Permit

Environmental Protection Act 1994

Environmental Authority

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

Environmental authority number: EPPR00953513

Environmental authority takes effect on 6 October 2026.

The anniversary date of this environmental authority is 15 October each year.

Environmental authority holder(s)

Name(s)	Registered address
Karreman Quarries Pty Ltd	616-632 West Mount Cotton Road SHELDON QLD 4157

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
ERA 16 - Extraction and Screening - 2(c) - Extracting, other than by dredging, in a year, the following quantity of material - more than 1,000,000t	1/RP186598 2/RP186598 2/RP196461 3/RP186598 3/SP103095 4/RP186598 5/RP186598 27/RP113142 101/SP334082
ERA 16 - Extraction and Screening - 2(b) - Extracting, other than by dredging, in a year, the following quantity of material - more than 100,000t but not more than 1,000,000t	2/RP77219 88/RP28542 5/RP134429 30/SP258504 17/RP146684

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Environmentally relevant activity/activities	Location(s)
ERA 16 - Extraction and Screening - 2(a) - Extracting, other than by dredging, in a year, the following quantity of material - 5,000t to 100,000t	2/SP188914
ERA 16 - Extraction and Screening - 3(b) - Screening, in a year, the following quantity of material - more than 100,000t but not more than 1,000,000t	2/RP77219 88/RP28542 5/RP134429 30/SP258504 17/RP146684
ERA 16 - Extraction and Screening - 3(c) - Screening, in a year, the following quantity of material - more than 1,000,000t	101/SP334082 4/RP186598 3/RP186598 5/RP186598 2/RP186598

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

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

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

Mobile and temporary activities

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

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

Contaminated land

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

- the presence of, or happening of an event involving, a hazardous contaminant on the land that is causing, or is reasonably likely to cause, serious or material environmental harm (notice must be given within 24 hours); or

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

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

Take effect

Please note that, in accordance with section 200(1) of the EP Act, an EA has effect:

(a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority—on the nominated day; or

(b) if the authority states a day or an event for it to take effect—on the stated day or when the stated event happens; or

(c) otherwise—on the day the authority is issued.

However, in accordance with section 200(2) of the EP Act, the day that the EA takes effect may not be before:

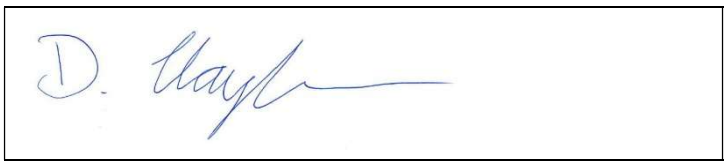
(a) if the authority is for a resource activity—the day the relevant tenure is granted to the applicant; or

(b) if a development permit for a material change of use of premises under the *Planning Act 2016* is necessary for carrying out an activity that related to the authority—the day the development permit takes effect; or

(c) if an SDA Approval under the *State Development and Public Works Organisation Act 1971* is necessary for carrying out an activity that relates to the authority—the day the approval takes effect.

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

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



Signature

6 October 2026

Date

Dayna Claybourn

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

Enquiries:

Energy and Extractive Resources Business Centre
GPO Box 2454, Brisbane QLD 4001
Phone: (07) 3330 5715
Email: EnergyandExtractive@detsi.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

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

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

Other permits required

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

Obligations under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

Matters of national environmental significance (MNES) are regulated under the Commonwealth EPBC Act rather than under state legislation. You may need to submit a referral if your project potentially impacts any matters protected under the EPBC Act. For more information on self-assessments, and referral and assessment processes, please visit the Australian Government Department of Climate Change, Energy, the Environment and Water's website at www.dcceew.gov.au/environment/epbc/advice.

Obligations under the *Mining and Quarrying Safety and Health Act 1999*

If you are operating a quarry, other than a sand and gravel quarry where there is no crushing capability, you will be required to comply with the *Mining and Quarrying Safety and Health Act 1999*. For more information on your obligations under this legislation, visit Resources Safety and Health Queensland's website at www.rshq.qld.gov.au, or call 13 QGOV (13 74 68) or your local Mines Inspectorate Office.

Development approval

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

Obligations under the *Aboriginal Cultural Heritage Act 2003* and *Torres Strait Islander Cultural Heritage Act 2003* (the Cultural Heritage Acts)

The Cultural Heritage Acts require anyone who carries out a land-use activity to exercise a duty of care. This 'duty of care' means land users must take all reasonable and practicable measures to ensure their activity does not harm Aboriginal or Torres Strait Islander cultural heritage, and applies to any activity where Aboriginal or Torres Strait Islander cultural heritage is located. For more information on your obligations under this legislation, please visit the Department of Women, Aboriginal and Torres Strait Islander Partnerships and Multiculturalism webpage at, www.dwatsipm.qld.gov.au.

Conditions of environmental authority

Part 1 (P1) – Common Conditions for extraction undertaken at the locations mentioned below: 616 – 632 West Mount Cotton Rd, Sheldon Qld 4157

Environmentally relevant activity	Location
ERA 16 - Extraction and Screening - 2(c) - Extracting, other than by dredging, in a year, the following quantity of material - more than 1,000,000t	1/RP186598 2/RP186598 2/RP196461 3/RP186598 3/SP103095 4/RP186598 5/RP186598 27/RP113142 101/SP334082
Prescribed ERA, ERA 16 - Extraction and Screening, 3: Screening, in a year, the following quantity of material, (c) more than 1,000,000t	4/RP186598 3/RP186598 5/RP186598 2/RP186598 101/SP334082

The environmentally relevant activities conducted at the locations as described above must be conducted in accordance with the following conditions.

Agency interest: General	
Condition number	**Condition**
G1	Any activity operating under this environmental authority must not be conducted contrary to any of the following limitations: 1. The amount of material extracted from the site must not exceed 4,400,000 tonnes per year. 2. Activities associated with ERA 16(2)(c) – extraction, other than by dredging must only take place within Lots 1, 2, 3, 4 and 5 on RP186598 and Lot 101 on SP334082. 3. The extraction void must not exceed a maximum depth of -60m AHD. 4. All activities must be in accordance with the following site layout plans and GPS coordinates: a. Appendix A: West Mount Cotton Quarry Processing Plant & Stockpile Areas; and

	b. Appendix B Map 1: West Mount Cotton Quarry Extraction Pit, Vegetation Buffer and Powerline Easement – 2326.DRG.048; and Map 2: West Mount Cotton Quarry Extraction Pit, Vegetation Buffer and Powerline Easement – 2326.DRG.028; and c. Appendix C: Extraction Pit boundary GPS coordinates.
G2	All reasonable and practicable measures must be taken to minimise the likelihood of environmental harm being caused.
G3	Any breach of a condition of this environmental authority must be reported to the administering authority as soon as practicable, or at most, within 24 hours of you becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
G4	Notify the administering authority when the release of contaminants is not in accordance with the conditions of this document or any event where environmental harm may be threatened. Written advice of the following information must be provided within fourteen (14) days any notification required under condition G3 or completion of any analysis: a) the location of the event; b) the time of the event; c) the time the registered operator became aware of the event; d) the suspected cause of the event; e) a description of the resulting effects of the event; f) the full analysis results where related to a release of contaminants; g) actions taken to mitigate any environmental harm and / or environmental nuisance caused by the event; h) the outcome of mitigation actions; and i) proposed actions to prevent a recurrence of the event.
G5	**Maintenance of measures, plant and equipment** Ensure that: a) all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority are installed; b) such measures, plant and equipment are maintained in a proper and efficient condition; and c) such measures, plant and equipment are operated in a proper manner.
G4	Other than as permitted by this environmental authority, the release of a contaminant into the environment must not occur.
G5	Environmental monitoring results must be kept until surrender of this environmental authority. All other information, plans and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and records required by the conditions of this environmental authority must be provided to the administering authority, or nominated delegate upon request, within the required timeframe and in the specified format.
G6	An appropriately qualified person(s) must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.

G7	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (NATA) certification, or an equivalent certification, for such analyses. The only exception to this condition is for in situ monitoring of pH, electrical conductivity, turbidity and dissolved oxygen.
G8	When required by the administering authority, monitoring must be undertaken in the manner prescribed by the administering authority, to investigate a complaint of environmental nuisance arising from the activity. The monitoring results must be provided within 10 business days to the administering authority upon its request.
G9	The activity must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the activity during routine operations, closure and an emergency; 2. establish and maintain control measures that minimise the potential for environmental harm; 3. ensure plant, equipment and measures are maintained in a proper and effective condition; 4. ensure plant, equipment and measures are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994*; and 6. ensure that reviews of environmental performance are undertaken at least annually. All plans must be made available to the administering authority upon request.
G10	All plans, procedures, programs, reports and methodologies required under this environmental authority must be written and implemented.
G11	Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system.
G12	The areas within the site designated for extraction of rock or other material and associated activities must be surveyed and clearly marked.
G13	All complaints received must be recorded including investigations undertaken, conclusions formed and action taken. This information must be made available to the administering authority on request.

Agency interest: Air	
Condition number	**Condition**
A1	Other than as permitted within this environmental authority, odours or airborne contaminants must not cause environmental nuisance to any sensitive place or commercial place.
A2	Dust and particulate matter suspended in the atmosphere must not exceed the limits identified in *Table 1– Dust Criteria* at any sensitive or commercial place when monitored in accordance with the relevant Australian Standard (or any other relevant method of monitoring permitted by the administering authority).

Table 1– Dust Criteria

Contaminant	Averaging Period	Limit	Relevant Australian Standard
Dust deposition	24 hours	120 mg/m^2	AS/NZS3580.10.1

	PM_{TSP}	Annual Average	90 µg/m^3	AS/NZS3580.9.3
	PM_{10}	24 Hour Average (Maximum)	50 µg/m^3	AS/NZS3580.9.6 or AS/NZS3580.9.8 or AS/NZS3580.9.9
		Annual Average	25 µg/m^3	
	$PM_{2.5}$	24 Hour Average (Maximum)	25 µg/m^3	AS/NZS3580.9.10 or AS/NZS3580.9.13 or AS/NZS3580.9.14
		Annual Average	8 µg/m^3	
	Silica (as $PM_{2.5}$)	Annual Average	3 µg/m^3	AS/NZS3580.9.10

Note:

i. Australian Standard AS3580.9.3 – Methods for sampling and analysis of ambient air: Determination of suspended particulate matter - total suspended particulate matter – High volume sampler gravimetric method.

ii. Australian Standard AS3580.9.6 - Methods for sampling and analysis of ambient air: Determination of suspended particulate matter - PM_{10} high volume sampler with size selective inlet – gravimetric method.

iii. Australian standard AS3580.9.8 – Methods for sampling and analysis of ambient air: Determination of suspended particulate matter- PM_{10} continuous direct mass method using tapered element oscillating microbalance analyser.

iv. Australian Standard AS3580.9.9 – Methods for sampling and analysis of ambient air: Determination of suspended particulate matter- PM_{10} low volume sampler – Gravimetric method

v. Australian Standard AS3580.9.10 – Methods for sampling and analysis of ambient air: Determination of Suspended particulate matter – $PM_{2.5}$ low volume sampler- Gravimetric method

vi. Australian Standard AS3580.9.13 – Methods for sampling and analysis of ambient air: Determination of suspended particulate matter – $PM_{2.5}$ continuous direct mass method using a tapered element oscillating microbalance monitor

vii. Australian Standard AS3580.9.14 - Methods for sampling and analysis of ambient air: Determination of suspended particulate matter - $PM_{2.5}$ high volume sampler with size selective inlet- gravimetric method.

viii. Australian Standard AS3580.10.1 – Methods for sampling and analysis of ambient air: Determination of particulate matter – deposited matter – gravimetric method.

A3

An Air Quality Management Plan (AQMP) must be developed and implemented prior to the commencement of any earthworks or vegetation clearing. The AQMP must:

(a) define the best practice air quality management and mitigation measures to be implemented at the site, monitoring and reporting requirements; and

(b) be subject to annual review and annual update to ensure the appropriate health and amenity criteria can be achieved, and to incorporate best practice management measures for minimising emissions to the ambient environment.

A4

Dust and particulate matter suspended in the atmosphere must be monitored in accordance with the relevant standards specified in A2 (or any other relevant method of monitoring permitted by the administering authority's Air Quality Sampling Manual). Meteorological monitoring must be undertaken in accordance with Australian Standard AS 2923: Ambient air - Guide for measurement of horizontal wind for air quality applications.

A5	Where monitoring at locations identified in the Ambient Dust Monitoring Program indicates that the limits detailed in condition A2 have been exceeded, within 14 days the matter must be investigated and the following information must be reported to the administering authority: (a) the concentration of TSP, PM_{10}, $PM_{2.5}$, respirable crystalline silica and dust deposition rate recorded; (b) a description of meteorological conditions occurring at the time; and (c) dust abatement measures that have or will be implemented to ensure dust from the activity does not exceed the limits in A2 and A3.
A6	When required by the administering authority and as a result of a complaint, monitoring must be undertaken in the manner prescribed by the administering authority, to investigate the complaint of environmental nuisance arising from the activity. The monitoring results must be provided within 10 business days to the administering authority upon its request.
Agency interest: Land	
Condition number	**Condition**
L1	Contaminants must not be released to land.
L2	A natural vegetation buffer must be maintained in accordance with Appendix B Map 2: West Mount Cotton Quarry Extraction Pit, Vegetation Buffer and Powerline Easement – 2326.DRG.028.
L3	The natural vegetation buffer referred to in condition **L2** must be managed by implementing and complying with a Buffer Management Plan that improves visual amenity and habitat connectivity, including, by requiring: a. regular weed removal and minimisation; and b. native vegetation planting along the edge of the buffer and within existing disturbed areas within the buffer.
L4	Before applying to surrender this environmental authority, the site must be rehabilitated to achieve a safe, stable and non-polluting landform.
L5	Land that has been disturbed by activities conducted under this environmental authority must be rehabilitated in a manner such that: 1. suitable native species of vegetation including grasses for the location are established and sustained for earthen surfaces; 2. Rehabilitation activities are to be completed through the collection of local provenance species and mature slow growing species. 3. landform does not prevent, stop or endanger koala movement; 4. potential for erosion is minimised; 5. the quality of water released from the site, including seepage, does not contain contaminants capable of causing environmental harm; 6. potential for environmental nuisance caused by dust is minimised; 7. the water quality of any residual water body does not have the potential to cause environmental harm; 8. the final landform (including any water bodies) is stable and protects public safety;

	9. any residual water bodies must be designed and constructed to minimise ongoing drawdown on the groundwater table. 10. Areas disturbed by the activity must be rehabilitated to a stable landform in accordance with Appendix C: West Mount Cotton Quarry Rehabilitation Plan.
L6	Rehabilitation of disturbed areas required under condition **L5**, must take place progressively as works in disturbed areas cease.
L7	The upper two terminal benches of the extraction pit must be rehabilitated and revegetated as soon as practically possible.
L8	The powerline easement identified in Appendix B Map 1: West Mount Cotton Quarry Extraction Pit, Vegetation Buffer and Powerline Easement – 2326.DRG.048 must be planted with native grass species within six months of completion, and maintained thereafter including ensuring weeds are minimised.
L9	**Vegetation Clearing** Subject to condition G1(2), vegetation must be cleared progressively. The rate of clearing of Remnant Vegetation must not exceed 5 ha per year.
L10	Prior to any clearing of vegetation on site, a qualified spotter-catcher must be engaged to prepare and implement a Wildlife Protection and Management Plan which must include: (a) a pre-clearance survey of the area to be cleared to identify potential refugia for, and presence of: 1. Koalas (*Phascolarctos cinereus)*; 2. Greater Glider (*Petaroides volans*), 3. Grey Headed Flying Fox (*Pteropus poliocephalus*), 4. Wallum froglet (*Crinia tinnula*), 5. Glossy Black Cockatoo (*Calyptorhynchus lathami*), and 6. Tusked Frog (*Adelotus brevis*) 7. Powerful Owl (*Ninox strenua)* 8. Short Beaked Echidna (*Tachyglossus aculeatus)* (b) Clearing methodology to minimize physical risks to wildlife (c) Assessment of animal health and injuries and husbandry of captured animals (d) Identification of suitable release sites (e) Reporting requirements as per Condition **L11**
L11	All vegetation clearing activities are to be undertaken under the direction of a qualified spotter-catcher. Reports detailing the area cleared, the methodology used, any wildlife relocated, injured or killed, and the number and nature of habitat trees cleared are to be retained and provided to the administering authority upon request.
L12	Prior to any clearing activities, a targeted survey for flora species listed as endangered, vulnerable or near threatened in the *Nature Conservation (Wildlife) Regulation 2006* must be undertaken. In the event such species are identified, a Protected Plant Clearing Permit must be sought and received from the appropriate administering authority prior to any disturbance commencing.

L13

Significant residual impacts on prescribed environmental matters are not authorised under this environmental authority or the *Environmental Offsets Act 2014* unless the impact(s) is specified in Table 2 below.

Table 2 – Significant residual impacts to prescribed environmental matters*

Prescribed environmental matter	Location of impact	Maximum extent in hectares
Connectivity		
Connectivity	Lot 1,2,3,4 & 5 on Plan RP186598	35.86
Regulated Vegetation		
Regional Ecosystem 12.11.27	Lot 1,2,3,4 & 5 on Plan RP186598	30.67
Wetland Vegetation		5.19
Essential habitat		
Glossy black cockatoo (*Calyptorhynchus lathami*)	Lot 1,2,3,4 & 5 on Plan RP186598	30.5
Protected wildlife habitat		
Glossy black cockatoo (*Calyptorhynchus lathami*)	Lot 1,2,3,4 & 5 on Plan RP186598	37.43
Powerful Owl (*Ninox strenua*)		44.38
Short Beaked Echidna (*Tachyglossus aculeatus*)		44.38
Tusked Frog (*Adelotus brevis*)		6.63
Waterway providing for fish passage		2.13

***** Where a MSES is triggered concurrently by another relevant Queensland Act, that matter is only required to be offset once (*as per the Environmental Offsets Act 2014*).

L14

Records demonstrating that each impact to a prescribed environmental matter did not, or is not likely to, result in a significant residual impact to that matter must be:

a) completed by an appropriately qualified person; and
b) kept for the life of the environmental authority.

L15

An environmental offset made in accordance with the *Environmental Offsets Act 2014* and Queensland Environmental Offsets Policy, as amended from time to time, must be undertaken for the maximum extent of impact to each prescribed environmental matter authorised in **Table 2 – Significant residual impacts to prescribed environmental matters.**

Agency interest: Noise

Condition number	Condition number
N1	Noise from the activity must not exceed the levels identified in *Table 3 — Noise limits (North Eastern and Eastern sides of the Quarry) and Table 4 – Noise limits (North Western side of the quarry)* when measured in accordance with the associated monitoring requirements.

Table 3 — Noise limits *(North Eastern and Eastern sides of the Quarry)*

	Monday to Saturday			Sundays and public holidays		
	7am – 6pm	**6pm – 10pm**	**10pm – 7am**	**7am – 6pm**	**6pm – 10pm**	**10pm – 7am**
Noise measured at a sensitive place* or commercial place						
$L_{A,eq\ 1Hr}$	42 dB(A)	36 dB(A)	42 dB(A)	No audible noise		
$L_{A,max,\ 1hr}$	-	-	49 dB(A)	No audible noise		

Table 4 — Noise limits *(North Western sides of the Quarry)*

	Monday to Saturday			Sundays and public holidays		
	7am – 6pm	**6pm – 10pm**	**10pm – 7am**	**7am – 6pm**	**6pm – 10pm**	**10pm – 7am**
Noise measured at a sensitive place* or commercial place						
$L_{A,eq\ 1Hr}$	40 dB(A)	34 dB(A)	40 dB(A)	No audible noise		
$L_{A,max,\ 1hr}$	-	-	49 dB(A)	No audible noise		

Associated monitoring requirements

1. All monitoring devices must be calibrated and maintained according to the manufacturer's instruction manual.
2. Any monitoring must be in accordance with the most recent version of the administering authority's *Noise Measurement Manual*.
3. Any monitoring of noise emissions from the activity must be undertaken when the activity is in operation.

N2

When required by the administering authority, noise monitoring must be undertaken in accordance with the associated monitoring requirements of *Tables 3 and 4 —Noise Limits*, and the results notified within 14 days to the administering authority. Monitoring must include:

1. $L_{Aeq,adj,T}$
2. background noise (background) as $L_{A\ 90,adj,T}$
3. $L_{A,max,T}$
4. the level and frequency of occurrence of any impulsive or tonal noise
5. atmospheric conditions including wind speed and direction
6. effects due to extraneous factors such as traffic noise
7. recording of location, date and time of measurements.

N3

Generation of substantial low frequency noise is not permitted.

N4

Clearing dozer and rock drill operation must only be conducted between the hours of 7am – 6pm.

N5

Blasting activities must not exceed the limits for peak particle velocity and air blast overpressure in *Table 5 – Blasting noise* limits when measured at any sensitive place or commercial place in accordance with the associated monitoring requirements.

Table 5 - Blasting noise limits

Blasting criteria	**Blasting limits**
Airblast overpressure	115 dB (Linear) Peak for 9 out of 10

		consecutive blasts initiated and not greater than 120 dB (Linear) Peak at any time.
	Ground **vibration** peak particle velocity	5 mm/s peak particle velocity for 9 out of 10 consecutive blasts and not greater than 10 mm/s peak particle velocity at any time.

Associated monitoring requirements

Monitoring must be performed in accordance with the most recent edition of the administering authority's *Noise and Vibration from Blasting guideline* and *Noise Measurement Manual* and any relevant *Australian Standard*.

N6	Unless prior approval is obtained from the administering authority: 1. blasting is only permitted during the hours of 9 am to 3 pm Monday to Friday, and from 9 am to 1 pm on Saturdays. 2. blasting is not permitted at any time on Sundays or public holidays.
N7	When required by the administering authority**,** a blast monitoring program must be developed and implemented to monitor compliance with *Table 5 – Blasting noise limits* at any sensitive place or commercial place**.**
N8	Noise from the activity must not cause an environmental nuisance at any sensitive place.

Agency interest: Water

Condition number	**Condition**
W1	Other than as permitted within this environmental authority, contaminants must not be released to any waters.
W2	Stormwater that is not contaminated by the activity must be diverted away from areas where it may become contaminated by the activity. Stormwater that is contaminated by the activity must be directed to a treatment system.
W3	Erosion and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment.
W4	The only contaminants to be released to surface waters are settled, treated stormwater runoff from the release points identified in *Table 6 –Surface water release limits* and the associated monitoring requirements.

Table 6—Surface water release limits

Release Point **Release Point** **Latitude & Longitude (GDA94)**	**Quality characteristic (units)**	**Limit**	**Limit Type**	**Minimum Monitoring Frequency**
Release Point 1 **Lat 27^0 36.513 S; Long 153.11.760 E**	pH	6.5 – 8.2	Range	Within 2 hours of the commencement of any release from stormwater treatment
	Total Suspended Solids (mg/L)	(a) <15	Maximum	

	Release Point 2 **Lat 27⁰ 36.362 S; Long 153.11.618 E** **Release Point 3** **Lat 27⁰ 36.420 S; 153.11.497 E**		Where <3000L/s of flow in Tingalpa Creek at the monitoring station** OR Background* + 10% or 15, whichever is greater. Where > or equal to 3000L/s of flow in Tingalpa Creek at the monitoring station**		systems and weekly thereafter
		Turbdity (NTU)	(a) <25 Where <3000L/s of flow in Tingalpa Creek at the monitoring station** OR (b) Background* + 10% or 15, whichever is greater Where >or equal to 3000L/s of flow in Tingalpa Creek at the monitoring station	Maximum	
		Electrical Conductivity (µS/cm)	<730	Maximum	
		Dissolved oxygen (%)	90%	Minimum	

*Background means a sample from Tingalpa Creek upstream of the quarry pits.

** The monitoring station is to be located upstream of Water Release Point 1 within Lot 101 onSP334082at Latitude 27° 36.51667' S and Longitude 153° 11.76667' E and is to be installed and operated in accordance with the "Karreman Redlands Quarry – Flow Monitoring Methodology Report" prepared by BMT dated April 2020 and with Australian Standards 3778.2.2 and 3778.2.3 to the extent applicable.

Associated monitoring requirements

1. Monitoring location and release points must be situated and maintained in accordance with a Site Based Management Plan and Stormwater Management Plan.
2. Monitoring must be in accordance with the methods prescribed in the current edition of the administering authority's *Monitoring and Sampling Manual.*
3. Water and sediment samples must be representative of the general condition of the water body or sediments.
4. All determinations must employ analytical practical quantification limits of sufficient sensitivity to enable comparisons to be made against water quality objectives/triggers/limits relevant to the particular water or sediment quality characteristic.
5. Monitoring must be undertaken during a release and at the frequency stated.
6. All monitoring devices must be calibrated and maintained according to the manufacturer's instruction manual.

W5	The release to waters permitted under **W4** must not contain any other properties at a concentration capable of causing environmental harm.
W6	The release to waters permitted under **W4** must not produce any slick or other visible evidence of oil or grease, scum, litter or other visually objectionable matter.
W7	A revised Stormwater, Flooding, Hydrology and Water Quality Management Plan must be developed and implemented that includes: 1. an assessment of the risk of flood waters developing on or entering the site; 2. an assessment of risk of such flood causing the discharge of contaminants from the site; 3. a detailed design for water diversions and containment structures; 4. a plan for managing the water quality of any onsite waters to ensure compliance with condition W4; 5. a plan for managing potential sources of contaminants caused by flooding, including, but not limited to: a) onsite contaminants that have been generated, exposed or mobilised by the extraction and screening activities; and b) contaminants imported onto the site via flood waters.
W8	The storage design criteria of any stormwater containment dam must be sufficient to contain the runoff expected from a 1 in 10 year AEP 24 hour rainfall event.

Agency interest: Waste	
Condition number	**Condition**
WS1	All waste generated in carrying out the activity must be reused, recycled or removed to a facility that can lawfully accept the waste.

Definitions

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

24 hour storm event with an average recurrence interval of 1 in 5 years means the maximum rainfall depth from a 24 hour duration precipitation event with an average recurrence interval of once in 5 years. (*For example, an Intensity-Frequency-Duration table for a 24 hour duration event with an average recurrence interval of 1 in 5 years, identifies a rainfall intensity of 7.09mm/hour. The rainfall depth for this event is therefore 24 hour x 7.09mm/hour = 170.16mm.*)

Activity means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

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

AHD means Australian Height Datum, the official Australian vertical datum and refers to Australian Height Datum 1971.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

Background means noise, measured in the absence of the noise under investigation, as $L_{A\ 90,\ adj,\ T}$ being the A-weighted sound pressure level exceeded for 90 per cent of the time period of not less than 15 minutes, using Fast response.

Blasting is the use of explosives to fracture:

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

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

Contaminant(s) means as defined in Section 11 of the Environmental Protection Act 1994.

Controlled discharges means the release of site waters due to an action being undertaken to:

- cause the release; or
- increase the volume of the release.

Disturbed areas includes areas:

- that are susceptible to erosion;
- that are contaminated by the activity; and/or
- upon which stockpiles of soil or other materials are located.

Environmental value –

- a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or
- another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.

Flood events, means flooding of the site caused by overland flow from a 24 hour duration precipitation event with an average recurrence interval of once in 20 years in the catchment immediately up gradient of the site

Groundwater means water that occurs naturally in, or is introduced artificially into, an aquifer.

$\mathbf{L_{Aeq,\ adj,\ T}}$ means the adjusted A weighted equivalent continuous sound pressure level measures on fast response, adjusted for tonality and impulsiveness, during the time period T, where T is measured for a period no less than 15 minutes when the activity is causing a steady state noise, and no shorter than one hour when the approved activity is causing an intermittent noise.

$L_{A,max,\ T}$ means the maximum A-weighted sound pressure level measured over a time period T of not less than 15 minutes, using Fast response.

Land means any land, whether above or below the ordinary high-water mark at spring tides (i.e. includes tidal land).

Measures has the broadest interpretation and includes:

- Procedural measures such as standard operating procedures for dredging operations, environmental risk assessment, management actions, departmental direction and competency expectations under relevant guidelines
- Physical measures such as plant, equipment, physical objects (such as bunding, containment systems etc.), ecosystem monitoring and bathymetric surveys.

NATA means National Association of Testing Authorities.

Natural vegetation means a retained (uncleared), native remnant vegetation community.

Nominated delegate means another government agency that provides services to the administering authority.

Noxious means harmful or injurious to health or physical well-being.

Nuisance means Environmental Nuisance as defined by section 15 of the *Environmental Protection Act 1994*

Offensive means causing offence or displeasure; is unreasonably disagreeable to the senses; disgusting, nauseous or repulsive.

Prescribed water contaminants means contaminants listed within Schedule 9 of the Environmental Protection Regulation 2008.

Release of a contaminant into the environment means to:

- deposit, discharge, emit or disturb the contaminant
- cause or allow the contaminant to be deposited, discharged, emitted or disturbed
- fail to prevent the contaminant from being deposited, discharged emitted or disturbed
- allow the contaminant to escape
- fail to prevent the contaminant from escaping.

Secondary containment system means a system designed, installed and operated to prevent any release of contaminants from the system, or containers within the system, to land, groundwater, or surface waters.

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

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
- a public park or garden; or
- for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2019.

Sensitive receptor includes biological sensitive receptors together with other environmental values sensitive to the effects of dredge-generated sediment plume-associated impacts.

Site for the purpose of this environmental authority means the area bounded by on Lots 1, 2, 3, 4 and 5 on RP186598 and Lot 101 on SP334082.

Stormwater that is not contaminated by the activity includes stormwater runoff from external or undisturbed catchments.

Substantial low frequency noise means a noise emission that has an unbalanced frequency spectrum shown in a one-third octave band measurement, with a predominant component within the frequency range 10 to 200 Hz. It includes any noise emission likely to cause an overall sound pressure level at a sensitive place exceeding 55 $dB_{(Z)}$.

Trigger values are physicochemical, parameter-specific measurement values used to indicate a condition where an environmental value or sensitive receptor may be at low, moderate or high risk, or some other risk-related indicator.

Uncontrolled discharges means the discharge of waters without any action being undertaken to cause the discharge, or increase the volume of the discharge.

Vibration is the oscillating or periodic motion of a particle, group of particles, or solid object about its equilibrium position.

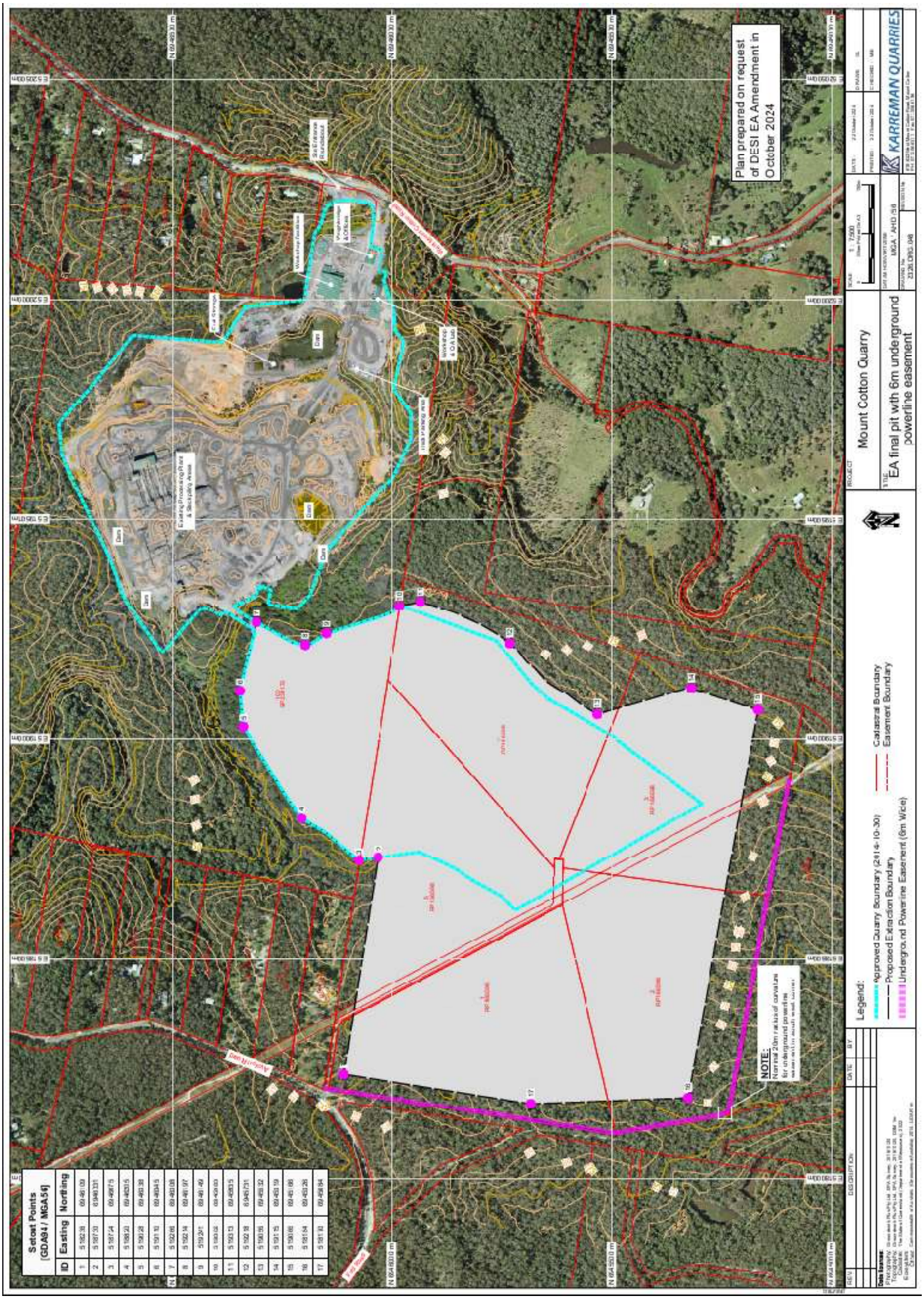
Waters includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water, natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

You means the holder of the environmental authority.

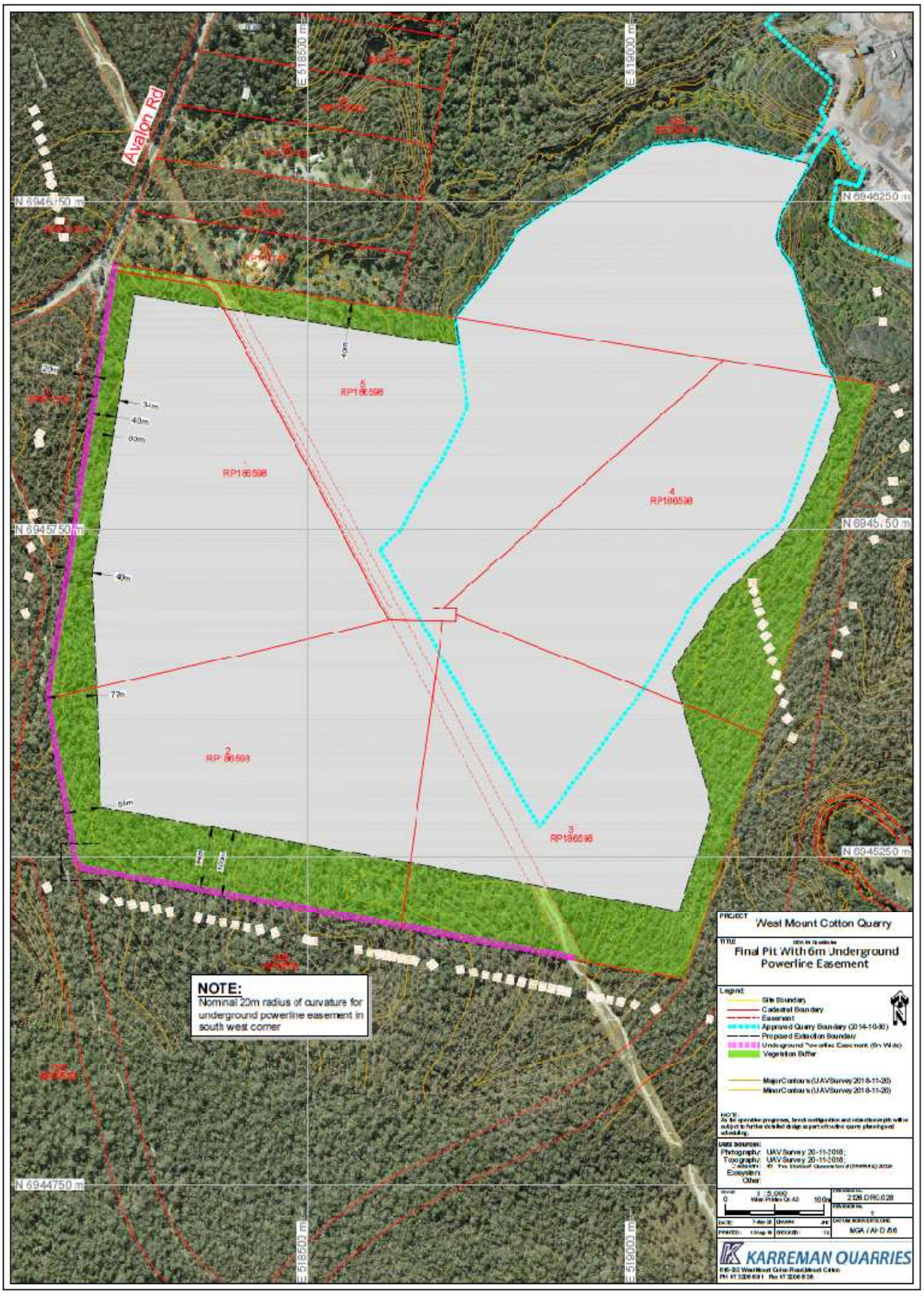
Appendix A: West Mount Cotton Quarry Processing Plant & Stockpile Areas



Appendix B: Map 1 West Mount Cotton Quarry Extraction Pit, Vegetation Buffer and Powerline Easement – 2326.DRG.048



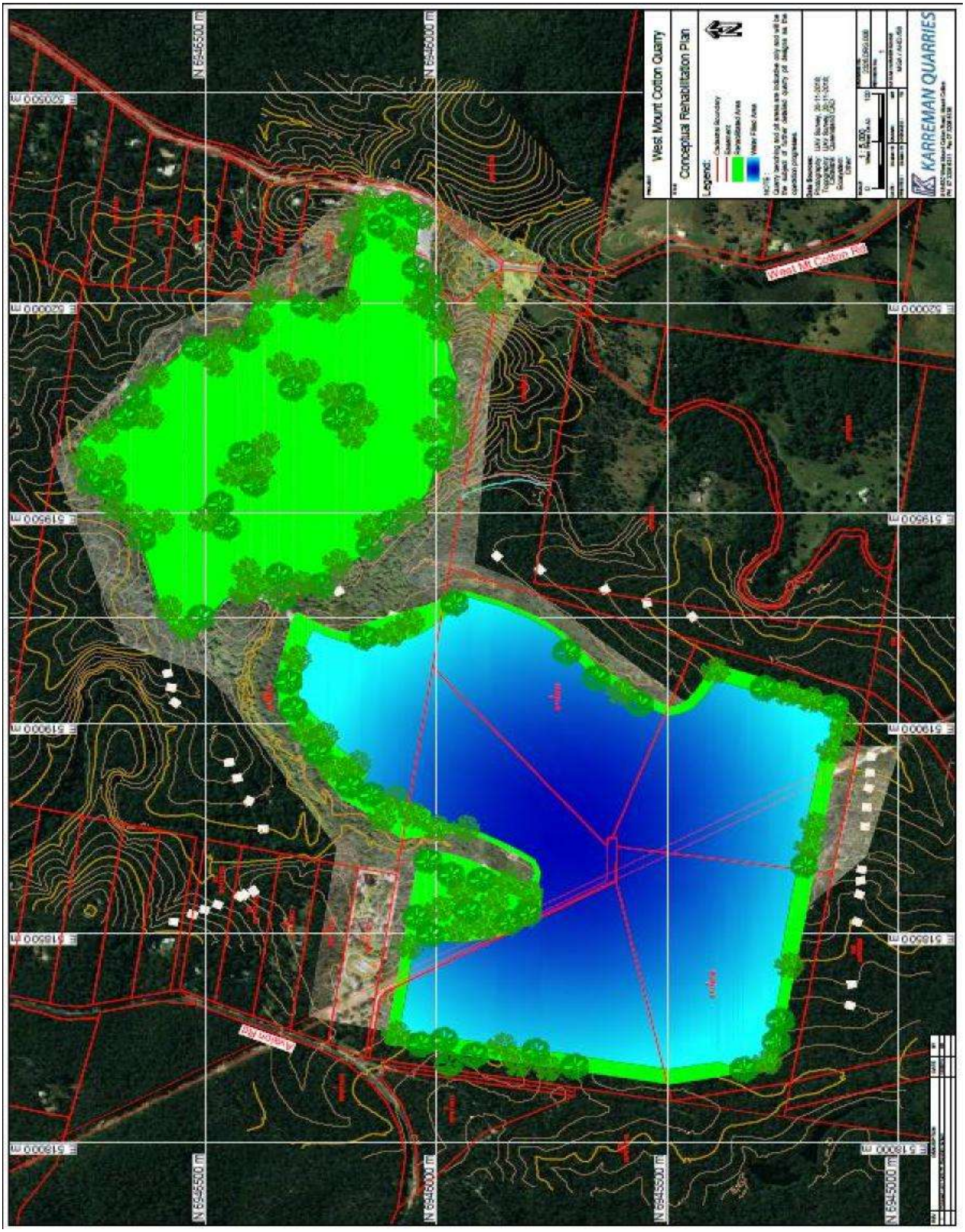
Appendix B: Map 2 West Mount Cotton Quarry Extraction Pit, Vegetation Buffer and Powerline Easement – 2326.DRG.028



Appendix C: Extraction Pit boundary GPS coordinates.

Extraction Boundary [GDA94/MGA56]		
ID	**Easting**	**Northing**
1	518236.248	6946108.757
2	518730.447	6946031.295
3	518724.342	6946074.715
4	518820.082	6946204.930
5	519028.358	6946338.215
6	519109.583	6946345.467
7	519265.806	6946307.903
8	519214.544	6946197.164
9	519241.186	6946148.875
10	519303.039	6945982.315
11	519312.691	6945935.016
12	519213.243	6945725.552
13	519056.111	6945532.116
14	519114.997	6945318.583
15	519066.113	6945166.358
16	518183.699	6945325.874
17	518170.225	6945684.294

Appendix D – West Mount Cotton Quarry Rehabilitation Plan



End of Conditions Part 1

Conditions of environmental authority

Part 2 (P2) – Common Conditions for extraction activities undertaken at the locations mentioned below: End of Cambrook Road, Esk Qld 4312

Environmentally relevant activity	Location
ERA 16 Extractive and screening activities Threshold 2(a) - extracting, other than by dredging, in a year, 5,000t to 100,000t of material	Brisbane River adjacent to Lot 2 on Plan SP188914 (previously Lot 48 on Plan RP14947)

The environmentally relevant activities conducted at the locations as described above must be conducted in accordance with the following conditions.

Agency interest: General	
Condition number	**Condition**
G1	**Prevent and /or minimise likelihood of environmental harm** In carrying out the ERA, reasonable and practicable measures must be taken to prevent or minimise the likelihood of environmental harm being caused.
G2	**Maintenance of measures, plant and equipment** Ensure that: a) all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority are installed; b) such measures, plant and equipment are maintained in a proper and efficient condition; and c) such measures, plant and equipment are operated in a proper manner.
G3	**Site Based Management Plan** From commencement of the ERA, a Site Based Management Plan (SBMP) must be implemented. The SBMP must identify all sources of environmental harm, including but not limited to the actual and potential release of all contaminants, the potential impact thereof and what actions will be taken to prevent the likelihood of environmental harm being caused. The SBMP must also provide for the review and 'continual improvement' in the overall environmental performance of the ERA. The SBMP must address the following matters in relation to the ERA: a) the holder's commitment to achieve specified and relevant environmental b) goals; c) identification of environmental issues and potential impacts; d) control measures for routine operations to minimise likelihood of causation of environmental harm; e) contingency plans and emergency procedures for non-routine situations which may cause environmental harm; f) organisational structure and responsibility;

	g) effective communication; h) monitoring of contaminant releases; i) conducting environmental impact assessments; j) staff training; k) record keeping; and l) periodic review of environmental performance and continual improvement.
G4	The SBMP must not be implemented or amended where such implementation or amendment would result in a contravention of any condition of this environmental authority.
G5	Details of any amendment of the SBMP must be submitted to the administering authority with the annual return which immediately follows the enactment of any such amendment.
G6	A copy of the SBMP must be kept at the authorised place.
G7	**Records** Record, compile and keep for a minimum of five years all monitoring results or other information required by or under this environmental authority and make those records available for inspection upon request by the administering authority.
G8	Where monitoring is required by or under this environmental authority, ensure that a competent person conducts all such monitoring.
G9	The total quantity of material that may be extracted under this permit in any 12 month period is 4,950m^3.
Schedule B: Air	
Condition number	**Condition**
A1	**Dust nuisance** The release of dust or other particulate matter resulting from the ERA must not cause an environmental nuisance at any sensitive place.
A2	For the purposes of condition A1 and without limiting the applicability of other criteria relevant in particular circumstances, the ERA would cause environmental nuisance where dust or other particulate matter resulting from the ERA exceeds the following limits when measured at a relevant sensitive place: a) dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard 3580.10.1 Methods for sampling and analysis of ambient air - Determination of particulates -Deposited matter - Gravimetric method; or b) a concentration of suspended particulate matter with an aerodynamic diameter of less than 10 micrometres (µm) (PM10) of 150 micrograms per cubic metre over a 24 hour averaging time at a sensitive place downwind, when monitored in accordance with: i. Australian Standard AS 3580.9.6 Methods for sampling and analysis of ambient air - Determination of particulate matter – PM10 high volume sampler with size-selective inlet - Gravimetric method; or

	ii. any alternative method of monitoring PM10 which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.
A3	Dust or other particulate monitoring must be undertaken as directed by the administering authority to investigate any complaint about dust nuisance being caused by the ERA, which complaint in the opinion of an authorised person is not frivolous, vexatious nor based on mistaken belief, and the results thereof notified to the administering authority within 14 days of receipt of the monitoring results. For the purposes of this condition, dust monitoring must be carried out by a competent person at a site relevant to the potentially affected sensitive place and at upwind control site(s) and must include: a) for a complaint alleging dust nuisance, dust deposition; and b) for a complaint alleging adverse health effects caused by dust, the concentration per cubic metre of suspended PM10 over a 24hr averaging time.
A4	If an authorised person's opinion is that monitoring results indicate environmental nuisance is being caused by dust or other particulate matter from the ERA, the holder must: a) address the complaint including the use of appropriate dispute resolution if required; or b) immediately implement abatement measures so that emission of dust or other particulate matter from the ERA does not result in further environmental nuisance.
A5	**Dust control - trafficable areas** Trafficable areas (including entry and exit points) must be maintained using reasonable and practicable measures necessary to minimise the release of wind blown or traffic generated dust to the atmosphere. Reasonable and practicable measures may include but are not limited to: a) keeping surfaces clean; b) sealing with bitumen or other suitable material; c) using water sprays; d) installing an effective truck body and wheel wash facility; and e) using dust suppressants and wind breaks.
A6	**Dust control – stockpiles** Stockpiles must be maintained using reasonable and practicable measures necessary to minimise the release of wind blown dust to the atmosphere. Reasonable and practicable measures may include but are not limited to: a) use of water sprays as required during winds likely to generate dust release; b) shielding and/or covering; and c) storage in enclosures.
Schedule C: Land	
Condition number	**Condition**
L1	**Land rehabilitation** Disturbed areas of the site must be rehabilitated in a manner such that:

	a) the landform and any surrounding buffer land does not prevent, stop or endanger fauna movement; b) a regular weed maintenance program is implemented in order to facilitate optimal success of native revegetation; c) potential for erosion of the site is minimised; d) stormwater, water or seepage released from the site does not contain contaminants including suspended solids, turbidity, total dissolved salts, pH, total iron, total aluminium, total manganese or total copper likely to cause environmental harm; e) the likelihood of environmental nuisance being caused by release of dust is minimised; f) the final landform is stable and not subject to slumping; and g) any potential acid forming materials in or on the site are encapsulated, submerged or treated so as to minimise environmental harm.
L2	**Land management** Contaminants must not be released thereby causing contaminated land.
L3	Spillage of any chemicals, flammable or combustible liquids must be contained on the site and rectified whereby material or serious environmental harm is not caused.
L4	All petroleum product storage must be designed, constructed and maintained in accordance with Australian Standard 1940 - Storage and Handling of Flammable or Combustible Liquids.

Schedule D: Noise	
Condition number	**Condition number**
N1	**Noise nuisance** Noise from the ERA must not cause an environmental nuisance at any sensitive place.
N2	Noise monitoring must be undertaken as directed by the administering authority to investigate any complaint about noise nuisance being caused by the ERA, which complaint in the opinion of an authorised person is not frivolous, vexatious nor based on mistaken belief, and the results thereof notified to the administering authority within 14 days following completion of monitoring. For the purposes of this condition, noise monitoring must be done by a competent person in accordance with the latest edition of the Environmental Protection Agency Noise Measurement Manual and include: a) $L_{A, max\ adj, T}$; b) relevant background sound level; c) the level and frequency of occurrence of impulsive or tonal noise; d) atmospheric conditions including wind speed and direction; and e) location, date and time of measurements.
N3	For the purposes of condition N1, the ERA will not cause environmental nuisance where noise from the ERA does not exceed the limits specified in Table 1 – Noise limits. **Table 1 — Noise limits**

Sound pressure level dB(A)	**Monday to Saturday**			**Sundays and public holidays**		
	7am – 6pm	**6pm – 10pm**	**10pm – 7am**	**9am – 6pm**	**6pm –10pm**	**10pm – 9am**

<table>
<tr><td></td><td>
<table>
<tr><td colspan="7">Noise measured at a ‘Noise sensitive place’</td></tr>
<tr><td>LA, max, adj, T</td><td>Background + 5 dB(A)</td><td>Background + 5 dB(A)</td><td>Background + 3 dB(A)</td><td>Background + 3 dB(A)</td><td>No audible</td><td>No audible</td></tr>
<tr><td colspan="7">Noise measured at a ‘Commercial place’</td></tr>
<tr><td>LA, max, adj, T</td><td>Background + 10 dB(A)</td><td>Background + 10 dB(A)</td><td>Background + 5 dB(A)</td><td>Background + 5 dB(A)</td><td>Background + 3 dB(A)</td><td>Background + 3 dB(A)</td></tr>
</table>
Where "T" is 10 minutes and "Background" means background sound pressure level measured in accordance with the latest edition of the administering authority’s Noise Measurement Manual.

NOTE: Table 1 does not purport to set operating hours for the ERA.</td></tr>
<tr><td>N4</td><td>If an authorised person's opinion is that monitoring results indicate environmental nuisance is being caused by noise from the ERA, the holder must:

a) address the complaint including the use of appropriate dispute resolution if required; or
b) immediately implement noise abatement measures so that emissions of noise from the ERA do not result in further environmental nuisance.</td></tr>
<tr><td colspan="2">Schedule E: Waste</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>WA1</td><td>All regulated waste removed from the site must be by a person who holds a current authority to do so under the Environmental Protection Act 1994.</td></tr>
<tr><td>WA2</td><td>Effective procedures must be implemented to ensure that wastes generated on the site are minimised, recycled, stored, handled and transferred in a proper and efficient manner, and so that disposal of such waste is at a facility lawfully able to do so.</td></tr>
<tr><td>WA3</td><td>The holder must not:

a) burn waste on the site;
b) allow waste to be burned on the site; or
c) remove waste from the site for burning elsewhere.</td></tr>
<tr><td colspan="2">Schedule F: Water</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>W1</td><td>Effective erosion protection and sediment control measures must be implemented and maintained to minimise erosion and release of sediment to any waters outside the site.</td></tr>
<tr><td>W2</td><td>Contaminants must not be released from the site to any waters, or the bed and banks of any waters.</td></tr>
</table>

Definitions

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

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

"annual return" means the return required by the annual notice (under section 316 of the Environment Protection Act 1994) for the section 73F registration certificate that applies to this environmental authority.

"approval" means this environmental authority and the conditions contained within.

"authorised person" means a person holding office as an authorised person under an appointment under the Environmental Protection Act 1994 by the chief executive.

"authorised place" means the place authorised under this environmental authority for the carrying out of the specified environmentally relevant activities.

"commercial place" means a place used as an office or for business or commercial purposes.

"competent person" means a person with sufficient demonstrated skill, knowledge and qualifications required to carry out a task to a necessary standard for protection of the environment.

"dwelling" means any of the following structures or vehicles that is principally used as a residence —

a) a house, unit, motel, nursing home or other building or part of a building;

b) a caravan, mobile home or other vehicle or structure on land;

c) a water craft in a marina.

"environmental nuisance" has the same meaning as is defined in section 15 of the Environmental Protection Act 1994.

"ERA" means ERA 16.2(a).

"hazardous contaminant" under schedule 3 of the Environmental Protection Act 1994 means a contaminant that, if improperly treated, stored, disposed of or otherwise managed, is likely to cause serious or material environmental harm because of:

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

b) its physical, chemical or infectious characteristics (e.g. spills of mercury, cyanide, petrol, diesel or oil).

"intrusive noise" means noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibration:

a) is clearly audible to, or can be felt by, an individual; and

b) annoys the individual.

In determining whether a noise annoys an individual and is unreasonably intrusive, regard must be given to Australian Standard 1055.2 — 1997 Acoustics — Description and Measurement of Environmental Noise Part 2 — Application to Specific Situations.

"LA, max adj, T" means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using Fast response.

"land" in the "Schedule C – Land" of this document means land excluding waters and the atmosphere.

"noise sensitive place" means:

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

b) a motel, hotel or hostel;

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

d) a medical centre or hospital;

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

f) a public thoroughfare, park or gardens;

and includes that part of the curtilage of a building or structure used for purposes usually or reasonably associated with the building or structure.

"noxious" means harmful or injurious to health or physical well being.

"nuisance sensitive place" includes:

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

b) a motel, hotel or hostel; or

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

d) a medical centre or hospital; or

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

f) a public thoroughfare, park or gardens;

and includes a place within the curtilage of such a place reasonably used by persons at that place.

"offensive" means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive.

"protected area" means:

a) a protected area under the Nature Conservation Act 1992; or

b) a marine park under the Marine Parks Act 2004; or

c) a World Heritage Area.

"quarry material" means material on State coastal land, other than a mineral within the meaning of any Act relating to mining. Material includes for example stone, gravel, sand, rock, clay, mud, silt and soil, unless it is removed from a culvert, stormwater drain or other drainage infrastructure as waste material.

"regulated waste" means non-domestic waste mentioned in Schedule 7 of the Environmental Protection Regulation 2008 (whether or not it has been treated or immobilised), and includes:

a) for an element - any chemical compound containing the element; and

b) anything that has contained the waste.

"sensitive place" includes:

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

b) a motel, hotel or hostel;

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

d) a medical centre or hospital;

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

f) a public thoroughfare, park or gardens; and

g) a commercial place;

and includes that part of the curtilage of a building or structure used for purposes usually or reasonably associated with the building or structure.

"site" means the place to which this environmental authority relates or the premises to which this environmental authority relates.

“watercourse" means a river, creek or stream in which water flows permanently or intermittently -

a) in a natural channel, whether artificially improved or not; or

b) in an artificial channel that has changed the course of the watercourse.

"waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part-thereof.

"you" or **"holder"** means the holder of an environmental authority or person acting under an environmental authority.

End of Conditions P2

Conditions of environmental authority

Part 3 (P3) – Common Conditions for extraction, screening activities undertaken at the locations mentioned below: Sinnamons Lane, Harlin Qld 4306

Environmentally relevant activity	Location
ERA 16 – Extractive and screening activities 2(b) - extracting, other than by dredging, in a year, more than 100,000t to 1,000,000t of material.	- 2/RP77219 - 88/RP28542 - 17/RP146684 - 30/Plan SP258504 - 5/RP134429 - That part of the bed and banks of the Brisbane River for access purposes (Area between Lot 88 on Plan RP28542 and Lot 30 on Plan SP258504).
ERA 16 Extractive and screening activities 3(b) - screening, in a year, more than 100,000t to 1,000,000t of material.	- 2/RP77219 - 88/RP28542 - 17/RP146684 - 30/Plan SP258504 - 5/RP134429 - That part of the bed and banks of the Brisbane River for access purposes (Area between Lot 88 on Plan RP28542 and Lot 30 on Plan SP258504).

The environmentally relevant activities conducted at the locations as described above must be conducted in accordance with the following conditions.

Agency interest: General	
Condition number	**Condition**
G1	**Approved place** This environmental authority authorises the development and operation of an extraction and screening activity at a rate not exceeding 1,000,000 tonnes in any period of one year, at the part of the place ("the approved place") depicted in the plan comprising - Drawing Number 11-079-4b Figure 4 — Operational Phase dated 12/04/12.
G2	The design and layout of facilities or infrastructure associated with the extraction of hardrock material must conform to the plan comprising - Drawing number 11-079-4b Figure 4 — Operational Phase, dated 12/04/12.
G3	**Copy of environmental authority must be kept at approved place** The person undertaking the activity to which this environmental authority relates must keep a copy of this environmental authority in hardcopy form at the approved place.
G4	**Prevent or minimise likelihood of environmental harm** In carrying out the activity to which this environmental authority relates, all reasonable and practicable measures must be taken to prevent or minimise the likelihood of environmental harm being caused.
G5	**Maintenance of measures, plant and equipment** The person undertaking the activity to which this environmental authority relates must do all of the following: a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; b) maintain such measures, plant and equipment in a proper and efficient condition; and c) operate such measures, plant and equipment in a proper and efficient manner.
G6	**Records** If a condition of this environmental authority requires the person undertaking the activity to which this environmental authority relates to make or keep a record (however described), or prepare a document, the person must do all of the following: a) keep the record or document at the approved place (or another place approved, in writing, by the administering authority); b) keep the record or document in a place that is accessible by all persons engaged in the activity; c) produce the record or document for inspection by an authorised person or the administering authority if requested; d) for each document or record made or created in response to a monitoring requirement, reporting requirement, investigation or incident — keep the record for a minimum of five (5) years from the date the document is made or created; and

	e) if the record of document is sent (in any form) to the administering authority — keep a copy of the document in accordance with paragraphs (a) to (d). *Note - Unless a condition of this approval requires a document to be made or kept in a specific format (e.g. in hardcopy format), the Electronic Transactions (Queensland) Act 2001 applies to the document.*
G7	**Site based management plan** The person undertaking the activity to which this environmental authority relates must keep and implement a site-based management plan (SBMP) that provides for the management of the actual and potential environmental impacts resulting from the carrying out of the activity to which this environmental authority relates, and includes the following: a) the functions and responsibilities of person's engaged in the activity (either by name or position) at the approved place; b) day-to-day procedures for the management of the activity specifically with respect to the management of aspects of the activity that cause, or may cause, a release of contaminants to the environment; c) the processes and procedures involved with the various aspects of the extraction phase of this process; d) the processes and procedures involved with the various aspects involved with crushing and screening of any raw materials won from this site or others; e) the processes and procedures involved with the stockpiling and loading of any materials won as a part of this activity; f) obligations for monitoring the operation and performance of all phases of the extraction, crushing and screening processes, and reporting particular noncompliance to the administering authority under a condition of this environmental authority or otherwise in accordance with any legally imposed duty to notify (however described) under the *Environmental Protection Act 1994*; g) describes training requirements for all persons engaged in the activity, including general environmental awareness, incident response, reporting and emergency procedures; h) the location and instruction for the operation and maintenance of all equipment used for clean-up of any spillages; i) investigation and response protocols to be utilised by persons engaged in the activity in response to any emergency, incident or event (including noncompliance events), the circumstances in which those protocols are to be applied, and describing escalation criteria for such events; j) the sampling and analysis regimes under the conditions of this environmental authority, identifying the person(s) responsible for taking monitoring samples; k) procedures for dealing with any abnormal situation or operation of the infrastructure used in the activity to which this environmental authority relates (including any uncontrolled release of contaminants to the environment, accident, incident or emergency or any situation or event that indicates non-compliance with the development conditions of this environmental authority has occurred or may occur); and l) response procedures for employees undertaking the activity arising from any emergency, incident or event (including any abnormal operating condition or circumstance observed or recorded in connection with the activity), including any protocols for the investigating any potential environmental harm arising from such emergencies, incidents or events.

G8	The person undertaking the activity to which this environmental authority relates must: a) review and update the SBMP annually to ensure that it remains current, is consistent with the conditions of this environmental authority, and reflects contemporary practice at the approved place; and b) ensure a record of the review containing at least the following information is kept: i. the name of the person who undertook the review; ii. the position the person who undertook the review holds in the organisation's hierarchy, or if the person is an external consultant, the person's position in that consultancy; iii. the date on which the review was undertaken; iv. any findings of the review; and v. any actions implemented as a result of such findings, including timelines by when such actions will be implemented.
G9	The person undertaking the activity to which this environmental authority relates must give the administering authority a copy of the SBMP: a) within three (3) months from the day this environmental authority takes effect; and b) if the plan in G8(a) is amended or replaced — within fourteen (14) days of the plan being amended or replaced. *Note: This requirement may be satisfied by giving the administering authority a copy of the SBMP in electronic format.*
G10	The person undertaking the activity to which this environmental relates must ensure the SBMP is kept in hardcopy form at the approved place.
G11	**Production capacity** The person undertaking the activity to which environmental authority relates must keep all records of materials despatched from the site at monthly intervals and provide annual summary.
G12	**Notification of certain releases or events to be supplies to the administering authority** The person undertaking the activity to which this environmental authority relates must notify the administering authority as soon as practicable after becoming aware of any release of contaminants to land or waters, unless one or more of the following applies: a) the administering authority has been given notice of the release or event under any statutorily imposed duty to notify under the *Environmental Protection Act 1994*; or b) the release or event is done in compliance with an emergency direction or a statutory notice or obligation under the Environmental Protection Act 1994 given or issued to the person.
G13	If the person undertaking the activity to which this environmental authority relates is required to give notification to the administering authority of an event or release under condition G12, the notification must include the following information: a) the name and telephone number of a designated contact person who is able to talk with the administering authority on behalf of the operator in relation to the event or release;

	b) the location of the event or release, including a physical address and lot on plan description (if available) and any other information necessary to identify the specific location of the event or release; c) the time of the event or release (if known); d) the time the person became aware of the event or release; and e) if the event or release has impacted, or may impact on, a person's land — whether the person whose land has been, or may be, impacted by the event or release has been notified. *NOTE 1: This condition can be satisfied by supplying the information either verbally or in writing.* *NOTE 2: In certain circumstances, the duty to notify of unlawful serious or material environmental harm under the Environmental Protection Act 1994 obliges the person undertaking the activity that caused, or threatens, the harm to notify affected landholders.*
G14	If the person undertaking the activity to which this environmental authority relates is required under condition G12 to notify the administering authority of an event or release, the person must, within fourteen (14) days from the date of the event or release, give the administering authority a written notice that includes the following information: a) the name of the holder of the registration certificate under which the activity to which this environmental authority relates is being undertaken, the environmental authority number; b) the information included in the notification supplied under condition G13, c) including any updates or changes to that information of which the person has become aware as a result of any incident response or investigation; d) if the event or release involved a chemical, a material safety data sheet (MSDS) for the chemical; e) a description of any observed effects on the environment of the release or event, and any anticipated long-term impacts; f) the suspected cause of the release or event; g) the results of any environmental sampling performed in relation to the release or event; h) actions taken to mitigate any environmental harm (including environmental nuisance) caused by the release or event; i) proposed actions to prevent a recurrence of the release or event; and j) that the written advice is submitted under a condition of this environmental authority. *NOTE: This statement differentiates a notification made under a condition of this approval and a notification made under a statutorily imposed duty under the* Environmental Protection Act 1994*.*
G15	**Record certain releases and events** The person undertaking the activity to which this environmental authority relates must make a record of the following events: a) the time, date, duration and description of equipment malfunctions or failure where the malfunction results in the release of any contaminants (including noise and emissions to air) to the environment; or b) description of any uncontrolled release of contaminants, including an estimation of the volume of contaminants released in the event.
G16	**Monitoring**

	The person undertaking the activity to which this environmental authority relates must ensure that all monitoring required under a condition of this environmental authority is performed by a person(s) with appropriate experience or qualifications.
G17	**Complaint Response** The person undertaking the activity must record the following details for all complaints received: a) time and date the complaint was received; b) method of communication used for complaint received (i.e. telephone, email, letter, or in person); c) name and contact details (i.e. address, telephone number(s), and email address) of the complainant, if these details were disclosed as part of the complaint; d) time and date of the complaint; e) nature and source of the complaint; f) reasons for the complaint; g) any investigations undertaken, date investigations were undertaken and name of the responsible person; h) any conclusions formed; and i) any actions taken or proposed to be taken, date actions taken or proposed to be taken and name of the responsible person.
G18	**Spill kit** The person undertaking the activity to which this environmental authority relates must ensure an appropriate spill kit, protective equipment and relevant instructions and emergency procedures or guidelines for the management of wastes, regulated wastes and chemicals associated with the activity to which this environmental authority relates are kept at the approved place and are accessible at all times to any person undertaking the activity.
G19	The person undertaking the activity to which this environmental authority relates must: a) ensure that any person engaged in the activity to which this environmental authority relates is trained in the use of the spill kit and the emergency procedures or guidelines; b) keep a record of the names of person's that have received such training, the date the training was provided, and the details of the training provided.
G20	**Supervision of activity** The person undertaking the activity to which this environmental authority relates must ensure that at all times while the activity is operating: a) at least one person is present and whose duties include i. supervising any persons entering the facility; and ii. supervising the extraction, storage, loading and removal of extracted material; b) at least one person is responsible and contactable concerning the management of the facility and whose duties include: i. managing any persons working in the facility; ii. managing the carrying out of the activity; and iii. managing any events, emergencies or incidents that may occur.
G21	Notification of commencement of activity

	The person undertaking the activity to which this environmental authority relates must notify the administering authority in writing within five (5) business days after the following: a) the commencement of works to prepare the approved place for the carrying out of the activity; and b) the commencement of the carrying out of the activity (i.e. the initial extraction of materials).

Schedule B: Air	
Condition number	**Condition**
A1	**Dust Nuisance** The release of dust or particulate matter resulting from the activity to which this environmental authority relates must not cause, or be likely to cause, an environmental nuisance at or beyond the boundary of the approved place.
A2	The dust deposition rate and concentration of PM10 and PMTSP must not exceed the limits specified in Table 1 - Dust and Particulate Matter for the contaminant when measured from a nuisance sensitive or commercial place in accordance with the measurement method specified in Table 1 - Dust and particulate matter.

Table 1 – Dust and particle matter

Contaminant	Measure	Limit	Measurement method
Dust	Deposition rate	120 mg/m2/day	Australian Standard AS3580.10.1 of 2003 (or more recent editions)
PM_{10}	Concentration	50µg/m3 averaged over 24 hours Note - This limit is not to be exceeded on more than 5 days per year	Either of the following: (a) AS3580.9.6 of 2003 (or more recent editions); or (b) AS3580.9.8 of 200 (or more recent editions)
Total Suspended Solids **(PM_{TSP})**	Concentration	90 µg/m3 as an annual average	Australian Standard AS/NZ3580.9.3.2003 (or more recent editions)

Notes:

- *Australian Standard AS3580.9.6 of 2003 (or more recent editions) Ambient Air — Particulate matter —Determination of suspended particulate matter PM10 high volume sampler with size selective inlet — Gravimetric method*

	• *Australian Standard AS3580.9.8:2008 (or more recent editions) Methods for sampling and analysis of ambient air — Determination of suspended particulate matter — PM10 continuous direct mass method using tapered element oscillating microbalance (TEOM) analyser.* • *Australian Standard AS/NZ3580.9.3.2003 (or more recent editions) Methods for sampling and analysis of ambient air method 9.3: Determination of suspended particulate matter — Total suspended particulate matter (TSP) — High volume sampler gravimetric method.* • *Any alternative method of monitoring which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.*
A3	Despite condition G5, the person undertaking the activity to which this environmental authority relates is required to install equipment to measure the dust deposition rate or the concentration of particulate matter (PM10 and PMTSP) for condition A2 only if directed to in writing by the administering authority or an authorised person to undertake monitoring for those contaminants. The person undertaking the activity relates must also ensure that an additional sample is taken at a location upwind of the alleged source to assist in the determination of the impact the alleged source on the sensitive receptor.
A4	**Dust and Particulate Matter Control — Trafficable Areas** The person undertaking the activity to which this environmental authority relates must ensure that areas subject to frequent vehicle movement are sealed or otherwise consolidated in such a way that dust emitted from the ordinary use of vehicles is minimised.
A5	**Minimising windborne emissions from vehicles** To reduce the frequency and severity of windborne emissions arising from the transportation of the extracted material or any resultant product of any crushing or screening process, the person undertaking the activity to which this environmental authority relates must do all of the following: a) for materials that are transported in a solid state; i. if the load is dry at the time of loading, or otherwise emitting dustduring manual handling or loading — ensure loads of material are wet down prior to transportation; ii. ensure any material that may have accumulated on vehicle side rails, tail gates or draw bars is removed prior to the vehicle leaving the loading place; iii. ensure the vehicle is of a type that is suitable to fully contain the material in transit; iv. ensure the material is not tracked by vehicles outside the approved place; v. ensure vehicles carrying any products from this site are covered by a tarpaulin or solid cover before leaving the approved place; and b) for materials transported in a liquid or semi-liquid state - ensure the material is transported in fully enclosed vessels or tankers of a type and design that is suitable to contain the material whilst in transit.
A6	**Dust and Particulate Matter Control - crushing and screening** To reduce the frequency and severity of windborne releases of dust or particulate matter from activities associated with any crushing or screening process, the person undertaking the activity to which this environmental authority relates must do all of the following: a) ensure that screening is ceased during periods where dry or gusty winds are present;

	b) prior to transferring any materials that have the potential to cause dust emissions, ensure that these materials are maintained in a damp state via sprays at transfer or manual handling points; c) keep surfaces, other than those upon which raw material and finished product are stockpiled, clean of any loose material; and d) where there is evidence of off-site release of dust or particulate matter — install windbreaks or another form of shielding that will effectively reduce the horizontal wind velocity at the source areas for those emissions.
A7	**Dust and Particulate Matter Control - stockpiling raw and finished materials** To reduce the frequency or severity of releases of dust or particulate matter from the stockpiling of raw and finished materials, the person undertaking the activity to which this environmental authority relates must do all of the following: a) when any stockpiled materials are observed to be visibly releasing dust — wet down the stockpile or apply any other material that may effectively bind the surface of the stockpile; b) keep all areas, other than those used to stockpile material, free of any loose material with notable dust generation potential; and c) where there is evidence of off-site release of dust or particulate matter — install windbreaks or another form of shielding that will effectively reduce the horizontal wind velocity at the source areas for those emissions.
A8	**Dust Suppression** The person undertaking the activity to which this environmental authority relates must ensure that a means of applying water for the purpose of dust suppression, (for example a water truck fitted with an appropriate means of broadcasting water), is kept at the place to which this environmental authority relates at all times.
A9	The person undertaking the activity to which this environmental authority relates must ensure that the rate of application of water for dust suppression is appropriate for the existing conditions and does not result in ponding or pooling of water on any surface.
A10	**Noxious or Offensive Odours** The release of noxious or offensive odours or any other noxious or offensive airborne contaminants resulting from the activity to which this environmental authority relates must not cause, or be likely to cause, a nuisance at or beyond the boundary of the approved place.
A11	**Monitoring Obligations in Respect to Air Quality — Odour** The person undertaking the activity to which this environmental authority relates must, if directed in writing by the administering authority or an authorised person, undertake or commission the undertaking of odour monitoring for contaminants released from the approved place at the site and other locations relevant to ascertaining the odour at affected premises.
A12	Odour monitoring must be performed by an independent person or body possessing appropriate experience and qualifications to perform the required measurements. Odour monitoring must be conducted in accordance with Australian and New Zealand Standard AS/NZS 4323.3:2001, Stationary source emissions — Determination of odour concentration by dynamic olfactometry; and a method as approved by Queensland, New South Wales of Victorian regulatory agencies.
A13	**Monitoring Station**

	The person undertaking the activity to which this environmental authority relates must install a monitoring station, in accordance with Australian Standard AS2923 — 1987 (Ambient air — guide for measurement of horizontal wind for air quality applications) (or a later standard), to continually record and log the following parameters: a) barometric pressure; b) humidity; c) temperature; d) rainfall; and e) wind speed and direction.
A14	**Reasonable adjustment of practices, procedures or infrastructure for resolving nuisance complaints** The person undertaking the activity to which this environmental authority relates must investigate, or commission the investigation of any complaints of nuisance caused by noxious or offensive odours or dust or particulates and, if the complaints are validated, make reasonable adjustments to processes or equipment to prevent a recurrence.
Schedule C: Land	
Condition number	**Condition**
L1	Contaminants must not be released to land.
L2	The person undertaking the activity to which this environmental authority relates must ensure that erosion protection and sediment control measures are implemented and maintained to prevent and minimise erosion and the release of sediment during the preparatory phase of this development, prior to the extraction activity occurring at the approved place.
L3	**Chemical storage** The person undertaking the activity to which this environmental authority relates must ensure all chemicals and fuels stored at the approved place in containers of 200 litres or more (other than chemicals stored in intermediate bulk containers) are stored in a bunded area(s).
L4	The person undertaking the activity to which this environmental authority relates must ensure that chemicals, other than those to which condition L3 apply, are stored in one or more of the following ways: a) in a bunded area; b) in purpose-built containers (e.g. intermediate bulk containers) that conform to the relevant Australian standard for the storage of such materials; or c) for containers of 20 litres or less — in a designated storage area.
L5	The person undertaking the activity to which this environmental authority relates must ensure that all bunded areas are: a) of a type and design sufficient to contain at least 110% of the volume of the largest container within the bund; b) impervious to the material to the chemical to be stored in the bund; and c) maintained and managed in a way that ensures all the following apply: d) The capacity of the bund is not compromised by the entrapment of water; e) materials or equipment are not stored within the bund; f) all drains or valves servicing the bund are protected from accidental damage; g) all drains or valves are closed and locked off at all times when not being used to empty the bund; or

	h) the bund is maintained in a serviceable condition and is not compromised by any gap, crack or other damage.
L6	The person undertaking the activity to which this environmental authority relates must not cause or permit chemicals that are incompatible to be stored within the same bund or containment area.
L7	All tanker loading and unloading areas must be bunded so that the capacity of the bund is sufficient to contain one hundred per cent (100%) of the largest compartment of any tanker using the area.
L8	The person undertaking the activity to which this environmental authority relates must ensure that all fixed chemical storage tanks are roofed.
L9	The person undertaking the activity to which this environmental authority relates must not cause or permit the release of any stormwater from a bund unless it is free of contaminants prior to being discharged to a stormwater detention pond or irrigated to land.
L10	The person undertaking the activity to which this environmental authority relates must ensure that all empty drums are stored with their closures in place.
L11	**Vehicle maintenance** The maintenance and cleaning of vehicles, equipment or other plant equipment must be carried out in areas where any contaminants are captured and contained such as an on-site containment system to prevent any release of contaminants to land.
L12	**Erosion control** Erosion protection and sediment control measures must be implemented and maintained at the place to which this environmental authority relates.
L13	**Extraction and Rehabilitation Plan** The person undertaking the activity to which this environmental authority relates must keep and implement an Extraction and Rehabilitation Plan (ERP) at all times while this environmental authority is in effect that provides for progressive extraction and rehabilitation activities at the place to which this environmental authority relates, and includes the following: a) the period, not greater than 2 years, over which the ERP applies; b) a plan illustrating where all current and proposed activities are to be carried out at the approved place including undisturbed, disturbed, stockpile, loading and rehabilitation areas over the plan period; c) calculation of projected surface area of disturbed areas that exist at the commencement of the plan period and will exist at the end of the plan period; d) details of extraction depths and methods to be applied to win material over the plan period; e) extraction rate projected over the plan period; f) demonstrating that the proposed extraction does not compromise the person's ability to rehabilitate disturbed areas to meet final landform design or requirements under this environmental authority or other approvals applying to the land comprising the approved place; g) identification of soil characteristics, soil analysis, and soil separation for rehabilitation of areas subject to extraction over the plan period; h) design objectives for rehabilitation of disturbed areas taking into consideration surrounding undisturbed areas and future land use(s) for the site; i) details of rehabilitation methods to be applied to disturbed areas over the plan period; j) demonstrating ongoing suitability landform design criteria and design plan including end of extraction design and is consistent with the proposed future land use(s); k) identify success criteria for the disturbed areas including revegetation success rate

	and final landform; l) plans to revegetate areas and establish corridors over the plan period; m) describe rehabilitation indicators and the monitoring program to be used; n) a rehabilitation program for land disturbed or proposed to be disturbed at the approved place including rehabilitation maintenance and redesign if required; and o) the status of rehabilitation progress occurring at the approved place.
L14	The person undertaking the activity to which this environmental authority relates must give the administering authority a copy of the ERP: a) within three (3) months after this environmental authority takes effect; and b) if the ERP in paragraph (a) is amended or replaced — within fourteen (14) days of the ERP being amended or replaced.
L15	The person undertaking the activity to which this environmental authority relates must ensure the ERP is kept in hardcopy format.
L16	The person undertaking the activity to which this environmental authority relates must: a) review and update the ERP at least once in each period of 2 years to ensure that it remains current, is consistent with the conditions of this environmental authority, and reflects contemporary activities and practices at the approved place; and b) ensure a record of the review is kept at the approved place.
L17	**Rehabilitation** The person undertaking the activity to which this environmental authority relates must ensure that rehabilitation of disturbed areas takes place progressively as works are staged and new areas of extraction have commenced.
L18	For applying condition L17, rehabilitation must commence on those areas disturbed by extraction activities, apart from those areas currently being actively utilised for extraction activities, within three (3) months after the completion of the extraction activities in those areas. Rehabilitation of disturbed areas includes slopes, borrow pits, stockpile storage areas, and sedimentation basins in a manner such that: a) all disturbed land is reshaped to a stable landform and is not subject to slumping; b) the potential for erosion is minimised; c) the surface drainage lines are re-established; d) suitable topsoil is reinstated on areas where revegetation is possible; suitable vegetation species and density of cover are established which is consistent with the surrounding undisturbed areas or the site's proposed future land use; e) the likelihood of environmental nuisance being caused by release of dust is minimised; and f) infrastructure is removed from the site.
L19	**Maintenance of rehabilitated areas** Maintenance of rehabilitated areas must take place to ensure: a) erosion control measures remain effective; b) plants show growth; c) any weed infestations are removed and prevented from recurring; d) plants that have not taken, died or have become diseased are removed and disposed of appropriately and replaced as soon as practical; e) significant plant losses are examined for possible causes; and f) the rehabilitated land should be capable of withstanding normal disturbances such as fire or flood.
L20	Maintenance of these rehabilitated areas must continue until such time as the operator can demonstrate that the areas has been successfully rehabilitated to a condition that will comply

	with condition L18 and that the rehabilitation works in the area is self-sustaining and no longer relies on the intervention of the person undertaking the activity.

Schedule D: Noise

Condition number	Condition number
N1	**Noise nuisance** Noise from activities must not cause an environmental nuisance at any noise affected premises.
N2	Subject to condition N4, the sound pressure level dB(A) from the activity to which this environmental authority relates, but excluding blasting associated with the activity, must not exceed the maximum compliance limit specified in the following table when measured using the acoustic descriptor, and at the location and at the times, specified in the Table 2 - Noise Limits.

Table 2 – Noise Limits

Location	Noise Level dB(A) measured as	Monday to Saturday	Monday to Friday	Saturday	Sundays and public holidays
		6:00am to 7:00am (Despatch only)	7:00 am to 6:00 pm	7:00am to 4:00pm	
At a noise sensitive place	LAeq, adi 15mln	37	40	40	No audible noise
At a commercial place	LAeq, adi 15mln	42	45	45	No audible noise

NOTE: Section 440R of the Environmental Protection Act 1994 limits the hours at which building work causing an audible noise may be undertaken, and applies to building work undertaken as part of the activity to which this environmental authority relates.

N3	There must be no audible noise emitted from the activity to which this environmental authority relates at the boundary of the approved place at times outside of the hours of day specified in Table 2 - Noise Limits.
N4	The maximum compliance limits in condition N2 relating to noise measured at a nuisance sensitive place apply only to a nuisance sensitive place that is outside the approved place and is one of the following: a) a nuisance sensitive place that is established on the date this environmental authority takes effect; or b) to a nuisance sensitive place to which N4(a) does not apply — only if the nuisance sensitive place is at least the same distance from the approved place as a nuisance sensitive place to which N4(a) applies.
N5	Administering authority may require noise monitoring to be undertaken

<table>
<tr><td></td><td>If directed by the administering authority or an authorised person, noise monitoring, which addresses the following issues, must be undertaken to investigate any complaint of noise nuisance, and the results of the monitoring are given or sent to the administering authority or authorised person within fourteen (14) days of the completion of the monitoring:
a) background noise;
i. $L_{A10, adj, 15}$;
ii. $L_{A1, adj, 15}$;
iii. $L_{Aeq, adj, 15}$;
b) the level and frequency or occurrence of impulsive or tonal noise;
c) atmospheric conditions including wind speed and direction;
d) effects due to extraneous factors such as traffic noise; and
e) location, date and time of recording.</td></tr>
<tr><td>N6</td><td>The method of measurement and reporting of noise levels must comply with the latest edition of the administering authority's Noise Measurement Manual.</td></tr>
<tr><td>N7</td><td>Blasting – Vibration
Blasting must not be carried out other than during the times specified in Table 3 - Vibration Limits at a nuisance sensitive place.</td></tr>
<tr><td>N8</td><td>Vibration emitted from activities associated with the approved place must not exceed the levels specified in Table 3 - Vibration Limits.
Table 3 — Vibration Limits
<table>
<tr><th>Monday to Friday
9:00am to 3:00pm</th><th>Saturday
9:00am to 1:00pm</th><th>Sundays, public holidays and times outside of those specified</th></tr>
<tr><td colspan="2">Ground borne vibration must not exceed a peak particle velocity of 5mm per second for nine out of ten consecutive blasts initiated, regardless of the interval between blasts; and</td><td rowspan="2">No blasting to occur</td></tr>
<tr><td colspan="2">Ground borne vibration must not exceed a peak particle velocity of 10mm per second for any blast</td></tr>
</table></td></tr>
<tr><td>N9</td><td>The limits imposed by condition N8 relating to vibration measured at a nuisance sensitive place apply only to a nuisance sensitive place that is outside of the approved place.</td></tr>
<tr><td>N10</td><td>Vibration monitoring
For vibration monitoring the ground-borne vibration transducer (or array) must be attached to a mass of at least thirty (30) kilograms to ensure good coupling with the ground where the blast site and the measurement site cannot be shown to be on the same underlying strata. The mass must be buried so that its uppermost surface is at the same level as the ground surface.</td></tr>
<tr><td>N11</td><td>The ground borne vibration transducer (or array) must be placed at a distance of at least the longest dimension of the foundations of a noise-affected building or structure away from such building or structure and between that building or structure and the site of the blasting.</td></tr>
<tr><td>N12</td><td>Airblast Overpressure Limits</td></tr>
</table>

<table>
<tr><td></td><td>The airblast overpressure emitted during any must not exceed the limits imposed Table 4 - Airblast Overpressure Limits.

Table 4 – Airblast Overpressure Limits
<table>
<tr><th>Monday to Friday
9:00am to 3:00pm</th><th>Saturday
9:00am to 1:00pm</th><th>Sundays, public holidays and times outside of those specified</th></tr>
<tr><td colspan="2">115 dB (linear) peak for nine out of any ten consecutive blasts initiated, regardless of the interval between blasts; and</td><td rowspan="2">No blasting to occur</td></tr>
<tr><td colspan="2">120 dB (linear) peak for any blast.</td></tr>
</table></td></tr>
<tr><td>N13</td><td>Outdoor measurement of airblast overpressure

Measurement of airblast overpressure must be taken at a location that is exposed to the direction of blasting and at least four (4) meters from any affected building or structure or within the boundary of a noise sensitive place, at a position of between 1.2 and 1.5 meters above the ground.</td></tr>
<tr><td>N14</td><td>The method of measurement of the noise from blasting must be measured using noise measurement equipment with a lower limiting frequency of 2Hz (-3dB response point of the measurement system) and a detector onset time of not greater than 100 microseconds as assessed in accordance with the standards AS 1EC61672.1-2004 and AS IEC61672.2-2004.</td></tr>
<tr><td>N15</td><td>Airblast overpressure and ground vibration monitoring

If requested by the administering authority, or an authorised person, airblast overpressure and ground vibration monitoring must be undertaken to investigate any complaint of vibration or nuisance noise associated with blasting, and the results notified within 14 days to the administering authority. Monitoring must include:

a) maximum instantaneous charge (MIC) in kg;
b) location of the blast within the site (including which bench level);
c) airblast overpressure level, dB (linear) peak
d) peak particle velocity (mm/s);
e) location, date and time of recording;
f) the level and frequency of occurrence of impulsive or tonal noise;
g) meteorological conditions (including temperature, relative humidity, temperature gradient, cloud cover, windspeed and direction);
h) distance from the blast site to the noise-affected building/s, structures or the boundary of any noise-sensitive place; and
i) effects due to other extraneous factors.</td></tr>
<tr><td>N16</td><td>Obligation to investigate complaints

Subject to condition N17, the person undertaking the activity to which this environmental authority relates must investigate, or commission the investigation of, all complaints alleging airblast overpressure, vibration or noise nuisance from the activity to which this environmental authority relates.</td></tr>
</table>

	NOTE: The form of any investigations made under condition N17 should be sufficient to enable a conclusion about the validity of the complaint to be made, but do not necessarily require formal noise monitoring in the form required under condition N15.
N17	The obligation for the person undertaking the activity to which the environmental authority relates to investigate a nuisance complaint is negated if all the following apply: a) the facts and circumstances forming the basis for the complaint are substantially the same as those alleged in a former complaint by the same complainant; b) the results of an investigation into the former complaint was that the complaint cannot be substantiated; and c) the administering authority or an authorised person has not, by written- notice, otherwise revived the obligation to investigate the complaint.
N18	**Reasonable adjustment for validated nuisance complaints** The person undertaking the activity to which this environmental authority relates must make reasonable adjustment of practices, procedures or equipment to resolve any validated complaint investigated under condition N16. Examples of a reasonable adjustment include: a) changing the times of the day at which particular actions giving rise to the complaint happen; b) installing or replacing acoustic housing of equipment; or c) enclosing, covering or closing open or exposed infrastructure if enclosing, covering or closing the infrastructure would not compromise or reduce its effectiveness. *NOTE: Refer to section 319 of the Environmental Protection Act 1994 (General environmental duty) for things that must be considered in determining whether a change is a reasonable adjustment.*
Schedule E: Water	
Condition number	**Condition**
W1	**Release to waters** A person must not cause or permit contaminants to be released to waters.
W2	**Stormwater management** The person undertaking the activity to which this environmental authority relates must ensure that suitable banks or diversion drains are installed and maintained to exclude stormwater runoff from entering any ponds or other structures used for the storage or treatment of contaminants or wastes.
W3	All waters flowing over any disturbed areas, such as extraction areas, stockpiling areas and unsealed roads, must be diverted to an onsite sediment basin.
W4	**Dust suppression** The person undertaking the activity to which this environmental authority relates must only use either uncontaminated stormwater or settled/treated water from any of the sedimentation basins for the purpose of dust suppression.

W5	**Vehicle Maintenance** The person undertaking the activity to which this environmental authority relates must ensure that: a) the maintenance and cleaning of vehicles or other equipment associated with the activity is carried out in an area designated for the service or cleaning of such vehicles or equipment; and b) the designated area under paragraph (a) is serviced by infrastructure of a type and design that is suitable to prevent the release of contaminants to any waters, roadside gutter or drain.
W6	**Stormwater Management Plan** Prior to commencing the activity to which this environmental authority relates, the operator must develop and implement a Stormwater Management Plan (SWP) which includes: a) the reuse, treatment and disposal of any contaminated stormwater collected from this approved site; b) prevention of incident stormwater and stormwater runoff from contacting any waste materials, disturbed areas (including extraction areas, stockpile areas and any unsealed roads) or any other contaminants; c) diversion of upstream stormwater runoff away from areas containing wastes, areas of exposed soil or other disturbed areas, or other potential contaminants; d) minimisation of the size of any areas of exposed soil or other disturbed areas; and e) the installation of appropriately designed and sized silt traps, erosion protection measures, sediment control measures (including sedimentation basins) and stormwater diversion drains.
W7	The person undertaking the activity to which this environmental authority relates must: a) periodically review and revise, as necessary, the SWP every two (2) years to ensure that it accurately reflects the current processes employed onsite and the activities being undertaken; and b) if the SWP is amended or replaced, provide the administering authority with a copy within fourteen (14) days of the SWP being amended or replaced. *NOTE: This requirement may be satisfied by giving the administering authority a copy of the SWP in electronic format.*
W8	**Sedimentation Basins** Any pond, basin or dam installed onsite for the purpose of sediment control must be designed and constructed to comply with the following: a) the minimum size of any sediment basin must be sufficient to contain the contaminated runoff expected from a 24 hour storm with an average recurrence interval of at least 1 in 5 years; b) water retaining structures must be designed to prevent an influx of surface water from adjacent water courses from a 24 hour storm event with an average recurrence interval of at least 1 in 5 years; c) drainage structures must be sufficient to convey the runoff from a 24 hour storm with an average recurrence interval of at least 1 in 5 years; d) in the event of site flooding, flow paths must be designed to minimise resuspension of fines or slimes; and

	e) any release point must be constructed in such a way as to prevent erosion and scouring of the area to which it discharges.
W9	All sedimentation basins used for the storage or treatment of waters at or on the authorised place must be constructed, installed and maintained: a) so as to minimise the likelihood of any release of effluent through the bed or banks of the basin to any waters (including ground water); b) so that a freeboard of not less than 0.5 meters is maintained and recorded at all times; and c) in such a way as to ensure the stability of the basin's construction.
W10	**Environmental monitoring and sampling following release event** If contaminants are released to waters, the person undertaking the activity to which this environmental authority relates must, if directed by the administering authority or an authorised person, do all of the following: a) take environmental samples to ascertain or confirm the nature and extent of contamination arising from the release; b) lodge such samples with a laboratory for analysis using a NATA-accredited methodology relevant to the analysis that must be performed; c) give or send a copy of the results of such analysis the administering authority with the report submitted to the administering authority under condition G14.

Schedule F: Waste	
Condition number	**Condition**
WA1	**Waste management Plan** From the commencement of the activity to which this environmental authority relates, a waste management program must be implemented: a) the types and amounts of waste generated by the activity; b) procedures for identifying and implementing opportunities to improve the waste management practices for dealing with accidents, spills and other incidents that may impact on the waste management practices employed (e.g. opportunities for beneficial reuse); c) procedures for dealing with accidents, spills or other incidents that may impact on waste management; d) details of any accredited management system employed, or planned to be employed, to deal with waste generated onsite; e) how often the performance of the waste management practices will be assessed by the person undertaking the activity; and f) the indicators or other criteria.
WA2	**Waste Disposal** Under no circumstances is any waste, other than any spoil or overburden removed as part of the extractive activity, or any by-products of the crushing and screening process permitted by this environmental authority, permitted to be disposed of to any of the voids created by this activity.

Definitions

Words and phrases used throughout this licence or environmental authority are defined below:

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

"µg/m3" means micrograms per cubic metre.

"µS/cm" means microsiemens per centimetre.

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

"approved place" means the site situated at Sinnamons Lane, Harlin (Lot 2 on RP77219, Lot 88 on RP28542, Lot 17 on RP146684, Lot 30 on SP258504, Lot 5 on RP134429 and that part of the bed and banks of the Brisbane River between Lot 88 on RP28542 and Lot 30 on SP258504).

"background noise" means LA90, T being the A-weighted sound pressure level exceeded for 90 percent of the time period not less than 15 minutes, using Fast response.

"commercial place" means a place, other than a nuisance sensitive place, used as an office or for business or commercial purposes including the place within the curtilage of that place reasonably used by persons at that place.

"dB" means decibel.

"dewatered" means the material does not yield free liquids.

"drum" means any individual container for holding a chemical and having a capacity of not more than 250 litres (L).

"dwelling" means any of the following structures or vehicles that is principally used as a residence:

a) a house, unit, motel, nursing home or other building or part of a building;

b) a caravan, mobile home or other vehicle or structure on land;

c) a water craft in a marina.

"extraction facility" means the facility incorporating the ERA/s approved to be carried out under this environmental authority.

"intrusive noise" means noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibration:

a) is clearly audible to, or can be felt by, an individual; and

b) annoys the individual.

In determining whether a noise annoys an individual and is unreasonably intrusive, regard must be given to Australian Standard 1055.2 — 1997 Acoustics — Description and Measurement of Environmental Noise Part 2 — Application to Specific Situations.

"LA10, 10min" means an A-weighted sound pressure level equal to or exceeded for 10% of a 10 minute sample period, measured using fast ("F") response.

"LA1, adj, 10min" means an A-weighted sound pressure level equal to or exceeded for 1% of a 10 minute sample period, measured using fast ("F") response, and adjusted for impulsiveness and tonality.

"LA10, adj, 10min" means an A-weighted sound pressure level equal to or exceeded for 10% of a 10 minute sample period, measured using fast ("F") response, and adjusted for impulsiveness and tonality.

"LAeq, adj, 15min" means an A-weighted sound pressure level of a continuous steady sound, adjusted for tonal character, that within a 1 hour period has the same mean square sound pressure of a sound that varies with time.

"land" in Schedule C - Land of the Parts comprising this environmental authority, excludes waters and the atmosphere.

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

"mg/L" means milligrams per litre.

"m/s" means metres per second.

"monitoring" in relation to monitoring the impact of an activity on the receiving environment, includes analysing, assessing, examining, inspecting, measuring, modelling or reporting any of the following:

a) the quantity, quality, characteristics, timing and variability of the release of the contaminant

b) the effectiveness of control measures

c) characteristics of, and impact on, the receiving environment;

d) the effectiveness of remedial or rehabilitation measures.

"noxious" means harmful or injurious to health or physical well being.

"nuisance sensitive place" means a place, including the curtilage of the place ordinarily used by persons at that place, that is one or more of the following:

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

b) a motel, hotel or hostel;

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

d) a medical centre or hospital;

e) a protected area under the Nature Conservation Act 1992, the Marine Parks Act 2004 or

f) a World Heritage Area; or

g) a public thoroughfare, park or gardens.

"offensive" means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive.

"PM2.5" means particulate matter with an aerodynamic diameter of less than or equal to 2.5um.

“PM10" means particulate matter with an aerodynamic diameter of less than or equal to 10um.

"protected area" means:

a) a protected area under the Nature Conservation Act 1992;

b) a marine park under the Marine Parks Act 2004; or

c) a World Heritage Area.

"screen" includes washing, crushing, grinding, milling, sizing or separating material.

"site" means land or tidal waters on or in which it is proposed to carry out the development approved under this environmental authority.

"waters" includes any river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

"works" or **"operation"** means the development approved under this environmental authority.

End of Conditions Part 3

END OF ENVIRONMENTAL AUTHORITY