related activities that have potential to impact on the community (e.g. blasting or road closures). ▪ Establishing, publicising and maintaining a readily accessible community complaints and resolution process. ▪ Establishing and maintaining long-term respectful relations with the Barada Barna Aboriginal Corporation, including managing cultural heritage in accordance with the Cultural Heritage Management Plan and meeting the requirements of any native title agreement. ▪ Regularly engaging with the Isaac Regional Council to monitor the implementation of the SIMP. ▪ Continuing to engage with emergency service providers (e.g. Queensland Police Service, Queensland Ambulance Service and Queensland Fire and Emergency Services) and government agencies (e.g. Department of Employment, Small Business and Training and Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships) over the life of the Project.
	The SIMP as a whole will also be reviewed regularly to assess the effectiveness and relevancy of the SIMP. Whitehaven WS will review, and, if necessary, revise the SIMP every two years for the first four years of the Project and every three years up to Year 10 of the Project. The SIMP may be reviewed and revised within a shorter period of time should Whitehaven WS consider the amendment of the SIMP necessary.
	Whitehaven WS will consult with relevant stakeholders to revise the SIMP to ensure actions accurately reflect the existing socio-economic context and updated operational elements, such as additional workers.

Matter	Commitment
Social (Continued)	The revised SIMP will provide further detail regarding people with disability and elderly persons as follows: ▪ including more specific baseline data in relation to people with disability; ▪ considering provision of community services for people with disability and elderly persons; ▪ acknowledging that employment opportunities will include opportunities for traditionally underrepresented groups such as people with disability; ▪ acknowledging that there are very limited services for elderly persons; ▪ acknowledging that the Project will contribute to a negative effect on housing availability, affordability and accessibility in the local study area and recognising the impact on disadvantaged and lower-income individuals and families; ▪ identifying the valuable contribution of elderly persons in the workplace, with employers and younger workers reaping the benefits of their wisdom and experience; ▪ including in the social impact management plan, actions for maximising employment opportunities for people with disability and elderly persons; and ▪ including reference to engagement with people with disability and elderly persons.
Noise	Whitehaven WS has executed a non-residency agreement with the land owner of the Olive Downs Homestead and the non-residency agreement will be implemented for the Project.
	Project noise adaptive management measures will include: ▪ response to community issues or complaints including discussions with relevant landowners; ▪ refinement of on-site noise mitigation measures and mine operating procedures, where required and practicable; ▪ use of real-time noise and meteorological monitoring as a management tool; and ▪ if necessary (i.e. as informed by operational noise monitoring results and subject to any agreements), implementation of feasible and reasonable mitigation at relevant sensitive receptors, in accordance with the Noise EPP.
Blast Management	Noise and vibration management and monitoring will be undertaken for the Project.
	Whitehaven WS will consult with Aurizon, operators of the railway, regarding proposed blasting events (including consideration of potential vibration or fly-rock impacts) and, if necessary, implement management and mitigation measures (e.g. temporary closure of the railway during blast events) to minimise risks.
Air Quality	Whitehaven WS has executed a non-residency agreement with the land owner of the Olive Downs Homestead and the non-residency agreement will be implemented for the Project.
	General dust mitigation measures will be implemented for the Project to minimise dust generated by wheel-generated dust and grading, drilling, ROM unloading at the CHPP, crushing and train loading activities and by wind erosion of product coal stockpiles.
	Whitehaven WS will implement chemical dust suppressant on selected haul roads (or alternative technologies with equivalent effectiveness) as required.
	Whitehaven WS will implement proactive and reactive dust control measures. These measures will include the use of weather forecasting and real-time measurement of dust levels and meteorological conditions to modify mining operations as required in order to achieve compliance with applicable air quality objectives at the nearest privately-owned receivers.
	Potential emissions associated with product coal transport (i.e. via rail) will be managed by profiling of the coal in wagons and the use of a veneering system (i.e. spray of the coal surface in the wagons).
	Meteorological data and dust levels will be monitored on an ongoing basis at the Project for the implementation of operational dust controls.
	If necessary (i.e. as informed by operational air quality monitoring results and subject to any agreements), feasible and reasonable mitigation at relevant sensitive receptors will be implemented, in accordance with the *Environmental Protection (Air) Policy 2019*.

Matter	Commitment
Greenhouse Gas Management	Whitehaven WS will develop and implement a Greenhouse Gas Management and Abatement Plan to abate carbon dioxide emissions, which will include the following initiatives to mitigate, reduce and manage greenhouse gas emissions from the Project: ▪ regular maintenance of plant and equipment to minimise fuel consumption and associated emissions, including training staff on continuous improvement strategies regarding efficient use of plant and equipment; ▪ regular assessment, review and evaluation of greenhouse gas reduction opportunities; ▪ procurement of policies that require the selection of energy efficient equipment and vehicles; ▪ monitor and maintain equipment in accordance with manufacturer recommendations; ▪ optimise diesel consumption through logistics analysis and planning (e.g. review of the mine plan to optimise haul lengths, dump locations, and road gradients); ▪ implementation of high-efficiency motors; ▪ limiting vegetation clearance, as far as practical, within the Project area; ▪ monitoring and reducing waste in accordance with the Project Waste Management Plan, including implementation of a waste recycling program for the Project to promote and encourage recycling of materials such as paper, cardboard and scrap metal; ▪ purchase of carbon neutral electricity, abating all estimated Scope 2 greenhouse gas emissions associated with the Project; ▪ commitment to fund research targeted at reducing greenhouse gas emissions associated with the Project; and ▪ the Greenhouse Gas Management and Abatement Plan will be reviewed, if necessary, following submission of each Annual Energy Audit by Whitehaven WS, in consultation with the relevant Government agencies. Greenhouse gas emissions from the Project will be tracked and reported each year in the Australian Government's National Greenhouse and Energy Reporting Scheme and National Pollutant Inventory.
Transport	Whitehaven WS will implement the following mitigation and management measures regarding road transport: ▪ continued Project travel demand management through use of, for example, shuttle bus services, car-pooling and staggering of shift times; ▪ design and construction of the new intersection of the mine access road with Eagle Downs Mine Access Road consistent with the relevant guidelines; ▪ appropriate contributions to Isaac Regional Council's maintenance of Moranbah Access Road and Peak Downs Mine Road to address specific safety risks identified during the risk assessment; and ▪ appropriate contributions to Department of Transport and Main Roads (DTMR) and Isaac Regional Council to support pavement reconstruction and rehabilitation works.
	The Project rail spur will be designed and constructed in consultation with Aurizon to minimise potential impacts on the existing environment in accordance with relevant guidelines, including the *Guide to Development in a Transport Environment: Rail* (DTMR, 2015).
	Project trains will be operated and coordinated by Aurizon or another suitably qualified operator.
	Existing local and regional infrastructure will be used to transport product coal to the port for export.
	Providing an updated Traffic Impact Assessment, including a Pavement Impact Assessment and associated marginal cost calculations, prepared in accordance with the *Guide to Traffic Impact Assessment* (DTMR, 2018), to DTMR for assessment and approval no later than six months prior to construction commencing.
	Whitehaven WS will continue to consult with Aurizon and DTMR regarding the Australian Level Crossing Assessment Model (ALCAM) assessment of the existing railway level crossing of Norwich Park Branch Railway and Peak Downs Mine Road.
	Whitehaven WS will continue to consult with DTMR over the life of the Project regarding flooding management and earthworks adjacent to the Norwich Park Branch Railway corridor.

Matter	Commitment
Land	Erosion and sediment controls will be developed and documented for the Project.
	Soil stripping and handling measures will be undertaken in accordance with the PRCP (or other management plan) to be developed for the Project.
	A soil inventory will be maintained during the life of the Project and detailed in the PRCP(or other management plan). The soil inventory will account for the volumes and locations of soil to be progressively stripped, stockpiled and reapplied.
	Whitehaven WS will implement appropriate mitigation measures and management to prevent or reduce the potential for contamination from the Project. If evidence of unexpected contamination is identified, work will cease in that area and action taken to appropriately delineate the contaminated soil or fill material which will be managed or remediated and validated under supervision of a suitably qualified person.
	Prior to any activity associated with the Project upon any relevant lands, all appropriate land tenure will be secured and all necessary approvals and/or consents from all parties holding a lawful interest in the relevant lands will be obtained. A tenure management plan for components related to the Project would be developed in consultation with the Department of Resources.
Biosecurity	Whitehaven WS will implement mitigation and management measures to minimise the spread of weeds, pest animals and control existing weeds and pests through an Environmental Management Plan. Control measures will be implemented at commencement of the Project and continue through to relinquishment of the Project area.
	Whitehaven WS will ensure that all personnel tasked with feral animal and weed management and control hold current and valid permits, including chemical licences for pesticide use.
	Consistent with the general biosecurity obligations Whitehaven WS will: ▪ know the biosecurity risks associated with the Project activities; ▪ take all reasonable and practical steps to prevent or minimise each potential biosecurity risk; and ▪ prevent or minimise the adverse effects the risk could have and refrain from doing, or omit to do, something that might exacerbate the adverse effects, or potential adverse effects.
Bushfire Risk	Whitehaven WS will implement fire prevention measures during the operation of the Project to reduce the likelihood and impact of bushfires, which will include the following: ▪ construction and maintenance of fire breaks; ▪ provision and maintenance of firefighting equipment around the Project; ▪ provision of firefighting equipment training for staff; ▪ managing vegetation within the Project mining leases to maintain safe fuel loads; ▪ handling and disposing any chemicals used in the Project area in accordance with the relevant Safety Data Sheet; ▪ implementing access tracks, to be used by Queensland Fire and Rescue Service for emergency purposes; and ▪ implementing an Emergency Response Procedure prepared in consultation with emergency services. It is noted that the Queensland Fire and Emergency Services supported the assessment of bushfire risk presented in the Draft EIS (Whitehaven WS, 2021) and the commitments to manage risk from bushfire.

Matter	Commitment
Waste	Whitehaven WS will manage the waste produced at the Project in accordance with the waste and resource management hierarchy in the *Waste Reduction and Recycling Act 2011* (i.e. "avoid, reduce, reuse, recycle, recover, treat, and dispose"). If waste must be disposed of, Whitehaven WS will do so in a way that prevents or minimises adverse effects on environmental values.
	A Waste Management Program will be developed that describes the handling and disposal of wastes associated with the Project, including waste rock, coal rejects and other wastes generated by the Project, and will describe the objectives and measures for protecting environmental values from potential impacts associated with waste.
	Whitehaven WS will continue to consult with the Isaac Regional Council regarding waste management and use of alternative waste management facilities outside the Isaac Regional Council Local Government Area (if capacity is not available).
	Disposal of waste heavy vehicle tyres will include stockpiling and transport to identified disposal locations within the waste rock emplacement areas, as determined by mine progression. The disposal methodology will generally include the following: ▪ operational personnel will initiate tyre disposal once a stockpile has accumulated that warrants a feasible disposal event; ▪ completion of a pre-task risk assessment for each waste tyre disposal event, to consider both the location and manner in which the tyres will be disposed, as well as required monitoring; ▪ relocation of the tyres will be undertaken in accordance with Whitehaven WS' internal Mine Tyre Disposal Environmental Procedure; ▪ tyres will be placed as deep into the waste rock emplacement area as is reasonably practical, with a minimum of 20 m of material to be emplaced over all tyre disposal areas; ▪ tyres will not be disposed of in areas with potential to impede saturated aquifers, compromise the stability of the consolidated final landform or have any long-term effects on rehabilitation; ▪ tyre dumps will be located more than 15 m from any coal rejects to minimise the potential for spontaneous combustion. The pre-task risk assessment must consider the following: ▪ fire hazards and their management; ▪ safety hazards and their management; ▪ potential for interaction with the surrounding groundwater systems; ▪ required depth to prevent uprising and ensure stability of the final consolidated landform; and ▪ proximity to coal rejects and depth of cover. Stockpiling of tyres at the allocated disposal area may be required prior to final coverage and burial. Stockpiles will be sized and located in consideration of potential fire risk and will be temporary only.

Matter	Commitment
Safety	The following processes and measures will be implemented: ▪ Development and implementation of a Risk Management System. ▪ Handling, storage and disposal of Hazardous Materials at the Project will be in accordance with relevant legislation, standards and guidelines. ▪ The management of all chemicals stored and used at the Project will be in accordance with the relevant safety data sheet for each chemical. ▪ Vehicle and equipment operators will be trained in processes and procedures such as safe and stable operation of machinery and emergency response. ▪ Licenced contractors will be used to recover, collect, store, handle and dispose of hazardous wastes and materials utilised at the Project. ▪ Regular inspections of hazardous material storage areas including tanks and bunds will be conducted to maintain structural integrity. ▪ Spill control kits will be available at all locations in which hazardous materials are stored. ▪ Whitehaven WS will continue to liaise with community stakeholders including the relevant community emergency services. ▪ The explosives magazine for the Project will be fenced, signed and maintained in accordance with AS 2187:1998 *Explosives - Storage, transport and use Storage*. ▪ Ongoing consultation with relevant emergency authorities over the life of the Project (e.g. the Local Disaster Management Group).
	Whitehaven WS will prepare an Emergency Response Procedure in consultation with emergency services. The Emergency Response Procedure will describe the actions that will be implemented if the following incidents were to occur: ▪ injury or illness; ▪ fire; ▪ unintended initiation of explosives; ▪ loss of containment of hazardous substances; ▪ natural events (e.g. flooding, bushfire, cyclone); ▪ vehicle accident; and ▪ unapproved mine-affected water discharge off-site.
	The Emergency Response Procedure may include, but not be limited to: ▪ contact details for key stakeholders in case of any emergency; ▪ emergency and evacuation planning, maps and response procedures; ▪ a description of the proposed communication mechanisms and required infrastructure; ▪ treatment plans for injured workers due to chemical processes used on site, including proposed consultation; ▪ a description of notification requirements for planned exercises; and ▪ a fatigue management policy.
	Whitehaven WS will perform a risk assessment specific to hazardous chemicals stored on-site during the detailed design phase of the Project, in accordance with relevant standards and codes.