

27.0 Conditions

Ensham JV currently operates the existing Ensham Mine under Environmental Authority (EA) EPML00732813, dated 3 September 2020. As the Ensham Life of Mine Extension Project (the propose project, hereafter referred to as 'the Project') is an extension of current underground operations at Ensham Mine, the existing EA will be extended to include the Project activities. The Project infrastructure and surface disturbance are shown in **Figure 27-1**. This chapter sets out the obligations which the Ensham JV envisages may be contained within the updated EA for Ensham Mine.

Schedule A: General		
Condition number	Condition	Proposed change to 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.	No change
A2	Conditions of this environmental authority continue to apply in the event that this environmental authority is suspended	No change
A3	Unless otherwise authorised by this environmental authority, contaminants must not be released to the receiving environment.	No change
A4	Prevent and /or minimise likelihood of environmental harm In carrying out the environmentally relevant activities, you must take all reasonable and practicable measures to prevent and/or minimise the likelihood of environmental harm being caused.	No change
A5	Scope of activity This environmental authority authorises the mining of twelve (12) million tonnes of run of mine (ROM) coal per annum.	No change
A6	Maintenance of measures, plant and equipment The environmental authority holder must: a) install, maintain and operate, in a proper manner, all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; and b) ensure all instruments and devices used on site for the measurement or monitoring of any parameter under any condition of this environmental authority are properly calibrated.	No change
A7	Monitoring and records Except where specified otherwise in another condition of this environmental authority, all monitoring records and reports required by this environmental authority must be kept for a period of not less than five (5) years .	No change
A8	Monitoring and determinations required under any condition of this environmental authority must be conducted by an appropriately qualified person(s).	No change
A9	Management Plans and Reports Unless otherwise specified in another condition of this environmental authority all management plans, reports, programs and documents required under any condition of this environmental authority must be developed by an appropriately qualified person.	No change
A10	Copies of monitoring results, records, registers, management plans, reports, programs, documents and spatial information required by the conditions of this environmental authority must be made available to the administering authority for inspection, or if requested provided to the administering authority within fourteen (14) days or otherwise agreed timeframe.	No change
A11	Within thirty (30) days of receiving comments from the administering authority for a management plan, report or document required under any condition of this environmental authority, the environmental authority holder must amend the management plan, report or document to address the comment(s) and any recommendations.	No change
A12	Notification of emergencies, incidents and exceedances The environmental authority holder must notify the administering authority in writing within twenty-four (24) hours after becoming aware of any emergency or incident that results in the release of contaminants not in	No change

	accordance, or reasonably expected not to be in accordance with the conditions of this environmental authority.	
A13	<p>Within fourteen (14) days following a notification in accordance with condition A12, further written advice must be provided to the administering authority, including the following:</p> <ul style="list-style-type: none"> c) results and interpretation of any samples taken and analysed; d) outcomes of any actions taken at the time to prevent or minimise unlawful environmental harm; and e) proposed actions to prevent a recurrence of the emergency or incident. 	No change
A14	All monitoring results related to the notified emergency or incident must be provided to the administering authority within four (4) weeks after they are received by the environmental authority holder.	No change
A15	<p>Complaints The environmental authority holder must record in a register all complaints received about the mining activities.</p>	No change
A16	<p>The register required by condition A15 must include:</p> <ul style="list-style-type: none"> f) complainant details: <ul style="list-style-type: none"> (i) name; (ii) address; (iii) contact number; and g) time and date of complaint; h) the complainant's observations (statement, photo and/ or video); i) reasons for the complaint; j) investigations undertaken by the holder; k) conclusions formed by the holder; l) actions taken to resolve the complaint by the holder; m) any abatement measures implemented by the holder; and n) the person responsible for resolving the complaint. 	No change
A17	<p>When requested by the administering authority, the environmental authority holder must investigate any complaint that is neither frivolous nor vexatious in the opinion of the administering authority, of nuisance or environmental harm, by:</p> <ul style="list-style-type: none"> o) undertaking monitoring in the timeframes specified by the administering authority; p) completing an analysis and interpretation of the monitoring results; and q) identifying any relevant abatement measures. 	No change
A18	The results of the investigation undertaken in accordance with condition A17 must be reported to the administering authority within thirty (30) days of completion of the monitoring undertaken under condition A17(a) , or an alternative timeframe agreed to by the administering authority.	No change
A19	<p>If the investigation undertaken in accordance with condition A17 indicates environmental harm has been or is likely to be caused, the environmental authority holder must:</p> <ul style="list-style-type: none"> r) address any complaint including the use of dispute resolution if appropriate; and s) immediately implement abatement measures to prevent environmental harm. 	No change

A20	Definitions Words and phrases used throughout this environmental authority are defined in the Definitions section of this environmental authority. Where a definition for a term used in this environmental authority is sought and the term is not defined within this environmental authority, the definitions in the <i>Environmental Protection Act 1994</i> , its Regulations and Environmental Protection Policies are to be used	No change
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Schedule B: Air		
Condition number	Condition	Proposed change to condition
B1	Dust nuisance The release of dust or particulate matter or both, as a result of the mining activity must not cause environmental nuisance at any sensitive or commercial place.	No change
B2	When requested by the administering authority or as a result of a complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the administering authority), dust and particulate monitoring must be undertaken by the environmental authority holder, and the results thereof notified to the administering authority within fourteen (14) days following the completion of monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected dust sensitive place.	No change
B3	Dust and particulate matter must not exceed the following limits when measured by the environmental authority holder at any nuisance sensitive or commercial place: <ul style="list-style-type: none"> a) dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10.1 of 2003 (or more recent editions); and b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, at a sensitive or commercial place downwind of the site, cannot be exceeded more than five (5) times per year, when monitored in accordance with: <ul style="list-style-type: none"> (i) Australian Standard AS 3580.9.6 of 2003 (or more recent editions) Ambient air -Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet -Gravimetric method; or (ii) any alternative method of monitoring PM10 which is permitted by the Air Quality Sampling Manual as published by the administering authority. (iii) any alternative method of monitoring PM10 as set out in the relevant Australian Standard including AS/NZ 3580.9.9:2006 Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM10 low volume sampler – Gravimetric method; AS/NZS 3580.9.6:2003 Methods for sampling and analysis of ambient air – Determination of particulate matter – PM10 high volume sampler with size-selected inlet – Gravimetric method; AS/NZS 3580.9.7:2009 Methods for sampling and analysis of ambient air – Determination of suspended particulate 	No change

Schedule B: Air		
Condition number	Condition	Proposed change to condition
	matter – Dichotomous sampler (PM10, coarse PM and PM2.5) – Gravimetric method; AS/NZS 3580.9.8:2008 Methods for sampling and analysis of ambient air – Method 9.8: Determination of suspended particulate matter – PM10 continuous direct mass method using a tapered element oscillating microbalance analyser, AS/NZS 3580.9.11:2008 Methods for sampling and analysis of ambient air – Method 9.11 Determination of suspended particulate matter – PM10 beta attenuation monitors (or more recent editions).	
B4	If monitoring indicates exceedance of the limits in condition B3 , the environmental authority holder must: <ul style="list-style-type: none"> a) address the complaint including the use of dispute resolution if appropriate; and b) immediately implement dust abatement measures to prevent further complaints and environmental harm. 	No change
B5	Odour The release of noxious or offensive odour(s) or any other noxious or offensive airborne contaminant(s) resulting from the mining activity must not cause an environmental nuisance at any sensitive or commercial place.	No change
B6	When requested by the administering authority, odour monitoring must be undertaken, within the timeframe nominated or agreed to by the administering authority, to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the administering authority) of environmental nuisance at any sensitive or commercial place, and the results must be notified within fourteen (14) days to the administering authority following completion of monitoring.	No change
B7	If the monitoring indicates environmental harm, the environmental authority holder must: <ul style="list-style-type: none"> address the complaint including the use of dispute resolution if appropriate; and immediately implement odour abatement measures to prevent further complaints and environmental harm. 	No change

Schedule C: Water		
Condition number	Conditions	Proposed change to condition
C1	Contaminant Release 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 mining activities, except as permitted under the conditions of this environmental authority.	No change
C2	Unless otherwise permitted under the conditions of this environmental authority, the release of mine affected	No change

water to waters must only occur from the release points specified in **Table C1 – Mine affected water release points, sources and receiving waters** and **Appendix 1** attached to this environmental authority.

Table C1 – Mine affected water release points, sources and receiving waters

Release Point (RP)	Easting (GDA94)	Northing (GDA94)	Mine Affected Water Source and Location	Monitoring Point	Receiving Waters description
RP 1	653731	7401335	Ramp 24 Fill Point Dam, Ramp ¾ Drain, A, B, C, D, E, F and Y Pits	End of pipe	Nogoa River
RP3	651680	7400608	Ramp 24 Fill Point Dam, Ramp ¾ Drain, A, B, C, D, E, F and Y Pits	End of pipe	Nogoa River
C3			The release of mine affected water to internal water management infrastructure is permitted so long as the infrastructure is installed and operated in accordance with the water management plan required by condition C31 .		No change
C4			The release of mine affected water to waters in accordance with condition C2 must not exceed the release limits for each quality characteristic stated in Table C2 – Mine Affected Water Release Limits when measured at the monitoring point specified in Table C1 – Mine affected water release points, sources and receiving waters .		No change

Table C2 – Mine Affected Water Release Limits

Quality Characteristic	Release Limits	Monitoring Frequency
Electrical conductivity (µS/cm)	12,500 (end of pipe)	Real time telemetry for EC and pH with grab samples at commencement and weekly thereafter when safe to do so and access permits.
pH (pH Unit)	6.5 (minimum) 9.0 (maximum)	Daily grab samples if telemetry not available. The first sample must be taken as soon as practicable and within two (2) hours following the commencement of release.
Sulfate (SO ₄ ²⁻) (mg/L)	1,000	Commencement of release and thereafter weekly during release.

		The first sample must be taken as soon as practicable and within two (2) hours following the commencement of release.
Turbidity (NTU)	360	Daily during release (the first sample must be taken within two (2) hours of commencement of release).
C5	<p>The release of mine affected water to waters from the release points must be monitored at the monitoring points specified in Table C1 – Mine affected water release points, sources and receiving waters and Appendix 1 for each quality characteristic and at the monitoring frequency specified in Table C2 – Mine Affected Water Release Limits and Table C3 – Release contaminant trigger investigation levels.</p> <p><i>NOTE: The administering authority will take into consideration any extenuating circumstances prior to determining an appropriate enforcement response in the event condition C4 is contravened due to a temporary lack of safe or practical access. The administering authority expects the environmental authority holder to take all reasonable and practicable measures to maintain safe and practical access to designated monitoring locations.</i></p>	No change

Table C3 – Release contaminant trigger investigation levels

Quality Characteristic	Trigger Levels ¹ (µg/L)	Monitoring Frequency
Aluminium	300	The first sample must be taken as soon as practicable and within two (2) hours following commencement of release and thereafter weekly during release.
Ammonia	900	
Arsenic	13	
Boron	370	
Cadmium	0.2	
Chromium	1.0	
Cobalt	90	
Copper	10	
Fluoride (total)	2000	
Iron	300	

Lead	4
Manganese	1900
Mercury	0.2
Molybdenum	34
Nickel	11
Nitrate	1100
Selenium	10
Silver	1
Sodium	TBA
Petroleum hydrocarbons (C6-C9)	20
Petroleum hydrocarbons (C10-C36)	100
Uranium	20
Vanadium	20
Zinc	20

NOTE:

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

C6

If any trigger levels specified in **Table C3 – Release contaminant trigger investigation levels** are exceeded for any quality characteristic during a release, the environmental authority holder must compare results of the downstream monitoring points (MP5 **Table C5 – Receiving water upstream background sites and downstream monitoring points**) to the trigger levels specified in **Table C3 – Release contaminant trigger investigation levels** and:

No change

- a. where the trigger levels are not exceeded, no further action is to be taken; or
- b. where the results of the downstream monitoring points outlined in **Table C5 – Receiving water upstream background sites and downstream monitoring points** exceed the trigger levels specified in **Table C3 – Release contaminant trigger investigation levels for any quality characteristic**, compare the results of the downstream monitoring points (MP5, **Table C5 – Receiving water upstream background sites and downstream monitoring points**) to the background monitoring data and:
 - i. if the result is less than or equal to the background monitoring site data, then no further action needs to be taken; or
 - ii. if the result is greater than the background monitoring site (MP2, **Table C5 – Receiving water upstream background sites and downstream monitoring points**) data recorded during the release, complete an investigation into the potential for environmental harm and provide a written report to the administering

authority within **ninety (90) days**, outlining:

- (1) details of the investigation 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 **C6 (b) (ii)** of this condition, no further reporting is required for subsequent trigger level exceedances for that release.*

C7	If an exceedance in accordance with condition C6 (b) (ii) is identified, the environmental authority holder must notify the administering authority in writing within twenty-four (24) hours of receiving the result.	No change
C8	Mine Affected Water Release Events The environmental authority holder must ensure a stream flow gauging station/s is installed, operated and maintained that records stream flows at the locations and flow recording frequency specified in Table C4 – Contaminant Release during Flow Events .	No change

Table C4 – Contaminant Release during Flow Events

Locations					Receiving water flow recording frequency	Receiving water flow criteria for discharge (m ³ /s)	Electrical conductivity and Sulfate release limits (µS/cm)
Receiving waters	Release point (RP)	Gauging Station	Gauging Station Easting (GDA94)	Gauging Station Northing (GDA94)			
Nogoa River	RP1	“GS2”	650482	7402403	Continuous real time	>30	Electrical conductivity (µS/cm): ≤12,500 Sulfate (SO₄²⁻) (mg/L): ≤1,000
	RP3	DNRME Gauging Station 130219A Nogoa River at Duck Ponds.					
C9			Notwithstanding any other condition of this environmental authority, the release of mine affected water to waters in accordance with condition C2 must only take place during periods of natural flow events, and in accordance with the receiving water flow criteria for discharge specified in Table C4 – Contaminant Release during Flow Events for the release point(s) specified in Table C1 – Mine affected water release points, sources and receiving waters.				No change
C10			The environmental authority holder is prohibited from releasing mine affected water into releases made from Fairbairn Dam for entitlement holders or environmental flows in accordance with the <i>Water Act 2000, Water Regulation 2002, Water Resource (Fitzroy Basin) Plan 2011</i> or <i>Fitzroy Basin Resource Operations Plan.</i>				No change
C11			The daily quantity of mine affected water released from each release point must be measured and recorded at the monitoring point in Table C1 – Mine affected water release points, sources and receiving waters.				No change
C12			Releases to waters must not cause erosion of the bed and banks of the receiving waters or cause a material build-up of sediment in such waters.				No change

C13	Electrical conductivity (EC) at MP5 must not exceed 850µS/cm at any time during the release influence period.	No change
C14	If EC at MP6 exceeds 650µS/cm during a release event, the environmental authority holder must immediately notify the administering authority and only continue to release mine affected water if the administering authority gives approval.	No change
C15	<p>Notification of Release Event</p> <p>The environmental authority holder must notify the administering authority via WaTERS as soon as practicable and no later than twenty-four (24) hours after commencing a release of mine affected water to the receiving environment. Notification must include the following information:</p> <ul style="list-style-type: none"> a) release commencement date/time; b) details regarding the compliance of the release with the conditions of Schedule C: Water of this environmental authority (that is, contaminant limits, natural flow, discharge volume etc.); c) release point/s; d) release rate; e) release volume (estimated); f) release salinity; and g) details of the receiving water/s including the natural flow rate. 	No change
C16	<p>The environmental authority holder must notify the administering authority via WaTERS as soon as practicable and no later than twenty-four (24) hours after cessation of a release event notified under condition C15. The release cessation notification must include the following information:</p> <ul style="list-style-type: none"> a) release cessation date and time; b) details of the receiving water/s including the natural flow rate; and c) volume of water released. <p><i>NOTE: Successive or intermittent releases occurring within twenty-four (24) hours of the cessation of any individual release can be considered part of a single release event and do</i></p>	No change

	<p><i>not require individual notification for the purpose of compliance with conditions C15, C16 and C17, provided the relevant details of the release are included within the notification provided in accordance with conditions C15, C16 and C17.</i></p>	
C17	<p>Within twenty-eight (28) days of notification under condition C16, the environmental authority holder must provide the administering authority the following information via WaTERS:</p> <ul style="list-style-type: none"> a) confirmation of: b) the release commencement date and time; <ul style="list-style-type: none"> iii. the release cessation date and time; iv. details of the receiving water/s including the natural flow rate; v. volume of water released; vi. all in-situ and laboratory water quality monitoring results; c) details regarding the compliance of the release with the conditions of Schedule C: Water of this environmental authority (i.e. contamination limits, natural flow, discharge volume); d) whether the release resulted in any impacts to the receiving environment; and e) any other matter(s) pertinent to the water release event. 	No change
C18	<p>Notification of Release Event Exceedance If the release limits defined in Table C2 – Mine Affected Water Release Limits are exceeded, the environmental authority holder must notify the administering authority via WaTERS within twenty-four (24) hours of receiving the results.</p>	No change
C19	<p>The environmental authority holder must, within twenty-eight (28) days of a release that is not compliant with the</p>	No change

	<p>conditions of this environmental authority, provide a report to the administering authority via WaTERS detailing:</p> <ol style="list-style-type: none"> the reason for the release; the location of the release; the total volume of the release and which (if any) part of this volume was non-compliant; the total duration of the release and which (if any) part of this period was non-compliant; all water quality monitoring results (including all laboratory analyses); identification of any environmental harm as a result of the non-compliance; all calculations; and any other matters pertinent to the water release event. 	
C20	<p>Release notification – potentially affected stakeholder</p> <p>The environmental authority holder must notify all potential affected stakeholders within two (2) hours of the commencement, or another timeframe as agreed to in writing with the relevant potentially affected stakeholder, of releasing mine affected water to the receiving environment. Notification must be in the form agreed to by the potentially affected stakeholder or at least include the following:</p> <ol style="list-style-type: none"> release commencement date/time; release location (release point/s); release rate; receiving waters for the release; receiving water flow rate; water quality of the release including salinity and pH; and estimated duration of the release. 	No change
C21	<p>Receiving environment monitoring and contaminant trigger levels</p> <p>The quality of the receiving waters must be monitored at the monitoring points specified in Table C5 – Receiving water upstream background sites and downstream monitoring points for each quality characteristic and at the monitoring frequency stated in Table C6</p>	No change

– Receiving water contaminant trigger levels.

Table C5 – Receiving water upstream background sites and downstream monitoring points

Monitoring Points	Receiving Waters Location Description	Easting (GDA94)	Northing (GDA94)
<i>Upstream background monitoring point</i>			
MP2	Nogoa River at Duckponds (130219A)	650482	7402403
<i>Downstream monitoring points</i>			
MP5	Nogoa River at Ensham Lease Boundary	654688	7400679
MP6	Mackenzie River at Riley's Crossing (130113A)	663861	7395396
C22	<p>If quality characteristics of the receiving water at the downstream monitoring points exceed any of the trigger levels for pH, suspended solids or Sulfate specified in Table C6 – Receiving water 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:</p> <ul style="list-style-type: none"> a) where the downstream result is the same or a lower value than the upstream value for the quality characteristic then no further action needs 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 via WaTERS by 1 March each year, outlining: <ul style="list-style-type: none"> (i) details of the investigations carried out; and (ii) actions taken to prevent environmental harm. <p><i>NOTE: Where an exceedance of a trigger level has occurred and is being investigated, in accordance with condition C22 (b) of this condition, no</i></p>	No change	

further reporting is required for subsequent trigger events for that quality characteristic.

Table C6 – Receiving water contaminant trigger levels

Quality Characteristic	Contaminant Trigger Levels	Monitoring Frequency	Comments
Electrical conductivity ($\mu\text{S/cm}$)	Cease Release: >850 (MP5) Approval Trigger 650 (MP6)	Real time telemetry. Daily grab samples if telemetry not available (the first sample must be taken as soon as practicable).	Grab samples shall be taken only when safe to do so and access permits. Refer to condition C13 and C14.
pH (pH Unit)	6.5 (minimum) (MP5) 9.0 (maximum) (MP5)		
Suspended solids (mg/L)	1,000 (MP5)	Grab samples at commencement and weekly thereafter.	
Sulfate (SO_4^{2-}) (mg/L)	250 (MP5)		
C23	<p>Receiving Environment Monitoring Program (REMP) The environmental authority holder must maintain and implement a Receiving Environment Monitoring Program (REMP) to monitor, identify and describe any adverse impacts to surface water environmental values, quality and flows as a result of the mining activities. The REMP must provide for monitoring of the receiving environment periodically (under natural flow conditions) and while mine affected water is being released.</p>		No change
C24	<p>For the purposes of the REMP, the only receiving environment is the waters of the Nogoia River, downstream of Ensham Coal Mine to Riley's Crossing of the Mackenzie River and downstream of the Comet River junction (the area of the REMP). The REMP must encompass any sensitive receiving waters or environmental values within the area of the REMP that will potentially be directly affected by an authorised release of mine affected water.</p>		No change
C25	<p>The REMP must:</p> <p>a) assess the condition or state of receiving waters, including upstream conditions, spatially within the REMP area, considering background water quality</p>		No change

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- characteristics based on accurate and reliable monitoring data that takes into consideration temporal variation (e.g. seasonality);
- b) be designed to facilitate assessment against water quality objectives for the relevant environmental values that need to be protected;
 - c) include monitoring from background reference sites (e.g. upstream or background) and downstream sites from the release (as a minimum, the locations specified in **Table C5 – Receiving water upstream background sites and downstream monitoring points**);
 - d) specify the frequency and timing of sampling required in order to reliably assess ambient conditions and to provide sufficient data to derive site specific background reference values in accordance with the Queensland Water Quality Guidelines 2006. This should include monitoring during periods of natural flow irrespective of mine or other discharges;
 - e) include monitoring and assessment of dissolved oxygen saturation, temperature and all water quality parameters listed in **Table C2 – Mine Affected Water Release Limits** and **Table C3 – Release contaminant trigger investigation levels**;
 - f) include, where appropriate, monitoring of metals/metalloids in sediments (in accordance with ANZG 2018, BATLEY and/or the most recent version of AS5667.1 Guidance on Sampling of Bottom Sediments);
 - g) include, where appropriate, monitoring of macroinvertebrates in accordance with the Australian River Assessment System (AusRivas) methodology;
 - h) apply procedures and/or guidelines from Australian and New Zealand Guidelines for Fresh and Marine
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	<p>Water Quality (ANZG 2018) and other relevant guideline documents;</p> <ul style="list-style-type: none"> i) describe sampling and analysis methods and quality assurance and control; and j) incorporate stream flow and hydrological information in the interpretations of water quality and biological data. 	
C26	<p>A report on the REMP must be prepared annually and made available on request to the administering authority. The report must include all monitoring results, an assessment of background reference water quality, the condition of downstream water quality compared against water quality objectives, and analysis on the suitability of current release limits to protect downstream environmental values.</p>	No change
C27	<p>Water reuse Mine affected water may be piped or trucked or transferred by some other means that does not contravene the conditions of this environmental authority and deposited into artificial water storage structures, such as farm dams or tanks, or used directly at properties owned by the environmental authority holder or a third party for the purpose of:</p> <ul style="list-style-type: none"> a) supplying stock water only where there is compliance with the release limits specified in Table C7 – Stock Water Release Limits; or b) supplying irrigation water only where there is compliance with the release limits specified in Table C8 – Irrigation Release Limits. 	No change

Table C7 – Stock Water Release Limits

Quality Characteristic	Units	Minimum	Maximum
pH	pH units	6.5	8.5
Electrical Conductivity	µS/cm	0	5000

Table C8 – Irrigation Release Limits

Quality Characteristic	Units	Minimum	Maximum
pH	pH units	6.5	8.5
Electrical Conductivity	µS/cm	0	Site specific value determined in accordance with ANZECC & ARMCANZ (2000) Irrigation Guidelines

C28	Mine affected water may be piped, trucked or transferred by some other means that does not contravene the conditions of this environmental authority and deposited into artificial water storage structures, such as farm dams or tanks, for the purpose of supplying water to any operation licensed for either ERA13 (mining black coal) or ERA31 (mineral processing). The volume, pH and electrical conductivity of water transferred must be monitored and recorded.	No change
C29	If mine affected water is given or transferred to another person in accordance with conditions C27 or C28 , the transfer must be in accordance with a written agreement (the third party agreement) that: includes a commitment from the transferee to use it in such a way so as to prevent environmental harm or public health incidents; a) reflects the General Environmental Duty (GED) under section 319 of the Environmental Protection Act 1994, environmental sustainability of the water disposal and protection of environmental values of waters; and b) is signed by both parties to the agreement.	No change

C30	<p>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 via WaTERS in the specified format by 1 March each year:</p> <ul style="list-style-type: none"> a) the date on which the sample was taken; b) the time at which the sample was taken; c) the location or monitoring point at which the sample was taken; d) the measured or estimated daily quantity of the contaminants 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 with the conditions of this environmental authority; and g) water quality monitoring data where required by the environmental authority (release, receiving environment, REMP, water storages, sewage treatment plants and groundwater) must be provided to the administering authority in the specified electronic format via WaTERS. 	No change
C31	<p>Water Management Plan A Water Management Plan must be developed by an appropriately qualified person and implemented at all times that mining activities are being carried out.</p>	No change
C32	<p>The release of any contaminants as permitted by this environmental authority, directly or indirectly to waters, other than in accordance with condition C31 must not result in any:</p> <ul style="list-style-type: none"> a) visible discolouration of receiving waters; and b) slick or other visible or odorous evidence of oil, grease or petrochemicals nor contain visible floating oil, grease, scum, litter or other objectionable matter. 	No change

C33	<p>Saline and acid rock drainage The environmental authority holder must ensure proper and effective measures are taken to avoid, or otherwise minimise, the generation and/or release of:</p> <ul style="list-style-type: none"> (a) saline drainage; (b) acid rock drainage. 	No change
C34	<p>Stormwater and water sediment controls An Erosion and Sediment Control Plan must be developed by an appropriately qualified person and implemented for all stages of the mining activities on the site to minimise erosion and the release of sediment to receiving waters and contamination of stormwater.</p>	No change
C35	<p>Stormwater, other than mine affected water, is permitted to be released to waters from:</p> <ul style="list-style-type: none"> a) erosion and sediment control structures that are installed and operated in accordance with the Erosion and Sediment Control Plan required by condition C34; and b) water management infrastructure that is installed and operated, in accordance with a Water Management Plan and that complies with condition C31, for the purpose of ensuring water does not become mine affected water. 	No change
C36	<p>The maintenance and cleaning of any vehicles, plant or equipment must not be carried out in areas from which contaminants can be released into any receiving waters.</p>	No change
C37	<p>Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable to minimise the release of wastes, contaminants or materials to any stormwater drainage system or receiving waters</p>	No change

C38	Sewage effluent Sewage effluent used for dust suppression or irrigation must not exceed the release limits in Table C9 – Sewage effluent quality standards.	No change
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Table C9 – Sewage effluent quality standards

Quality	Release limit	Units	Limit type	Monitoring frequency
5 Day BOD	20	mg/L	max	On release
pH	6 - 8		range	On release
Free Chlorine residuals	1.0	mg/L	max	On release
Faecal coliforms (based on the average of a minimum of 5 samples)	1,000	Colonies per 100ml	max	On release

C39	Groundwater Mining activities (including rehabilitation activities) must not adversely impact the groundwater receiving environment unless otherwise authorised under this environmental authority.	No change
C40	Groundwater must be monitored quarterly at all monitoring points specified in Table C10 – Quarterly groundwater monitoring requirements and location.	Changed – Table 10 to be modified to include new bores

Proposed Condition C40 Revision to Table 10 **Proposed Condition C40 Revision to Table 10 and shown on Figure 27-2.** **Additions to Table 10**

Location Description	Monitoring point	Monitoring required	Easting (GDA 94 Z55)	Northing (GDA 94 Z55)	Target Aquifer	Standing water level
Nogoa River Alluvium	RB7a	Water level and water quality	647740	7407172	Alluvium	TBD
	RB7b	Water level and water quality	647737	7407177	Alluvium	TBD
	2(alluvium)	Water level and water quality	647286	7405130	Alluvium	TBD
	3(alluvium)	Water level and water quality	643975	7404405	Alluvium	TBD

Regional Bores (Private Property)	4(coal)	Water level and water quality	639170	7406360	A2C Seam	TBD
C41		Groundwater drawdown fluctuations of greater than 2m from the standing water levels specified in Table C10 – Quarterly groundwater monitoring requirements and location not resulting from the pumping of licensed bores, must be notified to the administering authority via WaTERS within twenty eight (28) days following detection of drawdown.				Changed
C41		<p><u>Proposed Interim Condition</u></p> <p>Groundwater drawdown fluctuations of greater than 2m from the standing water levels specified in Table C10 – Quarterly groundwater monitoring requirements and location - not resulting from the pumping of licensed bores, must be notified to the administering authority via WaTERS within twenty eight (28) days following detection of drawdown.</p> <p><i>Groundwater level thresholds will be developed after two years of monitoring of the new monitoring bores, taking into consideration natural fluctuation, mine dewatering data, and model predictions.</i></p>				Revised version
C42		<p>The environmental authority holder must notify the administering authority within 28 days via WaTERS of receiving any monitoring result that shows an exceedance of any limit for any quality characteristic specified in Table C11 – Groundwater quality limits.</p> <p>For condition C42, an exceedance is when a limit for any quality characteristic specified in Table C11 – Groundwater quality limits is exceeded on any three (3) consecutive sampling occasions.</p>				Changed
C43		<p>Within fourteen (14) days of the notification given under condition C41 or C42, the environmental authority holder must commence an investigation to determine if the exceedance is a result of:</p> <ul style="list-style-type: none"> a) the mining activities including rehabilitation activities; b) seasonal / natural variation; c) neighbouring land use resulting in groundwater impacts; 				No change

	<ul style="list-style-type: none"> d) any other potential cause of exceedance; or e) an investigation is only required if the mining affected drawdown fluctuations reported in C41 are outside of modelled values; f) any combination of (a) to (d) the above. 	
C44	The investigation required by condition C43 must be completed and submitted to the administering authority via WaTERS within three (3) months of notification under condition C41 or C42 .	No change
C45	If the investigation under condition C43 determines that the exceedance was a result of the mining activities, including rehabilitation, in accordance with condition C43(a) or a combination that includes condition C43(a) then a further investigation must be undertaken by the environmental authority holder to establish whether environmental harm has occurred, and the extent thereof.	No change
C46	<p>Within one (1) month of the investigation under C45, the environmental authority holder must have:</p> <ul style="list-style-type: none"> a) implemented short-term measures to mitigate the potential for environmental harm; b) developed long-term mitigation measures to address any existing groundwater contamination; and c) if environmental harm has occurred as a result of groundwater drawdown exceedances, the environmental authority holder must: <ul style="list-style-type: none"> d) determine any actions required to reduce the potential for environmental harm; and e) determine any mitigation measures required to limit the drawdown in the affected groundwater resource. 	No change
C47	<p>Groundwater Management and Monitoring Program</p> <p>A Groundwater Management and Monitoring Program must be developed and implemented at all times mining activities, including</p>	No change

rehabilitation, are being carried out to meet the following requirements:

- a) identifies all potential sources of contamination to groundwater from mining activities and rehabilitated areas;
 - b) provides a hydrogeological conceptual groundwater model that details the interactions and direction of flow between the Permian coal measures, the Triassic Rewan Group, the Quaternary alluvial aquifers and the Nogoia River system including its tributaries within a 5km radius of the residual voids;
 - c) identifies all environmental values (including the Nogoia River) that must be protected;
 - d) details groundwater levels in all identified aquifers present across and adjacent to the site to confirm existing groundwater flow paths;
 - e) estimates the groundwater inflow to any rehabilitated landforms and surface water ingress to groundwater from flooding events in the form of a groundwater model;
 - f) details a water balance model;
 - g) ensures all potential adverse groundwater impacts due to mining and rehabilitation activities are identified, monitored and mitigated;
 - h) ensures groundwater monitoring and data analysis is undertaken to:
 - (i) detect any impacts to groundwater levels due to mining and rehabilitation activities;
-

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- (ii) detect any impacts to groundwater quality due to mining and rehabilitation activities;
 - (iii) determine compliance with condition C39; and
 - (iv) determine trends in groundwater quality;
 - i) provides an appropriate quality assurance and quality control program;
 - j) documents groundwater management and monitoring methodologies undertaken for the duration of all mining activities and rehabilitation activities; and
 - k) includes a review process to identify improvements to the program that includes addressing any comments provided by the administering authority.

 C48

The Groundwater Management and Monitoring Program required by condition **C47** must be updated by **30 November 2023** to incorporate data collected from the Residual Void monitoring bores as detailed in **Table C10 – Quarterly groundwater monitoring requirements and locations**. The update must:

No change

- l) include limits calculated in accordance with the Guideline: Using monitoring data to assess groundwater quality and potential environmental impacts;
 - m) be based on a statistically robust dataset; and
-

	include a minimum of 18 samples taken over twenty-four (24) months .	
C49	The Groundwater Management and Monitoring Program required by condition C47 must be reviewed at least every two (2) years by an appropriately qualified person to determine if it continues to meet the requirements stated in condition C47.	No change
C50	The following information must be recorded in relation to all groundwater water sampling: a) the date on which the sample was taken; b) the time at which the sample was taken; c) the monitoring point at which the sample was taken; and d) the results of all monitoring.	No change

Table C10 – Quarterly groundwater monitoring requirements and locations

Location Description	Monitoring Bore	Monitoring Required	Latitude	Longitude	Aquifer Type	Standing Water Levels (mAHD)
Nogoa River Alluvium	EC01	Water level and quality	-23.47564	148.46894	Alluvium	143.63
	EC03	Water level and quality	-23.48024	148.47213		143.18
	EC07	Water level and quality	-23.48741	148.47842		141.39
	EC09A	Water level and quality	-23.48956	148.48218		140.33
	EC11	Water level and quality	-23.49236	148.4838		139.54
	EC13	Water level and quality	-23.49612	148.48385		138.95
	EC14	Water level and quality	-23.49721	148.48542		138.76
	GW01	Water level and quality	-23.49908	148.50755		139.50

Residual Void Bores*	WSMB2S- Down gradient of Pit A South	Water level and quality	-23.52475	148.46012	TBD	TBD
	WSMB2D- Down gradient of Pit A South	Water level and quality	-23.52475	148.46012	TBD	TBD
	WSMB3S- Down gradient of Pit A South	Water level and quality	-23.53588	148.44814	TBD	TBD
	WSMB3D- Down gradient of Pit A South	Water level and quality	-23.53588	148.44814	TBD	TBD
	P2- Down gradient of Pit B	Water level and quality	-23.51530	148.49249	Alluvium	TBD
	P3- Located between Pit D and the Nogoia River	Water level and quality	-23.45638	148.46698	Alluvium	TBD
	P4- Located between Pit C and the Nogoia River	Water level and quality	-23.49248	148.51735	Alluvium	TBD
	P5 (GW02) - Located down gradient of Pit C and Pit D, adjacent to Nogoia River	Water level and quality	-23.48097	148.47860	Alluvium	TBD
	P6 - Down gradient of Pit Y between Pit and RB2	Water level and quality	-23.39889	148.49623	Permian	TBD
Regional Bores (Private Property)	Fairhills (RN89380)	Water level	-23.35005	148.55243	Burngrove Formation	213.75
	Yongala (RN89383)	Water level	-23.36085	148.5417	Burngrove Formation	213.47
	Karanga (Bore A)	Water level	-23.60897	148.46087	Coal Measures	133.15
	Winton Creek (Bore 4)	Water level	-23.49707	148.39822	Rewan Formation	137.76
	Twin Bore (Bore 5)	Water level	-23.4899	148.38392	Alluvium	153.25
	Jamar Bore (Bore 7)	Water level	-23.51226	148.39107	Rewan Formation	115.02
	Railway (RN90140)	Water level	-23.38936	148.60078	Fairhills Formation	162.61
Regional Bores (Ensham Mine)	RB01	Water level and quality	-23.38737	148.46797	Coal seams	146.24
	RB02	Water level and quality	-23.40987	148.44638		135.29
	RB03	Water level and quality	-23.48269	148.42481		136.42
	RB04	Water level and quality	-23.51356	148.39852		136.06

RB05	Water level and quality	-23.54595	148.43241	137.21
RB06	Water level and quality	-23.5741	148.45845	139.44

*Locations to be updated in accordance with the update of the Groundwater Monitoring and Management Plan required by 30 November 2023 in accordance with condition C48.

Table C11 – Groundwater quality limits

Location	Quality Characteristic	pH	Electrical Conductivity	Sulfate	Iron	Arsenic	Aluminium	Molybdenum	Selenium	*TRH C6 – C10	*TRH C10-C40	Major ions
			Maximum	Maximum	Maximum	Maximum	Maximum	Maximum	Maximum	Maximum	Maximum	Interpretation Only N/A
			(µS/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(µg/L)	(µg/L)	
EC01		6.5 – 8.5 ^A	20,000 ^D	650 ^D	0.7 ^C	0.013 ^C	0.055 ^C	0.034 ^C	0.005 ^C	≤20	≤100	Bicarbonate, sodium, carbonate, calcium, chloride, potassium, magnesium.
EC03			20,000 ^D	650 ^D	1 ^D	0.013 ^C						
EC07			30,100 ^D	826 ^B	3.5 ^D	0.024 ^B						
EC09A			20,000 ^D	650 ^D	0.7 ^C	0.013 ^C						
EC11			20,000 ^D	650 ^D	20.7 ^B	0.013 ^C						
EC13			20,800 ^D	650 ^D	3 ^D	0.013 ^C						
EC14			1,621 ^B	27 ^B	1.4 ^B	0.013 ^C						
GW01			6,426 ^B	328 ^B	0.7 ^C	0.013 ^C						
RB1			3818 ^B	25 ^A	0.7 ^C	0.013 ^C						
RB2			11626 ^B	25 ^A	0.7 ^C	0.013 ^C						
RB3			10600 ^B	25 ^A	0.7 ^C	0.013 ^C						
RB4			8070 ^B	25 ^A	0.7 ^C	0.013 ^C						
RB5			7450 ^B	25 ^A	0.7 ^C	0.013 ^C						
RB6			7730 ^B	157 ^B	1.3 ^B	0.013 ^C						
WSMB2S, WSMB2D, WSMB3S, WSMB3D, P2, P3, P4, P5, P6.			1,606 ^{B,E}	27 ^{B,E}	0.7 ^{C,E}	0.013 ^{C,E}						

C51	The environmental authority holder must provide an equivalent (in quality and quantity), alternative water supply to the owner of the privately owned bore/s in Table C10 – Groundwater monitoring locations and frequency , where adverse impacts are caused by the mining activities.	No change
C52	<p>Groundwater Management and Monitoring Program Report</p> <p>The environmental authority holder must:</p> <ul style="list-style-type: none"> a) complete a Groundwater Management and Monitoring Program Report every two years which outlines how the program meets the requirements specified in condition C47; b) submit the Groundwater Management and Monitoring Program Report to the administering authority via WaTERS by 1 March of 2024, and subsequently every second year thereafter; and submit all groundwater monitoring data from January to December of the previous calendar year to the administering authority via WaTERS by 1 March of each calendar year. 	No change
C53	<p>The Groundwater Management and Monitoring Program Report required by condition C52 must include:</p> <ul style="list-style-type: none"> a) the standing water level of all groundwater bores within Table C10 – Quarterly groundwater monitoring requirements and location; b) an assessment of long-term water quality and water level trends at all groundwater bores in Table C11 – Quarterly groundwater monitoring requirements and location; c) maps showing the actual water level drawdown contours caused by the take of associated water for each groundwater aquifer; d) details of any review undertaken of the numerical groundwater model and conceptual model; e) an assessment of any differences between the groundwater level impact predicted and actual impacts for corresponding periods in the most current numerical groundwater model; f) details of any bores which are predicted by the most current numerical groundwater model to be located within the depressurisation zone; and g) an investigation into any interconnection and direction of flow between the alluvial aquifer and the Permian coal measures, including any recharge. 	No change

C54	<p>Residual Voids Groundwater Monitoring Bore Investigation The environmental authority holder must complete an investigation which:</p> <ul style="list-style-type: none"> a) determines any groundwater aquifers which could be impacted by mining activities and the rehabilitation activities specified in Appendix 3; b) proposes a network of groundwater bores to detect changes, impacts and long term threats on groundwater aquifers potentially affected by the mining activities and the rehabilitation activities specified in Appendix 3; and <p>at a minimum, includes the residual void bores at the locations in Table C10 – Quarterly groundwater monitoring requirements and location.</p>	No change
C55	<p>A report documenting the outcomes of the investigation required by condition C54 must be provided to the administering authority via WaTERS by 26 February 2021 and must include at a minimum:</p> <ul style="list-style-type: none"> a) the location of the proposed groundwater bores to detect potential impacts from the mining and rehabilitation activities; b) the target groundwater aquifer for each of the proposed groundwater bores; c) the conceptual model used to determine the location of groundwater bores; d) the methodology used to determine an appropriate number of groundwater bores to be installed; e) a schedule for the construction and commissioning of the groundwater bores; f) how impacts to prescribed environmental matters will be avoided as a result of the disturbance associated with the installation of the proposed bores; and standing water level for each of the groundwater bores. 	No change
C56	<p>The following residual voids must act as groundwater sinks to the receiving groundwater environment into perpetuity:</p> <ul style="list-style-type: none"> a) A Central pit; b) A North pit; c) B pit; d) C pit; and e) D pit. 	No change
C57	<p>Should any monitoring or modelling required under this environmental authority show that any of the Groundwater Daylighting Water Areas specified in condition C56 and Appendix 3 do not act as groundwater sinks, or are likely to not act as groundwater sinks, then the environmental authority holder must:</p>	No change

	<ul style="list-style-type: none"> a) undertake an investigation to determine the necessary actions to ensure that no contamination of groundwater aquifers occurs; b) provide the investigation report to the administering authority and reach agreement with the administering authority on the corrective actions; and c) implement the agreed corrective actions 	
C58	<p>Bore construction, maintenance and decommissioning The construction, maintenance, management and decommissioning of groundwater bores (including groundwater monitoring bores) identified in the Groundwater Management and Monitoring Program Report must be undertaken in a manner that prevents or minimises impacts to the receiving environment and ensures the integrity of the bores to obtain accurate monitoring.</p>	No change

Schedule D: Dams and Levee

Condition number	Condition	Proposed change to condition
D1	<p>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 (ESR/2016/1933) at the following times:</p> <ul style="list-style-type: none"> a) prior to the design and construction of the structure, if it is not an existing structure; or <p>prior to any change in its purpose or the nature of its stored contents.</p>	No change
D2	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.	No change
D3	Certification must be provided by the suitably qualified and experienced person who undertook the assessment, in the form set out in the Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933).	No change
D4	Design and construction ¹ of a regulated structure (conditions D5 to D9 inclusive) do not apply to existing structures.	No change
	<i>Note:¹ Construction of a dam includes modification of an existing dam – refer to the definitions.</i>	
D5	All regulated structures must be designed by, and constructed ² under the supervision of, a suitably qualified and experienced person in accordance with the requirements of the Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933).	No change
	<i>Note:² Certification of design and construction may be undertaken by different persons.</i>	

Schedule D: Dams and Levee		
Condition number	Condition	Proposed change to condition
D6	Construction of a regulated structure is prohibited unless the holder has submitted a consequence category assessment report and certification to the administering authority which has been certified by a suitably qualified and experienced person for the design and design plan and the associated operating procedures in compliance with the relevant condition of this authority.	No change
D7	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 Regulated Dams/Levees register.	No change
D8	Regulated structures must: <ul style="list-style-type: none"> a) be designed and constructed in accordance with and conform to the requirements of the Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933); b) be designed and constructed to ensure the design is not be compromised by: <ul style="list-style-type: none"> i. floodwaters entering the regulated dam from any watercourse or drainage line; and ii. wall failure due to erosion by floodwaters arising from any watercourse or drainage line. iii. 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. 	No change
D9	Certification by the suitably qualified and experienced person who supervises the construction of a register must be submitted to the administering authority on the completion of construction of the regulated structure, and certify that: <ul style="list-style-type: none"> (a) the 'as constructed' drawings and specifications meet the original intent of the design plan for that regulated structure; construction of the regulated structure is in accordance with the design plan.	No change
D10	Operation of a regulated structure Operation of a regulated structure, except for an existing structure, is prohibited unless: <ul style="list-style-type: none"> c) the holder has submitted to the administering authority: <ul style="list-style-type: none"> i. an electronic copy of the design plan and certification of the 'design plan' in accordance with condition D6, and 	No change

Schedule D: Dams and Levee		
Condition number	Condition	Proposed change to condition
	ii. the 'as constructed' drawings and specifications certified in accordance with condition D9 , and iii. where the regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the DSA volume across the system, a copy of the certified system design plan. iv. the requirements of this authority relating to the construction of the regulated structure have been met; v. the environmental authority holder has entered the details required under this authority, into a register of regulated structures; and there is a current operational plan for the regulated structures.	
D11	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 twelve (12) months of the commencement of this condition a copy of the certified system design plan including that structure; and there must be a current operational plan in place.	No change
D12	Each regulated structure must be maintained and operated, for the duration of its operational life until decommissioned and rehabilitated, in a manner that is consistent with the current operational plan and, if applicable, the current design plan and associated certified 'as constructed' drawings.	No change
D13	Mandatory reporting level Conditions D14 to D17 inclusive only apply to Regulated Structures which have not been certified as low consequence category for 'failure to contain – overtopping'.	No change
D14	The Mandatory Reporting Level (the MRL) must be marked on a regulated dam in such a way that during routine inspections of that dam, it is clearly observable.	No change
D15	The environmental authority holder must, as soon as practical and within forty-eight (48) hours of becoming aware, notify the administering authority when the level of the contents of a regulated dam reaches the MRL	No change
D16	The environmental authority holder must, immediately on becoming aware that the MRL has been reached, act to prevent the occurrence of any unauthorised release from the regulated dam.	No change
D17	The environmental authority holder must record any changes to the MRL in the Register of Regulated Structures.	No change

Schedule D: Dams and Levee		
Condition number	Condition	Proposed change to condition
D18	<p>Design storage allowance</p> <p>The environmental authority 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</p>	No change
D19	<p>By 1 November of each year, storage capacity must be available in each regulated dam (or network of linked containment systems with a shared DSA volume), to meet the Design Storage Allowance (DSA) volume for the dam (or network of linked containment systems).</p>	No change
D20	<p>The environmental authority holder must, as soon as practicable and within forty-eight (48) hours of becoming aware that the regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on 1 November of any year, notify the administering authority.</p>	No change
D21	<p>The environmental authority holder must, immediately on becoming aware that a regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on 1 November of any year, act to prevent the occurrence of any unauthorised release from the regulated dam or linked containment systems.</p>	
D22	<p>Annual inspection report</p> <p>Each regulated structure must be inspected each calendar year by a suitably qualified and experienced person.</p>	No change
D23	<p>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 recommended actions to ensure the integrity of the regulated structure.</p>	No change
D24	<p>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).</p>	No change
D25	<p>The environmental authority holder must:</p> <ol style="list-style-type: none"> a) within twenty (20) business days of receipt of the annual inspection report, provide to the administering authority: <ol style="list-style-type: none"> i. the recommendations section of the annual inspection report; and ii. if applicable, any actions being taken in response to those recommendations; and iii. if, following receipt of the recommendations and (if applicable) actions, the administering authority requests a 	No change

Schedule D: Dams and Levee		
Condition number	Condition	Proposed change to condition
	full copy of the annual inspection report from the environmental authority holder, provide this to the administering authority within ten (10) business days of receipt of the request.	
D26	<p>Transfer arrangements</p> <p>The holder must provide a copy of any reports, documentation and certifications prepared under this authority, including but not limited to any Register of Regulated Structures, consequence assessment, design plan and other supporting documentation, to a new holder on transfer of this authority.</p>	No change
D27	<p>Register of regulated structures</p> <p>A Register of Regulated Structures must be established and maintained by the environmental authority holder for each regulated dam</p>	No change
D28	The environmental authority 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.	No change
D29	The environmental authority holder must enter the required information in the Register of Regulated Structures once compliance with conditions D10 and D11 has been achieved.	No change
D30	The environmental authority holder must ensure that the information contained in the Register of Regulated Structures is current and complete.	No change
D31	All entries in the Register of Regulated Structures must be approved by the chief executive officer for the environmental authority holder, or their delegate, as being accurate and correct.	No change
D32	The environmental authority holder must, by 1 March each year, supply to the administering authority a copy of the records contained in the Register of Regulated Structures, in the format required by the administering authority.	No change
D33	<p>Transitional arrangements</p> <p>All existing structures that have not been assessed in accordance with either the Manual or the former Manual for Assessing Hazard Categories and Hydraulic Performance of Dams must be assessed and certified in accordance with the Manual within six (6) months of amendment of the authority adopting this schedule.</p>	No change
D34	All existing structures must subsequently comply with the timetable for any further assessments in accordance with the Manual specified in Table D34 – Transitional hydraulic performance requirements for existing structures , depending on the consequence category for each existing structure assessed in the most recent certification for that structure.	No change

Schedule D: Dams and Levee			
Condition number	Condition		Proposed change to condition
Table D34 – Transitional hydraulic performance requirements for existing structures			
Transition period required for existing structures to achieve the requirements of the Manual for Assessing Consequence Categories and Hydraulic Performance of Dams			
Compliance with criteria	High	Significant	Low
>90% and a history of good compliance performance in last 5 years	No transition required	No transition required	No transitional conditions apply. Review consequence assessment every 7 years.
>70% - ≤90%	Within 7 years, unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Within 20 years, unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	No transitional conditions apply. Review consequence assessment every 7 years.
>50-≤70%	Within 5 years, unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Within 7 years, unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Review consequence assessment every 7 years.
≤50%	Within 5 years or as per Compliance requirements (e.g. TEP timing)	Within 5 years or as per compliance requirements (e.g. TEP timing)	Review consequence assessment every 5 years.
D35	Table D34 – Transitional hydraulic performance requirements for existing structures ceases to apply for a structure once any of the following events has occurred: it has been brought into compliance with the hydraulic performance criteria applicable to the a) structure under the Manual; or b) it has been decommissioned; or it has been certified as no longer being assessed as a regulated structure.		No change
D36	Certification of the transitional assessment required by conditions D33 and D34 (as applicable) must be provided to the administering authority within six (6) months of amendment of the authority adopting this schedule.		No change
D37	Flood Protection Levees		No change

Schedule D: Dams and Levee		
Condition number	Condition	Proposed change to condition
	Design requirements for the levee and adjacent mining excavation must meet the following: a) the design level of the levee crest must be at least one (1) metre above the estimated 1 in 1,000 ARI flood event for the adjacent watercourses; and b) mining excavation slopes adjacent to the levee must remain stable and are to be designed with a factor of safety of one point five (1.5) (calculated from the levee toe) or above based on an accepted stability analysis.	
D38	Design requirements for the levee and adjacent mining excavation must: a) not result in increased erosion of the bank or bed of the Nogoia River; b) not significantly impact upon riparian or existing remnant vegetation; and not erode during any flood events up to any 1 in 1,000 ARI event.	No change
D39	As part of the authorised rehabilitation activities required by Schedule H: Rehabilitation and Appendix 3, the flood protection levee must be optimised to widen the floodplain from 1.4km to 2km between the northern section of B Pit and the southern section of C Pit as detailed in Appendix 4 . The design and construction of the flood protection landform alignment must ensure the requirements of condition D38 are maintained and are supported by relevant hydrology, geomorphology, landform, geotechnical and risk management assessment studies.	No change

Schedule E: Acoustic		
Condition number	Condition	Proposed change to condition
E1	Noise nuisance Noise from mining activities must not cause an environmental nuisance at any sensitive receptor or commercial place.	No change
E2	Noise from mining activities must not exceed the levels for the time periods specified in Table E2 – Noise limits at any sensitive or commercial place.	No change

Table E2 – Noise limits

Noise Level dB(A)	7am – 6pm	6pm – 10pm	10pm – 7am
<i>Noise measured at a 'Noise sensitive place'</i>			

Schedule E: Acoustic			
Condition number	Condition		Proposed change to condition
L _A 10, adj, 10 mins	B/g + 5	B/g + 5	B/g + 3
L _A 1, adj, 10 mins	N/A	N/A	B/g + 8
<i>Noise measured at a 'Commercial place'</i>			
L _A 10, adj, 10 mins	B/g + 10	B/g + 10	B/g + 5
<i>Notes:</i>			
<i>B/g = background noise level (L_{A90, adj, 15 mins}) measured over 3-5 days at the nearest sensitive receptor</i>			
E3	Noise monitoring When requested by the administering authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within fourteen (14) days to the administering authority. Monitoring must include: <ul style="list-style-type: none"> a) L_A 10, adj, 10 mins b) L_A 1, adj, 10 mins c) the level and frequency of occurrence of impulsive or tonal noise; d) atmospheric conditions including wind speed and direction; e) effects due to extraneous factors such as traffic noise; and location date and time of recording.		No change
E4	Noise is not considered to be a nuisance under condition E1 if monitoring shows that noise does not exceed the levels in the time periods specified in Table E2 – Noise limits .		No change
E5	The method of measurement and reporting of noise monitoring must comply with the current edition of the administering authority's Noise Measurement Manual (ESR/2016/2195).		No change
E6	If monitoring indicates exceedance of the limits in Table E2 – Noise limits , the environmental authority holder must: <ul style="list-style-type: none"> a) address the complaint including the use of appropriate dispute resolution if required; and immediately implement noise abatement measures so that emissions of noise from the mining activities does not result in further environmental nuisance.		No change
E7	Vibration nuisance Vibration from the licensed activities must not cause an environmental nuisance at any sensitive or commercial place.		No change
E8	When requested by the administering authority, vibration monitoring must be undertaken within the timeframe nominated or agreed to by the administering authority, to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the administering authority) of environmental nuisance at any sensitive or commercial place, and the results must be notified within fourteen		No change

Schedule E: Acoustic		
Condition number	Condition	Proposed change to condition
	(14) days to the administering authority following completion of monitoring.	
E9	If the environmental authority holder can provide monitoring that the limits in Table E9 – Vibration limits are not being exceeded, the environmental authority holder is not in breach of condition E7 . Monitoring must include: <ol style="list-style-type: none"> location of the blast(s) within the mining area (including which bench level); and atmospheric conditions including temperature, relative humidity and wind speed and direction; and location, date and time of recording. 	No change

Table E9 – Vibration limits

Location	Vibration measured	
Sensitive or commercial place	5 mm/s peak particle velocity for nine (9) out of ten (10) consecutive blasts and not greater than 10 mm/s peak particle velocity at any time	
E10	If monitoring indicates exceedance of the limits in Table E9 – Vibration limits then the environmental authority holder must: <ol style="list-style-type: none"> address the complaint including the use of dispute resolution if appropriate; and immediately implement vibration abatement measures so that vibration from the activity does not result in further environmental nuisance. 	No change
E11	Airblast overpressure nuisance The airblast overpressure level from blasting operations on the premises must not exceed the limits defined in Table E11 – Airblast overpressure level at any sensitive or commercial place.	No change

Table E11 – Airblast overpressure level

Location	Airblast Overpressure Measured	
Sensitive or commercial place	Air blast overpressure level of 115db (Linear peak) for nine (9) out of ten (10) consecutive blasts initiated and not greater than 120db (Linear peak) at any time.	
E13	When requested by the administering authority, airblast overpressure monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the administering authority) of environmental nuisance at any sensitive or commercial place, and the results must be notified within fourteen (14) days to the administering authority following completion of monitoring.	No change
E14	Airblast overpressure monitoring must include the following descriptors, characteristics and conditions: a) location of the blast(s) within the mining area (including which bench level); b) atmospheric conditions including temperature, relative humidity and wind speed and direction; and location, date and time of recording.	No change
E15	If monitoring indicates exceedance of the limits in Table E11 , then the environmental authority holder must: a) address the complaint including the use of dispute resolution if appropriate; and b) immediately implement airblast overpressure abatement measures so that airblast overpressure from the activity does not result in further environmental nuisance	No change
E16	The method of measurement and reporting of airblast overpressure levels must comply with the current edition of the administering authority's Noise Measurement Manual (ESR/2016/2195).	No change

Schedule F: Waste

Condition number	Condition	Proposed change to condition
F1	Storage of tyres Scrap tyres stored awaiting disposal or transport for take-back and recycling, or waste-to-energy options must be stored in stable stacks and at least ten (10) metres from any other scrap tyre storage area, or combustible or flammable material, including vegetation.	No change

Schedule F: Waste		
Condition number	Condition	Proposed change to condition
F2	All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a ten (10) metres radius of the scrap tyre storage area.	No change
F3	Disposing of scrap tyres resulting from the mining activities is not permitted in spoil emplacements unless tyres are placed as deep in the spoil as reasonably practicable.	No change
F4	A record must be kept of the number and location for tyres disposed.	No change
F5	Scrap tyres resulting from the mining activities disposed of within the site must not impede saturated aquifers or compromise the stability of the consolidated landform.	No change
F6	<p>Waste Management</p> <p>A Waste Management Plan must be implemented that:</p> <ol style="list-style-type: none"> describes how the Ensham mine recognises and applies the waste management hierarchy; characterises wastes generated from the project and identifies general volume trends over the past five (5) years; contains a program for safe recycling or disposal of all wastes - reusing and recycling where possible; contains waste commitments with auditable targets to reduce, reuse and recycle; has waste management control strategies which addresses: <ol style="list-style-type: none"> the type of wastes; segregation of the wastes; storage of the wastes; transport of the wastes; monitoring and reporting matters concerning the wastes; emergency response planning; disposal, reused and recycling options; identifies the potential adverse and beneficial impacts of the wastes generated; details the hazardous characteristics of the waste generated (if any); contains a disposal procedure for hazardous wastes; outlines the process to be implemented to allow for continuous improvement of the waste management systems; 	No change

Schedule F: Waste		
Condition number	Condition	Proposed change to condition
	j) identifies responsible staff (positions) for implementing, managing and reporting the Waste Management Plan; and k) contains a staff awareness and induction program that encourages re-use and recycling.	
F7	Waste must not be burned or allowed to be burned on the licensed site unless by written approval of the administering authority.	No change
F8	A designated area must be set aside for the segregation of economically viable, recyclable solid and liquid waste	No change
F9	Records must be kept for five (5) years , and must include the following information: <ul style="list-style-type: none"> a) date of pickup of waste; b) description of waste; c) cross reference to relevant waste transport documentation; d) quantity of waste; e) origin of the waste; f) destination of the waste; and g) intended fate of the waste, for example, type of waste treatment, reprocessing or disposal. <p><i>NOTE: Records of documents maintained in compliance with a waste tracking system established under the Environmental Protection Act 1994 or any other law for regulated waste will be deemed to satisfy this condition</i></p>	No change
F10	Records of trade and regulated wastes or material leaving the mining lease for recycling or disposal, including the final destination and method of treatment, must be in accordance with the <i>Environmental Protection Act 1994</i> .	No change
F11	The environmental authority holder must ensure that all regulated waste received at and removed from the site must be transported by a person who holds a current authority to transport such waste under the provisions of the <i>Environmental Protection Act 1994</i> .	No change
F12	Except as otherwise provided by the conditions of this authority, all waste removed from the site must be taken to a facility that is lawfully allowed to accept such waste under the provisions of the <i>Environmental Protection Act 1994</i> .	No change

Schedule G: Land		
Condition number	Condition	Proposed change to condition
G1	Preventing contaminant release to land Contaminants must not be released to land in a manner which constitutes nuisance, material or serious environmental harm.	No change
G2	<p>Bord and pillar – factors of safety</p> <p>The environmental authority holder will determine relevant pillar and roadway dimensions to ensure that the following factors of safety are achieved:</p> <p>a) 2.11 for bord and pillar workings beneath the Nogoia River anabranh;</p> <p>b) 2.11 for access roadways beneath the Nogoia River to connect the bord and pillar and longwall mining areas; and</p> <p>1.6 for all other bord and pillar workings beneath the floodplain of the Nogoia River.</p> <p><u>Proposed Condition Change</u></p> <p>Bord and pillar – factors of safety</p> <p>The environmental authority holder will determine relevant pillar and roadway dimensions to ensure that a factor of safety of 1.6 is achieved for:</p> <p>a) bord and pillar workings beneath the Nogoia River anabranh;</p> <p>b) access roadways beneath the Nogoia River to connect the bord and pillar and longwall mining areas; and</p> <p>c) all other bord and pillar workings beneath the floodplain of the Nogoia River.</p>	Changed
G2		Changed
G3	Operational management protocols must be implemented to ensure that minimum pillar and roadway dimensions are calculated to achieve condition G2 during the life of the bord and pillar operation.	No change
G4	<p>Mine Waste</p> <p>A Mining Waste Management Plan together with the certification by an appropriately qualified person must be developed and implemented while mining activities are being carried out. The Mining Waste Management Plan must at a minimum include:</p> <p>a) characterisation programs to ensure that all mining waste is progressively characterised during disposal for net acid producing potential, salinity and the following parameters: pH, Electrical Conductivity (EC), Acid Neutralising Capacity (ANC), Net Acid Generation (NAG) (reporting NAG capacity and NAG pH after oxidation), Total Sulfur (S), Chromium Reducible Sulphur (Scr), Boron (B) Cadmium (Cd), Iron (Fe), Aluminium (Al), Copper (Cu),</p>	No change

Schedule G: Land		
Condition number	Condition	Proposed change to condition
	<p>Magnesium (Mg), Manganese (Mn), Calcium (Ca), Sodium (Na), Zinc (Zn) and Sulfate (SO₄);</p> <p>b) individual parameters in a) above can be removed following sufficient mine waste characterisation to demonstrate that certain individual parameters are not present in sufficient quantities to warrant further characterisation;</p> <p>c) characterisation programs to ensure that the physical properties of the mining waste is progressively characterised during disposal;</p> <p>d) the availability or leachability of metals from the mining waste;</p> <p>e) quantification of PAF from mining waste present;</p> <p>f) review impacts of the PAF mining waste on the rehabilitation;</p> <p>g) management actions for mining waste that has been identified as having a high availability or leachability of metals;</p> <p>h) management actions for mining waste that has been defined as PAF;</p> <p>i) identification of environmental impacts and potential environmental impacts;</p> <p>j) control measures for routine operations to minimise likelihood of environmental harm;</p> <p>k) contingency plans and emergency procedures for non-routine situations; and</p> <p>l) periodic review of environmental performance and continual improvement.</p>	
G5	<p>Storage and handling of chemicals and flammable or combustible liquids</p> <p>All chemicals and flammable or combustible liquids must be stored and handled in accordance with the most recent version of an Australian Standard where such is applicable. Where no relevant Australian Standard exists, storage of such materials must be within an effective on-site containment system.</p>	No change
G6	<p>Exploration</p> <p>Disturbance due to exploration activities in areas not authorised to be mined must be rehabilitated in accordance with provisions detailed in the <i>Eligibility criteria and standard conditions for exploration and mineral development projects</i> or its successor.</p>	No change
G7	<p><u>Proposed New Condition</u></p> <p><u>Subsidence Monitoring</u></p> <p>On commencement of mining under Zone 1, and then annually, an annual assessment of potential subsidence will be completed over mine workings under the Nogoia River floodplain in Zone 1 using LiDaR.</p>	Addition

Schedule G: Land		
Condition number	Condition	Proposed change to condition
	<p>LiDAR will be used to monitor potential land elevation changes greater than natural variation (50 mm)..</p> <p>Where surface levels indicate a difference in elevation greater than 50 mm and likely as a result of mining activities, an investigation will be undertaken by Ensham. Where the investigation supports that the elevation change is associated with mining, then a report will be prepared and submitted to the Administering Authority and to the land owner/land occupier.</p>	

Schedule H: Rehabilitation		
Condition number	Condition	Proposed change to condition
H1	<p>Rehabilitation – Surface</p> <p>All surface areas significantly disturbed by mining activities must be rehabilitated in accordance with Schedule H: Rehabilitation and Appendix 3 of this environmental authority.</p>	No change
H2	<p>Residual voids</p> <p>Residual voids must not cause any serious environmental harm to land, surface waters or any regional groundwater aquifer, other than the environmental harm constituted by the existence of the residual void itself unless otherwise permitted by any other condition within this environmental authority.</p>	No change
H3	<p>Rehabilitation Management Plan</p> <p>A Rehabilitation Management Plan must:</p> <ol style="list-style-type: none"> be developed for all significant disturbance associated with mining activities; implemented for the duration of mining activities; and be implemented by a suitably qualified person. 	No change
H4	<p>The Rehabilitation Management Plan required by condition H3, must address all relevant requirements within this environmental authority, and at a minimum include:</p> <ol style="list-style-type: none"> details of how all land significantly disturbed by the mining activities will be rehabilitated to ensure that it is; <ol style="list-style-type: none"> safe for humans and wildlife; non-polluting stable; and 	No change

Schedule H: Rehabilitation		
Condition number	Condition	Proposed change to condition
	<ul style="list-style-type: none"> iv. able to sustain an agreed post mining land use, unless specified as having no use in Appendix 3 (Domain 5: Groundwater Daylighting Water Areas and Domain 6: Highwalls); and b) details of how all land significantly disturbed by mining activities that will not have a land use will be managed to prevent environmental harm into the foreseeable future; c) an indicative plan of each domain area identified in Appendix 3. d) a map of existing areas of rehabilitation including classification of stage (i.e. time since establishment) and quality; e) a strategy for progressive rehabilitation, including a progressive rehabilitation schedule; f) details of the design objectives for rehabilitation of each domain to achieve rehabilitation success criteria as specified in Appendix 3; g) specify the spoil characteristics, soil analysis and soil separation for use on rehabilitation; h) specify the topsoil requirements for the site and how topsoil will be managed for use in rehabilitation; i) details of any topsoil deficit and how any deficit will be managed for successful rehabilitation; j) details of a balance material and how any topsoil deficit will be managed for successful rehabilitation; balance includes – rock, topsoil, gypsum, lime and all other ameliorates. k) details of landform design including end of mine design; l) details of how landform design will be consistent with surrounding topography; m) identification of planned native vegetation rehabilitation areas and corridors; n) a description of rehabilitation indicators and how these will be monitored; o) a description of management actions to address unsuccessful rehabilitation or redesign; and p) a description of end of mine landform design planning and post mining land uses across the mine. 	
H5	Land significantly disturbed by mining activities must be progressively rehabilitated in accordance with the Rehabilitation Management Plan required by condition H3 .	No change
H6	Rehabilitation activities must comply with the Rehabilitation Management Plan required by condition H3 .	No change
H7	Rehabilitation Monitoring	No change

Schedule H: Rehabilitation		
Condition number	Condition	Proposed change to condition
	The environmental authority holder must implement an annual rehabilitation monitoring program that details the outcomes of the previous year's rehabilitation activities in an annual rehabilitation report and submit it to the administering authority by 1 March each year.	
H8	<p>Annual rehabilitation reports must:</p> <ul style="list-style-type: none"> a) be developed by a suitably qualified person; b) include the rehabilitation monitoring results; c) include any actions and recommendation to rectify or improve, areas of rehabilitation that are of concern; and d) be consistent with the Rehabilitation Management Plan requirements specified by condition H3. 	No change
H9	<p>Flood Protection Landform Design</p> <p>The design of the flood protection landform must be supported by relevant hydrology, geomorphology, landform, geotechnical and risk management assessment studies of the Nogoia River Floodplain, and must:</p> <ul style="list-style-type: none"> a) incorporate the pre-mining hydrologic characteristics of surface water and groundwater systems for the area in which the floodplain is located; b) incorporate the pre-mining hydraulic characteristics of the flood plain for the area for which it is located in without using artificial structures that require on-going maintenance; c) maintain sediment transport and water quality regimes that allow the floodplain to be self-sustaining, which prevents any impacts to upstream and downstream water quality, geomorphology and vegetation; d) maintain equilibrium and functionality in all substrate conditions at the location of the floodplain; and e) allow the free and safe passage of fauna, both aquatic and terrestrial, upstream and downstream. <p>For the purposes of this environmental authority the Flood Protection Landform does not need to be decommissioned or rehabilitated as per condition D12.</p>	No change
H10	A certified design plan and any technical reports that consider the requirements of condition H9 , and that will meet the requirements of Appendix 3 for the flood protection landforms must be submitted to the administering authority at least ninety (90) days before commencing construction of the flood protection landforms.	No change
H11	After ninety (90) days following the submission of documents in accordance with condition H10 , the environmental authority holder may commence construction of the flood protection landforms. Construction may commence prior with the written agreement from the administering authority.	No change

Schedule H: Rehabilitation		
Condition number	Condition	Proposed change to condition
H12	<p>Retainment of Infrastructure Infrastructure, constructed by or for the environmental authority holder during the licensed activities including water storage structures, must be removed from the site prior to surrender, except where agreed in writing by the post mining landowner / holder.</p>	No change
H13	Condition H12 does not apply where the landowner or landholder is also the environmental authority holder.	No change
H14	Where the landowner or landholder is also the environmental authority holder, the administering authority must give its consent to the retainment of infrastructure, constructed by or for the environmental authority holder as a result of the authorised mining activities.	No change
H15	<p>Post Closure Management Plan A Post Closure Management Plan for the site must be prepared at least eighteen (18) months prior to the final coal processing on site and implemented for a nominal period of:</p> <ul style="list-style-type: none"> a) at least thirty (30) years following final coal processing on site; or b) a shorter period if the site is proven to be geotechnically and geochemically stable and it can be demonstrated to the satisfaction of the administering authority that no release of contaminants from the site will result in environmental harm. 	No change

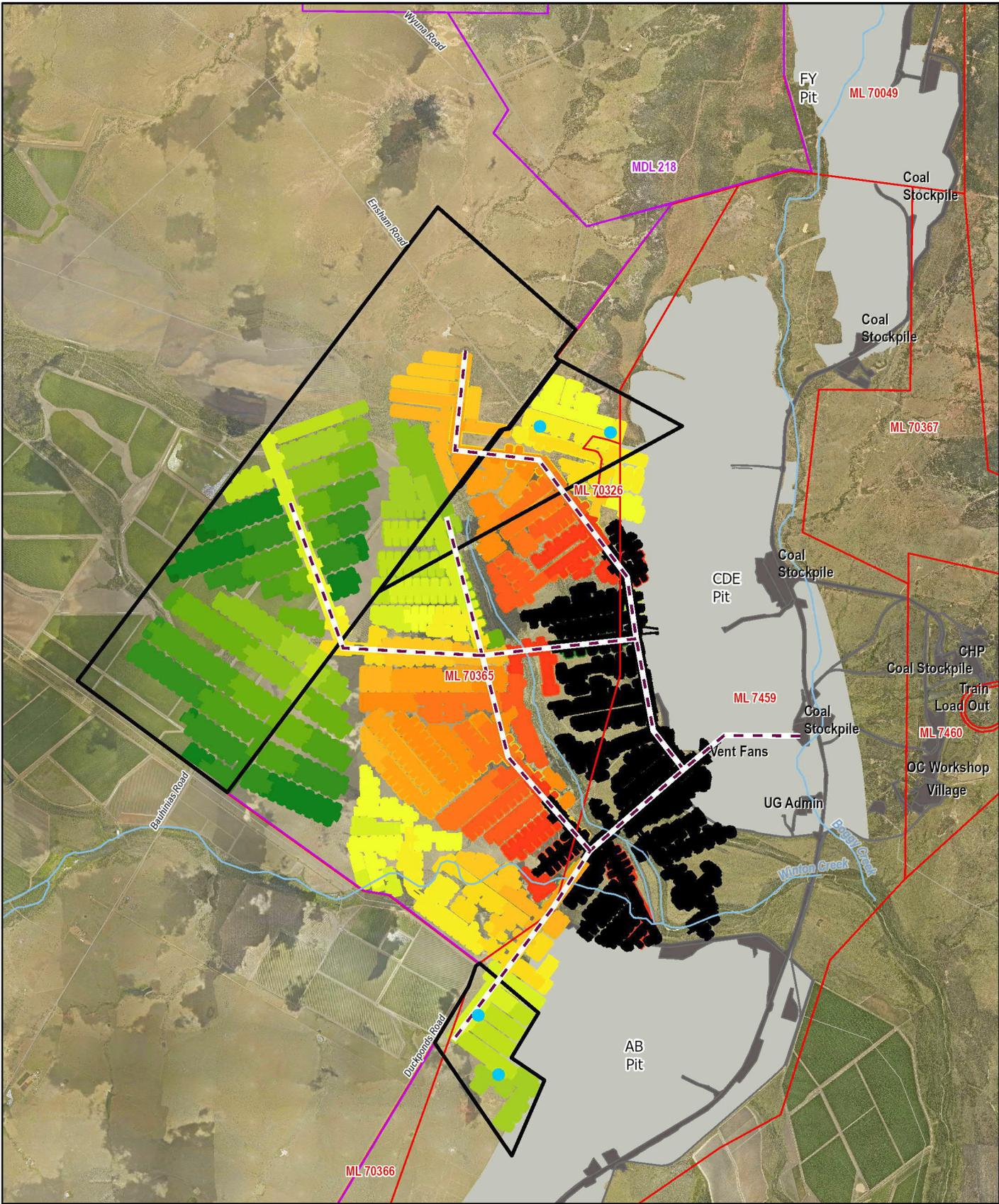


Figure 27-1
Project Site disturbance map

Legend

- Project Area
- Coal conveyor transport system
- Exclusion zone
- Mineral development licence
- Mining leases
- Mine infrastructure footprint
- Pit
- Mined out areas

Mine Plan - Jan 2020 Year		2019		2024		2031
		2020		2025		2032
		2021		2026		2033
		2022		2027		2034
		2023		2028		2035
				2029		2036
				2030		2037



ENSHAM LIFE OF MINE EXTENSION PROJECT

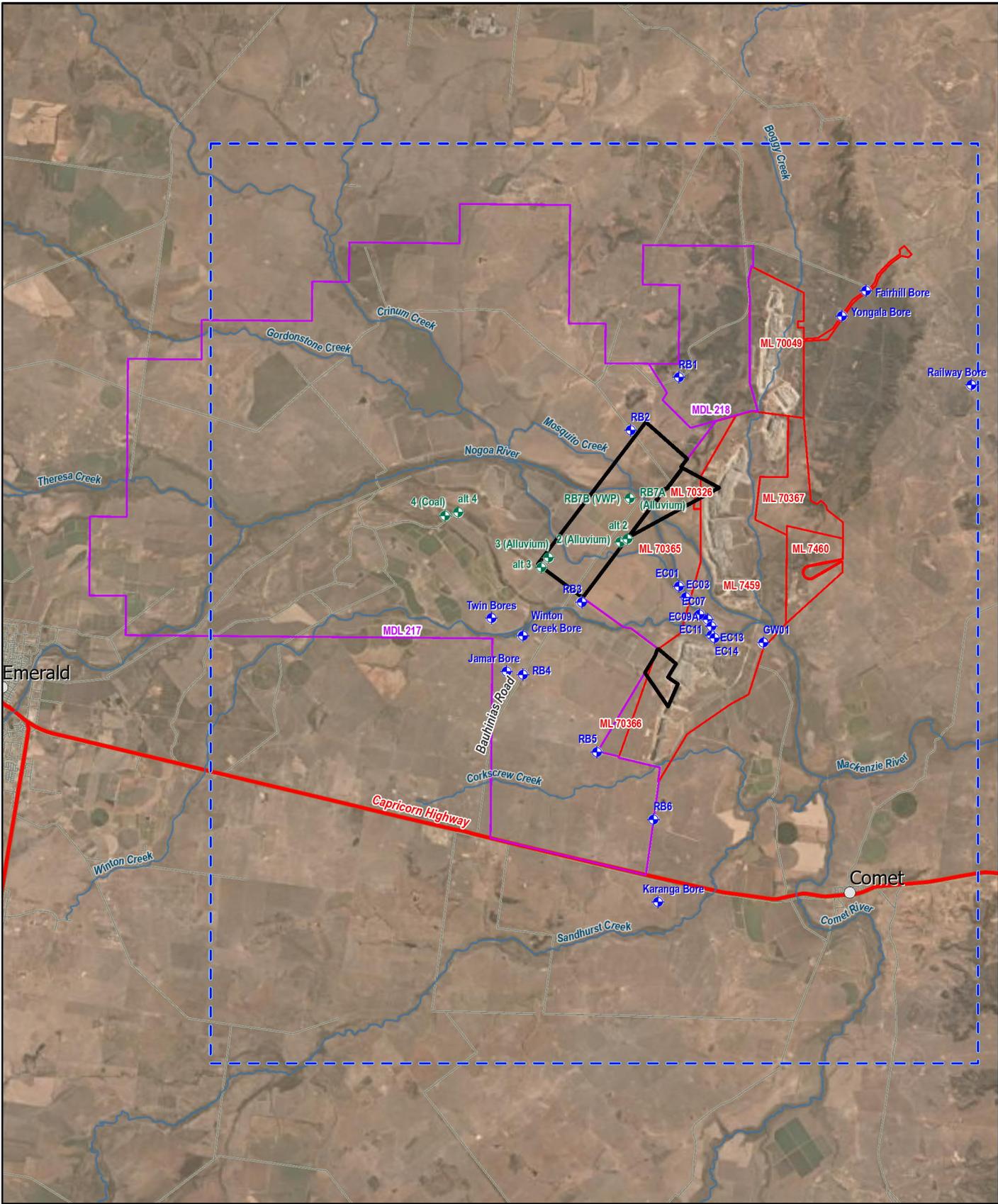


Figure 27-2
Groundwater monitoring network



Legend

- Project Area
- Watercourse
- Main road
- Other road
- Ensham mine leases
- Mining leases
- Model domain (study area)
- +

 Groundwater monitoring bores
- +

 Proposed groundwater monitoring bores

ENSHAM LIFE OF MINE EXTENSION PROJECT

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