

Permit

Environmental Protection Act 1994

Environmental Authority EPPR00443213

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

Environmental authority number: EPPR00443213

Environmental authority takes effect on the day the authority is issued.

The anniversary date of this environmental authority is 28 March each year.

Environmental authority holder

Name	Registered address
Lemura Sand Co. Pty. Ltd. as trustee for Lemura/ Bugeja Discretionary Trust	Level 1, 15 Lake Street, CAIRNS QLD 4870

Environmentally relevant activity and location details

Environmentally relevant activities	Locations
ERA 60 – 4, maintaining a decommissioned waste disposal facility ERA 62 – Resource recovery and transfer facility operation, 1 operating a facility for receiving and sorting, dismantling, baling or temporarily storing — (a) scrap metal, non-putrescible waste or green waste only ERA 54 – Mechanical waste reprocessing, 2 operating a facility for receiving and mechanically reprocessing, in a year, the following quantity of general waste — (c) more than 10,000t ERA 54 – Mechanical waste reprocessing, 3 operating a facility for receiving and mechanically reprocessing, in a year, the following quantity of category 2 regulated waste — (b) more than 5,000t but not more than 10,000t	Barron River Sand Plant Site: Lot 8/SP341832 Lot 2/SP173007
ERA 55 – Other waste reprocessing or treatment, 2 operating a facility for receiving and either reprocessing or treating, in a year, the following quantity of category 2 regulated waste — (a) 5,000t or less	Lot 2/SP173007

Environmentally relevant activities	Locations
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	Lot 8/SP341832
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	Lot 2/SP173007
	Lot 2/SP284222
	Lot 4/SP284222
ERA 54 – Mechanical waste reprocessing, 2 operating a facility for receiving and mechanically reprocessing, in a year, the following quantity of general waste— (c) more than 10,000t	Mobile and temporary within the State of Queensland
ERA 57 Regulated waste transport 1: Transporting end-of-life tyres	

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.

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).

Permit

Environmental Authority EPPR00443213



Signature

Scott Blanchard

Department of the Environment, Tourism, Science and Innovation

Delegate of the administering authority

Environmental Protection Act 1994

11 May 2026

Date

Enquiries:

Waste Assessment Business Centre

GPO Box 2454, Brisbane QLD 4001

Phone: 1300 130 372

Email: palm@detsi.qld.gov.au

Conditions of environmental authority

Part 1: Mobile and temporary within the State of Queensland

- ERA 57 Regulated waste transport 1: Transporting end-of-life tyres

Part 2: Barron River Sand Plant Site - Lot 8/SP341832 and Lot 2/SP173007

- ERA 60 – 4, maintaining a decommissioned waste disposal facility
- ERA 62 – Resource recovery and transfer facility operation, 1 operating a facility for receiving and sorting, dismantling, baling or temporarily storing— (a) scrap metal, non-putrescible waste or green waste only
- ERA 54 – Mechanical waste reprocessing, 2 operating a facility for receiving and mechanically reprocessing, in a year, the following quantity of general waste— (c) more than 10,000t
- ERA 54 – Mechanical waste reprocessing, 3 operating a facility for receiving and mechanically reprocessing, in a year, the following quantity of category 2 regulated waste — (b) more than 5,000t but not more than 10,000t

Barron River Sand Plant Site - Lot 2/SP173007 Only

- ERA 55- Other waste reprocessing or treatment, 2 operating a facility for receiving and either reprocessing or treating, in a year, the following quantity of category 2 regulated waste— (a) 5,000t or less

Part 3: Mobile and temporary within the State of Queensland

- ERA 54 – Mechanical waste reprocessing, 2 operating a facility for receiving and mechanically reprocessing, in a year, the following quantity of general waste— (c) more than 10,000t

Part 4: Lot 8/SP341832, Lot 2/SP173007, Lot 2/SP284222, and Lot 4/SP284222

- 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
- 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

Part 1 Standard Conditions of environmental authority**Location:** Mobile and temporary through the State of Queensland**Relevant activity:** ERA 57 Regulated waste transport 1: Transporting end-of-life tyres**Standard conditions**

This environmental authority contains standard conditions. Standard conditions are identified by (S) after the condition number.

Eligibility criteria

Eligibility criteria
Regulated waste is transported by vehicles

Conditions of environmental authority

Condition number	Condition
Agency Interest: General	
G1 (S)	All reasonable steps must be taken to ensure the activity complies with the eligibility criteria.
G2 (S)	The activity must be undertaken by vehicles whose registration details must be provided to the administering authority before commencing the activity. The administering authority must be notified within 10 business days of any change to the vehicle registration details.
G3 (S)	The activity is undertaken by vehicles which are covered by a policy of insurance or other form of indemnity, for a sum that is not less than \$100,000, in respect of: a) personal injury, death, property damage and other damage (except consequential economic loss) arising out of fire, explosion, leakage or spillage of dangerous goods in, on or from the vehicle or a container on the vehicle; and b) costs incurred by or on behalf of a Commonwealth, State or Territory government authority in a clean-up resulting from any event of the kind referred to in subparagraph a) of this condition.
G4 (S)	Any breach of a condition of this environmental authority must be reported to the administering authority as soon as practicable within 24 hours of becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions taken.
G5 (S)	The activity must be undertaken in accordance with written procedures that: a) identify potential risks to the environment from the activity during routine operations and emergencies; and b) establish and maintain control measures that minimise the potential for environmental harm; and

Condition number	Condition
	c) ensure plant, equipment and measures are maintained in a proper and effective condition; and d) ensure plant, equipment and measures are operated in a proper and effective manner; and e) ensure that staff are trained and aware of their obligations under the <i>Environmental Protection Act 1994</i>; and f) ensure that reviews of environmental performance are undertaken and recorded at least annually.
G6 (S)	The activity must not cause environmental nuisance at a sensitive place .
G7 (S)	All records required by conditions of this authority must be kept for at least five years and provided to the administering authority within 10 business days upon its request.
G8 (S)	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 (S)	All vehicles, including tanks, containers and secondary containers used to transport regulated waste must be: a) maintained at all times to prevent any spillage or leakage of regulated waste or other contaminants; and b) kept free of regulated waste residues at all times when not in use; and c) must be effectively cleaned.
G10 (S)	At all times, a copy of: a) this environmental authority issued by the administering authority for regulated waste transport activities; and b) the appropriate emergency guides in relation to the waste transported must be carried in the cabin of each vehicle used to transport regulated waste and when requested, be presented to an authorised officer of the administering authority or relevant regulatory agency of the State or Territory in which the vehicle is travelling. <i>Note: Standards Australia publish numerous guides including HB 76-2004 Dangerous Goods – Initial emergency response guide, and emergency procedure guides (AS1678 Series) which are available from SAI Global Business Publishing. Further, when developing emergency guides in relation to PCB's, reference should be made to the United States Environmental Protection Agency 40CFR Part 761: Polychlorinated biphenyls: notification and manifesting for PCB waste activities: clause number 761.125</i>
G11 (S)	When transporting regulated waste: a) any regulated waste not contained within weatherproof packages must be covered during transport to contain the load and protect it from wind and rain; and b) all regulated waste containers must be mounted securely to the vehicle and contained within the tray of the vehicle.

Condition number	Condition
G12 (S)	When transporting packaged regulated waste , the top of any container must not protrude above the sides or gates of the vehicle by more than 30% of the height of the container.
G13 (S)	Road tank vehicles must: a) be constructed to minimise instability and risk of rollover; and b) be provided with roll-over protection to protect all tanks, components and fittings on the upper and side surfaces of the tank in the event of the vehicle rolling over or becoming inverted; and c) be provided with an effective bumper and/or barrier system to protect the tank and fittings from rear impact.
Agency Interest: Waste	
W1 (S)	Waste transported under the activity must be contained within a suitably designed waste containment structure that is constructed, operated and maintained in accordance with accepted engineering standards currently appropriate for the purpose for which the structure is intended to be used.
W2 (S)	Regulated waste must not be removed or released from the vehicle other than: a) for the purpose of consolidating grease trap and/or other oily wastes; or b) at a facility that can lawfully accept the waste.
W3 (S)	Incompatible wastes must not be placed in the same container or transported in such a way that mixing may occur.
W4 (S)	A record of all regulated waste (excluding trackable waste) must be kept detailing the following information for every load of waste transported: a) date of pickup of waste, including where loads are consolidated; b) description of waste; c) quantity of waste; d) origin of the waste; and e) destination of the waste. <i>Note: Additional waste tracking requirements apply to the transportation of trackable waste in accordance with the Environmental Protection Regulation 2019.</i>
W5 (S)	Vehicles and load compartments must be locked when unattended.

Part 1 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.

Term	Definition
Activity	means the environmentally relevant activity to which this environmental authority relates. An activity may be undertaken on the whole or a part of a site.
ADG Code	means the <i>Australian code for the transport of dangerous goods by road and rail, 7th edition</i> , or more recent versions as they become available.
Administering authority	means the Department of Environment and Science or its successor.
Combination vehicle	means a road vehicle that includes one or more trailers.
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)	as defined in Section 11 of the <i>Environmental Protection Act 1994</i> .
Environmental harm	as defined in Section 14 of the <i>Environmental Protection Act 1994</i> .
Environmental nuisance	as defined in Section 15 of the <i>Environmental Protection Act 1994</i> .
Incompatible waste	means waste that may chemically react when: a) placed in proximity to other wastes; and/or b) mixed with other wastes.
Land	means land excluding waters and the atmosphere.
Measures	has the broadest interpretation and includes plant, equipment, physical objects, monitoring, procedures, actions, directions and competencies.
Minimise	means minimise by taking all reasonable and practical measures to minimise the adverse effect having regard to the following matters: a) the nature of the harm or potential harm b) the sensitivity of the receiving environment c) the current state of technical knowledge for the activity d) the likelihood of successful application of different measures that might be taken to minimise the adverse effects e) the financial implications of the different measures as they would relate to the type of activity f) if the adverse effect is caused by the location of the activity being carried out, whether it is feasible to carry out the activity at another location.
Sealed	means fully contained within. Where polythene sheeting has been used, adhesive tape should be applied to the entire length of every overlap.

Term	Definition
Sensitive place	includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place: a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or b) a motel, hotel or hostel; or c) a kindergarten, school, university or other educational institution; or d) a medical centre or hospital; or e) a protected area under the <i>Nature Conservation Act 1992</i>, the <i>Marine Parks Act 2004</i> or a World Heritage Area; or f) a public park or garden; or g) for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2019.
Packaged regulated waste	means regulated waste in a container with: a) a capacity of not more than 450 litres; and b) a nett mass of not more than 400 kilograms.
Records	includes breach notifications, written procedures, analysis results, monitoring reports and monitoring programs required under a condition of this environmental authority.
Regulated waste	As defined in Section 42 of the <i>Environmental Protection Regulation 2019</i> .
Regulatory agency	means the agency of a State or Territory that has responsibility for regulating the transport of regulated wastes in that State or Territory.
Related waste	means waste that constitutes, or is contaminated with, chemicals, cytotoxic drugs, human body parts, pharmaceutical products or radioactive substances.
Risk phrase	means a phrase stated in the National Occupational Health and Safety Commission's document entitled <i>National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012(1994)]</i> , or more recent versions, that gives information about the substance's hazards.
Road tank vehicle	means a truck, trailer or semi-trailer or unit in a road train, incorporating a tank, or having a tank or tanks mounted thereon, either permanently or temporarily (as defined in AS 2809.1–2008 — road tank vehicles for dangerous goods).
Safety phrase	means a phrase stated in National Occupational Health and Safety Commission's document entitled <i>National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012(1994)]</i> , or more recent versions, that gives information about: a) the safe use of the substance; or b) the personal protective equipment for the substance.
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.

Term	Definition
Vehicle	Means a road vehicle including an articulated or combination vehicle, and does not include a train, boat or aircraft.
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.

Part 2 Site Specific Conditions of environmental authority - Barron River Sand Plant Site

Location: Lot 8/SP341832 and Lot 2/SP173007

Relevant activities: ERA 60 – 4, maintaining a decommissioned waste disposal facility

ERA 62 – Resource recovery and transfer facility operation, 1 operating a facility for receiving and sorting, dismantling, baling or temporarily storing — (a) scrap metal, non-putrescible waste or green waste only

ERA 54 – Mechanical waste reprocessing, 2 operating a facility for receiving and mechanically reprocessing, in a year, the following quantity of general waste — (c) more than 10,000t

ERA 54 – Mechanical waste reprocessing, 3 operating a facility for receiving and mechanically reprocessing, in a year, the following quantity of category 2 regulated waste — (b) more than 5,000t but not more than 10,000t

Location: Lot 2/SP173007 Only

Relevant activities: ERA 55 – Other waste reprocessing or treatment, 2 operating a facility for receiving and either reprocessing or treating, in a year, the following quantity of category 2 regulated waste — (a) 5,000t or less

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

Agency Interest: General	
Condition Number	Condition
2 – G1	All reasonable and practicable measures must be taken to minimise the likelihood of environmental harm being caused.
2 – G2	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.
2 – G3	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the administering authority, upon request.
2 – G4	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.
2 – G5	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.
2 – G6	The activity must be undertaken in accordance with written procedures that: a) identify potential risks to the environment from the activity during routine operations, closure and an emergency; b) establish and maintain control measures that minimise the potential for environmental harm;

	c) ensure plant, equipment and measures are maintained in a proper and effective condition; d) ensure plant, equipment and measures are operated in a proper and effective manner; e) ensure that staff are trained and aware of their obligations under the <i>Environmental Protection Act 1994</i>; and f) ensure that reviews of environmental performance are undertaken at least annually.
2 – G7	All reasonable and practicable measures must be taken to contain litter within the waste operations area, and retrieve litter released.
2 – G8	Financial Assurance By 31 October 2024, an application to amend the financial assurance for the activity in accordance with section 312 of the <i>Environmental Protection Act 1994</i> , must be submitted to the administering authority.
2 – G9	From 31 October 2024, an application to amend the financial assurance for the activity in accordance with section 312 of the <i>Environmental Protection Act 1994</i> , must be submitted to the administering authority at least once every 5 years.
2 – G10	The amount and form of financial assurance decided by the administering authority in accordance with Chapter 5, Part 14 of the <i>Environmental Protection Act 1994</i> , must be given to the administering authority within 20 business days of the decision date.
2 – G11	Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system.
2 – G12	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.
Agency Interest: Land	
Condition Number	Condition
2 – L1	A program of post closure care must be implemented and must be effective in preventing and/or minimising the likelihood of environmental harm being caused. The program must include but not be limited to maintaining: a) the structural integrity and effectiveness of the final capping system to the landfill unit to minimise: i. infiltration of water into the landfill unit; and ii. water ponding on the surface of the landfill capping area; and iii. the likelihood of any erosion occurring to either the final capping system or rehabilitated areas; and b) rehabilitated areas to: i. ensure the final landform is stable and protects public safety; and ii. minimise the potential for environmental nuisance caused by dust; and iii. ensure suitable species of vegetation for the location are established and sustained for earthen surfaces; and c) the surface water quality monitoring system to detect contaminants within 'pond 1' and 'pond 2' as depicted in <i>Appendix 1- Part 2 & 3 Site Plan</i>; and

	d) the groundwater monitoring system to detect any release of contaminants to groundwater.
2 – L2	Post-closure care of the landfill unit must be conducted for a period of 30 years or until the administering authority determines, on the basis of correct information, that the landfill unit and surrounding site are stable and that no release of waste materials, leachate, landfill gas or other contaminants that may cause environmental harm is likely.
2 – L3	The surface profile of the final capping system must ensure that stormwater runoff from capped areas of the landfill is directed to 'pond 1' or 'pond 2' as depicted in <i>Appendix 1 – Part 2 & 3 Site Plan</i> .
2 – L4	The construction and maintenance of 'pond 1' as depicted in <i>Appendix 1 – Part 2 & 3 Site Plan</i>, including the bund walls and base of the pond, must: a) be compacted to 97% standard compaction in accordance with MRTS04¹ – General Earthworks: Table 15.3(b) – density requirements; and b) conform with 1:1 part clayey sand to gravel / crushed concrete mixture; and c) have a minimum depth of 1m; and d) be constructed in accordance with <i>Appendix 2 – Bund wall construction plan</i> and within 12 months of the decommissioned waste disposal facility being approved by the administering authority; and e) ensure the works as constructed are certified by an appropriate qualified person.
2 – L5	The landfill capping system must be maintained to ensure that the requirements stated in condition 2 - L4 (a), (b) and (c) are met.
Agency Interest: Air	
Condition Number	Condition
2 – 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.
2 – A2	Dust and particulate matter emissions must not exceed the following concentration at any sensitive place or commercial place: a) Dust deposition of 120 milligrams per square metre per day, averaged over 1 month, when monitored in accordance with the most recent version of Australian Standard AS/NZS3580.10.1:2016: Methods for sampling and analysis of ambient air—Determination of particulate matter—Deposited matter – Gravimetric method (or more recent editions). b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometres (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24-hour averaging time, when monitored in accordance with the most recent version of either: i. Australian Standard AS/NZS3580.9.6:2015: Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM10 high volume sampler with size-selective inlet – Gravimetric method; or ii. Australian Standard AS 3580.9.8- 2008: Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM10 continuous direct mass method using a tapered element oscillating microbalance (TEOM) analyser.

¹ MRTS04 General Earthworks: Transport and Main Roads specifications 2021

	c) A concentration of particulate matter with an aerodynamic diameter of less than 2.5 micrometre (PM2.5) suspended in the atmosphere of 25 micrograms per cubic metre over a 24 hour averaging time, when monitored in accordance with Australian Standard AS 3580.9.10 of 2017 (or more recent editions) or any other method approved by the administering authority. d) A concentration of respirable crystalline silica (as PM2.5) of 3 micrograms per cubic metre annual average period, when monitored in accordance with Australian Standard AS 3580.9.10 (or more recent editions) or any other method approved by the administering authority. e) Any alternative methods of monitoring, which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority, are also acceptable.
2 – A3	Any measured exceedances of PM10, PM2.5, crystalline silica (as PM2.5) or dust deposition as specified in condition 2-A2 must be investigated to determine the influence of emissions from the site on sensitive place or commercial place. A report by an appropriately qualified person(s) must be prepared and submitted to the administering authority every 12 months with an annual return and include: a) Review of monitoring locations; b) Frequency and cause of any exceedances of air quality objectives measured by the monitoring program; c) Dust complaints; d) Future progression of the activities; and e) Locations of sensitive receptors relative to the activities.
2 – A4	Stockpiles must be maintained using all reasonable and practicable measures necessary to minimise the release of windblown dust and particulate matter to the atmosphere. Reasonable and practicable measures may include but are not limited to: a) use of water spraying as required during winds likely to generate such releases; and b) use of dust-suppressant shielding.
Agency Interest: Noise	
Condition number	Condition
2 – N1	Noise from the activity must not exceed the levels identified in <i>Table 1— Noise Limits</i> when measured in accordance with the associated monitoring requirements.

Table 1- Noise Limits

Noise level dB(A)	Monday to Saturday			Sundays and public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
	Noise measured at a 'Noise sensitive place'					
LA10, adj, 10 mins	B/g + 5	B/g + 3	B/g + 0	B/g + 5	B/g + 3	B/g + 0
LA1, adj, 10 mins	B/g + 10	B/g + 8	B/g + 5	B/g + 10	B/g + 8	B/g + 5
maxL _{pA} , 1hr	--	--	47	--	--	47
	Noise measured at a 'Commercial place'					
LA10, adj, 10 mins	B/g + 10	B/g + 10	B/g + 5	B/g + 10	B/g + 10	B/g + 5
LA1, adj, 10 mins	B/g + 15	B/g + 15	B/g + 10	B/g + 15	B/g + 15	B/g + 10

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.
- 4) Monitoring must include:
 - i. LA_{eq}, adj, T;
 - ii. Background noise (Background) as LA 90, adj, T;
 - iii. MaxL_{pA}, T;
 - iv. the level and frequency of occurrence of any impulsive or tonal noise;
 - v. atmospheric conditions including wind speed and direction;
 - vi. effects due to extraneous factors such as traffic noise; and
 - vii. location, date and time of recording.
- 5) All monitoring must be performed by an appropriately qualified person(s).

Agency Interest: Water

Condition number	Condition
2 – WT1	Contaminants must not be released to any waters in a manner that causes or is likely to cause environmental harm.
2 – WT2	Notwithstanding condition 2 - WT1, any release to waters must not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visually objectionable matter.
2 – WT3	Pond monitoring The monitoring of surface waters must be conducted at both 'pond 1' and 'pond 2', as depicted in <i>Appendix 1- Part 2 & 3 Site Plan</i> .

2 – WT4

You must monitor surface water for the parameters at the frequency specified, and comply with the limits defined in *Table 2 – Surface Water Monitoring* at the locations specified in condition 2-WT3.

Table 2- Surface Water Monitoring

Parameter	Units	Limit	Type of sample	Limit Type	Frequency
pH	pH Units	5.5 – 8.0	In-situ	Range	Weekly at the pond surface and monthly at one (1) metre vertical intervals to the pond floor
Electrical Conductivity	µS/cm	No Limit	In-situ	Monitoring only	
Dissolved Oxygen	mg/L	2 – 8 at the pond surface	In-situ	Range	
Turbidity	NTU	No limit	In-situ	Monitoring only	Monthly at the pond surface and at one (1) metre intervals to the pond floor
Total Organic Carbon	mg/L	No limit	Grab sample	Monitoring only	
Ammonia Nitrogen, Organic Nitrogen and Oxidised Nitrogen	mg/L	No limit	Grab sample	Monitoring only	

Associated monitoring requirements

- 1) All grab samples must be analysed by a laboratory that has National Association of Testing Authorities (NATA) accreditation for such analyses.
- 2) All monitoring devices must be correctly calibrated and maintained.
- 3) Monitoring must be in accordance with methods prescribed in the current edition of the administering authority's *Monitoring and Sampling Manual*.

2 – WT5

Groundwater Monitoring

As part of the post closure care, required by condition 2 – L1, groundwater monitoring for all of the following quality characteristics must be conducted to monitor contaminant releases to groundwater:

- i. Groundwater Level (AHD)
- ii. EC (µS/cm)
- iii. pH
- iv. Ammonia (mg/L)
- v. Sulphate (mg/L)
- vi. Chloride (mg/L)
- vii. Total Nitrogen (mg/L)
- viii. Total Potassium (mg/L)
- ix. Aluminium (mg/L)
- x. Copper (mg/L)
- xi. Iron (mg/L)
- xii. Lead (mg/L)

	xiii. Zinc (mg/L) xiv. Cadmium (mg/L) xv. PFAS compounds (µg/L) (see associated requirement 7c)) Associated monitoring requirements: 1) All groundwater monitoring must be in accordance with the current edition of the administering authority's Monitoring and Sampling Manual; and 2) Groundwater monitoring locations must include locations of background groundwater quality in hydraulically up-gradient or background bore(s) that have not been affected by any release of contaminants to groundwaters and locations downgradient of any release of contaminants to groundwater and the landfill unit; and 3) Measurement and recording of standing water levels must be in metres, accurate to 0.1 metres. The elevation of the reference point, relative to Australian Height Datum, for use in any groundwater level measurement must be determined to an accuracy of 0.05 metres; and 4) Measurement of groundwater levels must be undertaken prior to any disturbance by sampling, and must be reported as the depth in metres from the established reference point to the water surface within the bore. 5) Each groundwater monitoring bore must be fitted with a locked cap at all times other than when sampling is being undertaken; and 6) All determinations of the quality of the groundwater must employ analytical practical quantification limits sufficiently low enough to enable comparisons to be made against water quality objectives/limits relevant to the particular water quality characteristic; and 7) All testing and monitoring for PFAS compounds is for information purposes only and must: a. Use analysis techniques that achieve lowest practicable limits of reporting ($LOR \leq 0.001 \mu\text{g/L}$) (but not ultra trace); and b. Comply with recommendations for sampling and analysis in the PFAS National Environmental Management Plan (NEMP) Version 2.0 or more recent editions adopted by the Queensland Government; and c. Sampling must include: i. Perfluoroalkyl carboxylic acids (C4-C14 inclusive); and ii. Perfluoroalkyl sulfonic acids (C4-C8 inclusive & C10); and iii. Perfluoroalkyl Sulfonamide substances - C8; and iv. n:2 Fluorotelomer Sulfonic Acids – where n = 4, 6, 8 & 10; and v. 5:3 Fluorotelomer carboxylic acid (5:3 FTCA).
2 – WT6	Groundwater quality and levels must be monitored at the locations and frequencies defined in <i>Table 3- Groundwater monitoring locations and frequencies</i> for quality characteristics identified in condition 2-WT5.

Table 3- Groundwater monitoring locations and frequencies

Monitoring point	Upgradient or downgradient bore	Aquifer type	Location (decimal degree, GDA2020)		Monitoring frequency
			Latitude	Longitude	
GW1	Upgradient	Alluvium	-16.868669°	145.690372°	Quarterly
GW2a	Downgradient	Alluvium	-16.87208°	145.68688°	Quarterly
GW3a	Downgradient	Alluvium	-16.87187°	145.69253°	Quarterly

	GW4	Downgradient	Alluvium	-16.872060	145.690593	Quarterly
	GW5	Upgradient	Alluvium	-16.869765	145.691442°	Quarterly
	BH20A	Downgradient	Alluvium	-16.871088°	145.695343°	Quarterly
	BH30b	Downgradient	Alluvium	-16.87157°	145.69386°	Quarterly
2 – WT7	Groundwater monitoring must be followed by an assessment undertaken by an appropriately qualified person(s) to determine whether or not there has been any statistically significant increase over background values at the locations described in <i>Table 3- Groundwater Monitoring Locations and Frequencies</i> as hydraulically down gradient of the landfill unit for each quality characteristic listed in condition 2-WT5, except for PFAS.					
2 – WT8	An annual monitoring report must be prepared by an appropriately qualified person(s) and submitted to the administering authority on the anniversary date of this environmental authority each year. The annual monitoring report must include but not be limited to: a) a summary of previous 12 months monitoring data obtained under condition 2-WT4 and 2-WT5 in accordance with any of the monitoring requirement of this environmental authority; and b) the results and findings of all statistically significant increase assessments as required by condition 2-WT7; and c) An investigation into any potential sources of contamination onsite including from the landfill unit, as a result of any statistically significant increase or exceedance of limits identified; and d) An evaluation/explanation of the data from the monitoring programs, including graphical representations showing relevant limits and trends against all historical data; and e) An outline of action taken, and proposed to be taken, to minimise the environmental risk from any deficiency identified by the monitoring or recording programs; and f) any mitigation measures or actions proposed under condition 2-WT8 e) must be implemented onsite within 20 business days (or a longer period agreed to in writing by the administering authority) of the annual monitoring report being submitted to the administering authority.					
2 – WT9	Stormwater Management Waste inspection areas, waste storage areas and temporary storage areas must be bunded and the bund must be maintained at all times to provide flood immunity from a 1 in 50 year flood event.					
2 – WT10	All batteries, liquid chemicals, fuels, and other liquid substances with potential to cause environmental harm must be stored within a secondary containment system that is impervious to the materials stored within it, and must be managed to prevent the release of contaminants to waters or land.					
2 – WT11	Stormwater Management for Green Waste Stockpile A stormwater collection system must be installed and maintained to prevent the release of wastes or contaminants from the green waste stockpile area to any waters.					
2 – WT12	Soils or other materials used in the construction of the base of any green waste stockpile area and any associated above ground perimeter embankment surrounding the green waste stockpile must achieve a maximum in situ hydraulic conductivity of no greater than 1×10^{-8} metres per second so as to effectively prevent or minimise the release of leachate through the base and embankments.					

2 – WT13	The captured stormwater runoff contained in the stormwater collection system must be disposed of without delay after the collection system has been filled so that the capacity of the collection system is again made available in readiness for the next rainfall event.
2 – WT14	Contaminated stormwater generated on the licensed place and captured in the stormwater collection system must be disposed of: a) by recirculation back into the areas of the licensed place where green waste stockpiling is taking place; or b) to sewer in accordance with Council's Trade Waste Policy.
2 – WT15	Leachate and contaminated stormwater from the stormwater collection system must not be irrigated on land.
Agency Interest: Waste	
Condition number	Condition
2 – WS1	Activities under this environmental authority must be conducted in accordance with the following limitations: a) The only waste that can be received and treated onsite under ERA55 is Actual Acid Sulfate Soil (AASS); b) All sorting, consolidation and storage of wastes must be undertaken within the 'stockpiling and storage' areas defined in <i>Appendix 1 – Part 2 & 3 - Site Plan</i>. c) Only the following wastes are to be accepted at the site for resource recovery and transfer facility operations: i. construction and demolition waste; ii. clean earth; iii. green waste; iv. mattresses; d) All mechanical reprocessing of wastes must be undertaken within the designated 'C&D Waste Reprocessing Area' or 'Green Waste Reprocessing Area' defined in <i>Appendix 1 - Part 2 & 3 Site Plan</i>; e) Only the following wastes are to be accepted at the site for mechanical waste reprocessing: i. Construction and demolition waste; ii. inert solid concrete waste; iii. green waste; iv. end of life tyres; and v. mattresses.
2 – WS2	No putrescible waste, organic waste (other than green waste) and regulated waste is to be accepted on site for resource recovery and transfer facility operation, other than incidental amounts comingled with the permitted waste streams prescribed in condition 2-WS1.
2 – WS3	Notwithstanding conditions 2-WS4 to 2-WS6, the treatment and management of AASS must comply with the latest edition of the <i>Queensland Acid Sulfate Soil Technical Manual (QASSTM)</i> (available on the Queensland Government website).
2 – WS4	An Acid Sulfate Soil (ASS) Environmental Management Plan (EMP) relating to the acceptance and treatment of AASS from any project must be developed and implemented by an appropriately qualified person who possesses appropriate qualifications and experience in the

	field of soil science and contaminated land to be able to competently advise on and assess the potential impacts and risk of undertaking the activities of the treatment of AASS.
2 – WS5	Any ASS EMP required by condition 2-WS4 must be submitted to the administering authority prior to the acceptance of AASS onsite.
2 – WS6	An ASS EMP, as required by condition 2-WS4, must include but not be limited to the following information: a) Intended volume of soils to be accepted from any project; b) Testing results from the source site explaining the potential contaminants present within the soils; c) Procedures for onsite testing, verification and visual inspections for the acceptance of the soils; d) Any surface water and groundwater monitoring requirements and procedures additional to the requirements conditioned within this environmental authority, including management and mitigation measures to ensure potential impacts are minimised; e) Location and specifications of the AASS treatment pad, in accordance with section 7.4 of the QASSTM, and the mitigation measures to ensure potential impacts to environmental values from the treatment of AASS are minimised; f) AASS treatment methods and procedures, including information regarding the neutralising agent, testing requirements and neutralisation calculations, in accordance with section 7.3 of the QASSTM; g) AASS treatment validation testing procedures in accordance with section 7.2 of the QASSTM; h) The reuse options for treated AASS and their appropriateness including the potential impacts to the environment.
2 – WS7	All waste generated in carrying out the activity must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.
2 – WS8	Incompatible wastes must not be mixed in the same container or waste storage area.
2 – WS9	Stockpile Management The amount of waste and material stockpiles (excluding end of life tyres) located within the 'stockpiling and storage' area, as depicted in <i>Appendix 1 – Part 2 & 3 Site Plan</i> must not exceed the following quantities for each of the following waste streams: i. 15,000 m³ of construction and demolition waste; ii. 30,000 m³ of inert solid concrete waste; iii. 10,000 m³ of green waste; iv. Untreated AASS must not be stockpiled onsite.
2 – WS10	The dimension of all waste and material stockpiles (excluding end of life tyres, green waste and inert solid concrete stockpiles) must not exceed the following: i. Ten (10) metres as the maximum width of the base of the stockpiles; ii. Twenty (20) meters as the maximum length of the base of the stockpiles; and iii. Three (3) meters as the maximum height from the base of the stockpiles.
2 – WS11	The dimensions of inert solid concrete stockpiles must not exceed the following: i. Thirty (30) meters as the maximum length of the base of the stockpiles;

	ii. Thirty (30) meters as the maximum width of the base of the stockpile; and iii. Five (5) meters as the maximum height from the base of the stockpiles.
2 – WS12	The dimensions of any green waste stockpiles must not exceed: i. Eight (8) meters as the maximum width of the base of the stockpiles; ii. Three (3) meters for the maximum height from the base of stockpiles; and iii. Twenty (20) meters as the maximum length of the base of the stockpiles.
2 – WS13	There must be at least ten (10) meters separating each green waste stockpile.
2 – WS14	Tyre storage The storage of any end-of-life tyres must be stored in accordance with the following requirements: a) There must be no more than four (4) end of life tyres stockpile located within the ‘stockpiling and storage’ area, as depicted in <i>Appendix 1 - Part 2 & 3 Site Plan</i>; b) The dimensions of the end-of-life tyre stockpiles must not exceed: i. Five (5) metres as the maximum width of the base; ii. Twenty-Five (25) metres for the maximum length of the base; and iii. Three (3) metres for the maximum height from the base; c) The minimum separation distance between end-of-life tyre stockpiles and other waste and material stockpiles must be at least ten metres in any direction; and d) The minimum distance between the end-of-life tyre stockpile and any flammable or combustible material, including grass or weeds, must be at least 10 metres in any direction.
2 – WS15	Measures must be implemented and maintained to manage stockpile fire risk. These measures may include but not be limited to an effective fire break between stockpiles and effective minimum distance between stockpiles to prevent fire spreading and effective fire control systems.
2 – WS16	Recovered regulated waste storage Regulated waste (excluding end of life tyres) recovered from waste loads at the site must be removed to a facility licensed to receive such wastes as soon as practicable. Temporary storage areas for regulated waste must be contained and bunded and; a) Bunding must be constructed of materials that provide an impervious barrier to the materials stored. b) Be roofed where practicable. c) Where it is impracticable to completely roof a bunded area, the operator must ensure that any stormwater captured within the bund is free from contaminants or waste prior to any release. d) A collection sump must be provided in the floor of the bunding to facilitate the removal of liquids and the bund floor must be graded so that the fall is towards the collection sump. e) All storage drums must be stored on a concrete hardstand area or similar impervious material with their closures in place.
2 – WS17	Notwithstanding condition 2-WS16, waste oil, fuel and chemicals may be temporarily stored in drums or other containers at the site, provided that the drums or containers are: a) Stored in a roofed area designated for this purpose;

	b) Bunded to contain spillages and leakages – bunding to comply with provisions of AS1940 – 2004, or more recent versions; and c) Securely sealed when full to prevent spillage if knocked over.
2 – WS18	Bunding of the regulated waste temporary storage areas, as per condition 2-WS16, must be to a height not less than a height equivalent to a one (1) in five (5) year average recurrence interval (ARI) flood level for the Barron River in the vicinity of the licensed place.

Part 3 Site Specific Conditions of environmental authority

Location: Mobile and temporary within the State of Queensland

Relevant activities: ERA 54 – Mechanical waste reprocessing, 2 operating a facility for receiving and mechanically reprocessing, in a year, the following quantity of general waste— (c) more than 10,000t

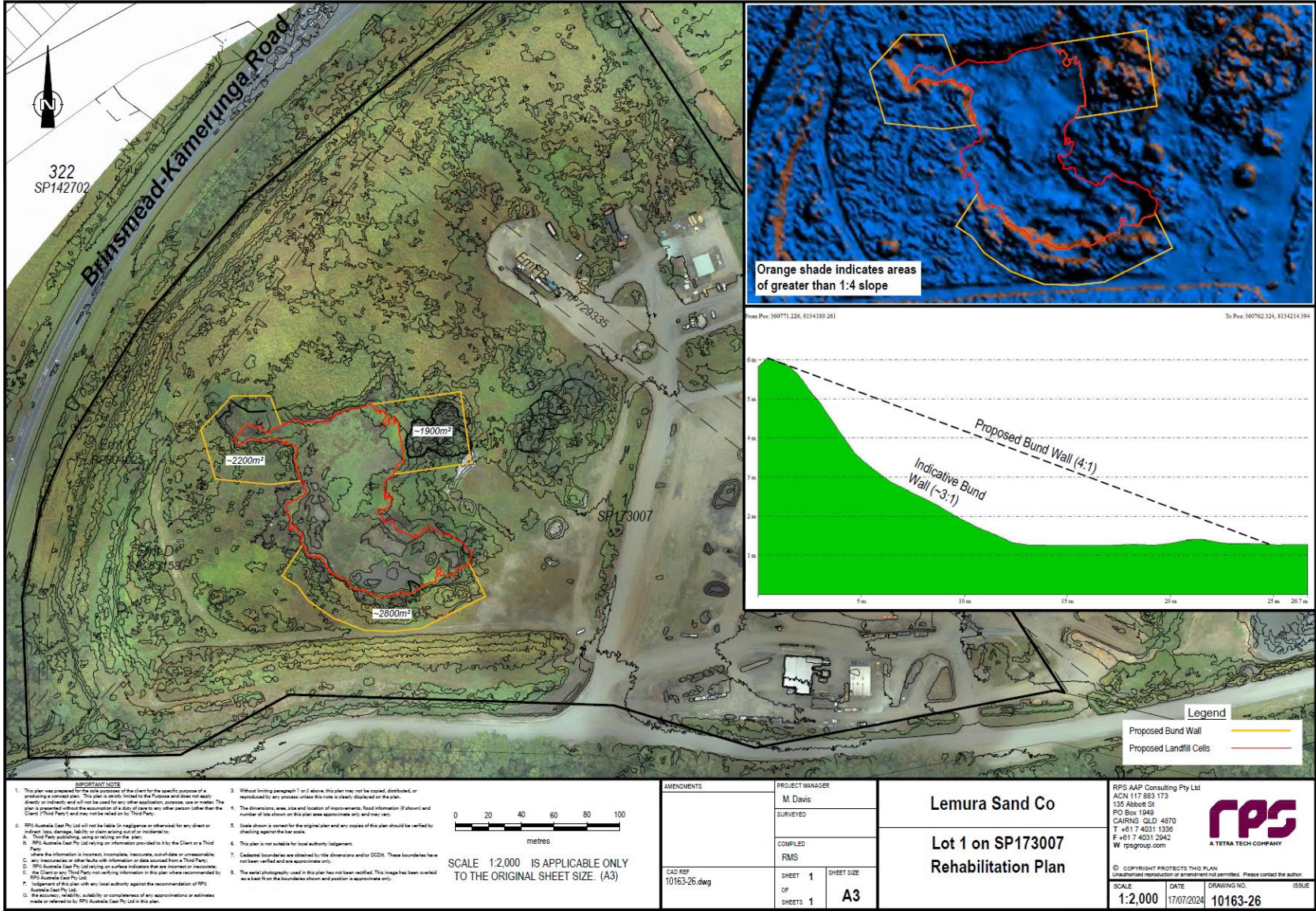
The environmentally relevant activities conducted at the locations as described above must be conducted in accordance with the following site specific conditions of approval.

Agency Interest: General	
Condition Number	Condition
3 – G1	Any breach of a condition of this environmental authority must be reported to the administering authority as soon as practicable within 24 hours of becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions taken.
3 – G2	Activities under this environmental authority must be conducted in accordance with the following limitations: a) The only materials which can be accepted for crushing/milling/grinding/screening are: i. Construction and demolition waste; ii. Skip bin wastes and mattresses; and iii. green waste. b) Regulated wastes must not be accepted for crushing/milling/grinding/screening.
3 – G3	All reasonable and practicable measures must be taken to prevent or minimise environmental harm caused by the activities.
3 – G4	Written procedures must be developed for the activity that meet the following standards: a) Identify all potential risks to the environment from the activity, including when the activity is not in operation or in an emergency; b) Establish and maintain control measures that prevent and/or minimise the potential for environmental harm; c) Detail an inspection and maintenance program that ensure all plant and equipment are maintained in a proper and effective condition; d) Ensure plant and equipment are operated in a proper and effective manner; e) Detail how and when staff training is to be conducted (at least annually) to ensure awareness of obligations under the environmental authority and the <i>Environmental Protection Act 1994</i>; and f) Detail how reviews of environmental risks and environmental performance, including complaints, are undertaken at regular intervals (at least annually).
3 – G5	Procedures required by condition 3-G4 must be implemented so the activity is undertaken in accordance with these procedures.
3 – G6	Procedures required by condition 3-G4 must be reviewed at least annually.
3 – G7	All records must be kept for a period of at least five years and provided to the administering authority upon request.

3 – G8	Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system.
3 – G9	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.
Agency Interest: Air	
Condition Number	Condition
3 – A1	Odours or airborne contaminants must not cause environmental nuisance to any sensitive place or commercial place.
Agency Interest: Water	
Condition Number	Condition
3 – WT1	Contaminants must not be released to any waters in a manner that causes or is likely to cause environmental harm.
Agency Interest: Noise	
Condition Number	Condition
3 – N1	Noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.
Agency Interest: Land	
Condition Number	Condition
3 – L1	Contaminants must not be released to land.
Agency Interest: Waste	
Condition Number	Condition
3 – W1	All waste generated in carrying out the activity must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.

[illegible]

Appendix 2- Bund wall construction plan



Part 2 and 3 Definitions

Key terms and/or phrases used in this document are defined in this section and bolded throughout this document. Applicants should note that 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.

Words and phrases used throughout this permit' are defined below. Where a definition for a term used in this permit' is sought and the term is not defined within this permit' the definitions provided in the relevant legislation shall be used.

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

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

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.

Actual Acid Sulfate Soil (AASS) means soils containing highly acidic soil horizons resulting from the aeration of soil materials that are rich in iron sulfides, primarily pyrite. This oxidation produces hydrogen ions in excess of the sediment's capacity to neutralise the acidity, resulting in soils of pH 4 or less. These soils can usually be identified by the presence of jarosite.

Background means noise, measured in the absence of the noise under investigation, as $L_{A90,T}$ 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.

Clean earth means any natural substance found in the earth that is not contaminated with waste or a hazardous contaminant.

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.

Construction and demolition waste as defined in the Waste Reduction and Recycling Regulation 2011.

Dwelling means any of the following structures or vehicles that is principally used as a residence

- a house, unit, motel, nursing home or other building or part of a building;
- a caravan, mobile home or other vehicle or structure on land;
- a water craft in a marina.

Dust sensitive place means:

- a dwelling, mobile home or caravan park, residential marina or other residential place;
- a motel, hotel or hostel;
- a kindergarten, school, university or other educational institution;
- a medical centre or hospital;
- a protected area;
- a park or gardens; or
- a place used as an office or for business or commercial purposes.

- and includes the curtilage of any such place.

End-of-life tyres means a used tyre that is not attached to a vehicle.

Environmental nuisance as defined in Chapter 1 of the *Environmental Protection Act 1994*.

General waste means waste other than regulated waste.

Green waste means grass cuttings, trees, bushes, shrubs, loppings of trees, bushes or shrubs, or similar matter.

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

Groundwater monitoring system means a system of groundwater monitoring devices, such as monitoring bores, used to provide data in respect to the level and quality of groundwater in the uppermost aquifer where the location of the groundwater monitoring devices is such that comparisons of groundwater quality and groundwater level can be made between groundwater flowing from beneath the site (down-gradient flow) of the activity and groundwater flowing towards the site of the activity (up-gradient flow).

Incidental amounts means no more than the following amounts of wastes occasionally found in defined waste loads:

- 6t or 6m³ of general waste;
- 4t or 4m³ of category 2 regulated waste; and
- 1t or 1m³ of category 1 regulated waste.

Intrusive noise means noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibration —

- is clearly audible to, or can be felt by, an individual; and
- 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 "L_{A10, adj, 10 mins}" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10 minute measurement period, using Fast response.

Jarosite means acidic, pale yellow (straw- or butter-coloured) iron hydroxy-sulfate mineral: KFe₃(SO₄)₂(OH)₆. Jarosite forms upon the hydrolysis of ferric sulfate if the pH is between 3.5–4.0 and conditions are oxidising enough for the Fe³⁺ to be stable.

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.

Land means land excluding waters and the atmosphere.

Landfill unit means a discrete area of land or an excavation that received solid waste.

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

Licensed place means the place authorised for the carrying out of the specified environmentally relevant activities.

Liquid means any substance that:

- 1) has an angle of repose of less than five degrees; or
- 2) becomes free flowing at or below 60 degrees Celsius or when it is transported; or
- 3) is not generally capable of being picked up by a spade or shovel.

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

Measures has the broadest interpretation and includes plant, equipment, physical objects, monitoring, procedures, actions, directions and competency.

mg/L means milligrams per litre.

Minor comingled amounts means <5% of comingled waste in a mixed load

Nuisance sensitive place includes —

- 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 thoroughfare, park or gardens; or
- 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.

Protected area means:

- a protected area under the *Nature Conservation Act 1992*; or
- a marine park under the *Marine Parks Act 2004*; or
- a World Heritage Area.

Records include breach notifications, written procedures, analysis results, monitoring reports and monitoring programs required under a condition of this authority.

Regulated waste defined in the Environmental Protection Regulation 2019.

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:

- 1) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- 2) a motel, hotel or hostel; or
- 3) a kindergarten, school, university or other educational institution; or
- 4) a medical centre or hospital; or

- 5) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
- 6) a public thoroughfare, park or gardens; or
- 7) for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2019.

Site means land or tidal waters on or in which it is proposed to carry out the environmentally relevant activities under this environmental authority.

Statistically significant means when the difference between groups of data is sufficient for a statistical test to reject the null hypothesis. For example, a requirement for a statistical test is that you have a minimum of two hypotheses, the null hypothesis and one or more alternative hypotheses. If you have data from two groups of bores (say A = background values and B = values at locations hydraulically down gradient of the landfill unit), and you wish to test whether A is different from B, the null hypothesis would be that A and B are from the same population (no significant difference). After performing the statistical test, you will either accept or reject the null hypothesis.

Solid concrete waste means inert waste that has not been processed through the mechanical waste reprocessing plant.

Tidal water means the sea and any part of a harbour or watercourse ordinarily within the ebb and flow of the tide at spring tides.

Waste operations area means the following areas:

1. waste receiving
2. sorting
3. treating
4. recycling

Watercourse means a river, creek or stream in which water flows permanently or intermittently-

- in a natural channel, whether artificially improved or not; or
- 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.

Works or operation means the development approved under this development approval.

You means the holder of this environmental authority.

Part 4 – Site specific conditions of environmental authority

Location: Lot 8/SP341832, Lot 2/SP173007, Lot 2/SP284222, and Lot 4/SP284222

Relevant activities: 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

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

Agency interest: General	
Condition number	Condition
4 – G1	All reasonable and practicable measures must be taken to prevent or minimise environmental harm caused, or likely to be caused, by the activities.
4 – G2	Unless specifically authorised by a condition of this environmental authority, this environmental authority does not authorise a relevant act which is: a) an act that causes serious or material environmental harm or an environmental nuisance; or b) an act that contravenes a noise standard; or c) a deposit of a contaminant, or release of stormwater run-off, mentioned in section 440ZG of the <i>Environmental Protection Act 1994</i>.
4 – G3	Contravention of conditions Unless specifically authorised by a condition of this environmental authority, details of any contravention of a condition of this environmental authority must: a) be reported to the administering authority within 24 hours of becoming aware of the contravention; and b) include the nature and circumstances of the contravention and any immediate actions taken.
4 – G4	As soon as reasonably practicable but no later than 20 business days of a report made under condition 4-G3 (or a longer period agreed to in writing by the administering authority), an investigation must be undertaken to determine: a) the potential circumstances and actions that may have contributed to the contravention; and b) reasonable and practicable measures that will be implemented to address the cause of the contravention to prevent future contraventions of this nature.
4 – G5	As soon as reasonably practicable but no later than 20 business days of investigating a contravention under condition 4-G4 (or a longer period agreed to in writing by the administering authority), the reasonable and practicable measures identified in the investigation must be implemented.
4 – G6	The outcome of the investigation carried out under condition 4-G4 and the reasonable and practicable measures implemented under condition 4-G5 must be recorded.

4 – G7	Complaints The following details must be recorded for all complaints received and provided to the administering authority upon request: a) date and time the complaint was received; and a) if authorised by the person making the complaint, their name and contact details; and b) nature and details of the complaint.
4 – G8	As soon as reasonably practicable but no later than 5 business days of receiving a complaint (or a longer period agreed to in writing by the administering authority), an investigation must be undertaken to determine: a) the potential circumstances and actions on site that may have contributed to the basis of the complaint; and b) reasonable and practicable measures that will be implemented to address the complaint.
4 – G9	As soon as reasonably practicable but no later than 5 business days of investigating a complaint under condition 4-G8 (or a longer period agreed to in writing by the administering authority), the reasonable and practicable measures identified in the investigation must be implemented.
4 – G10	The outcome of the investigation carried out under condition 4-G8 and the reasonable and practicable measures implemented under condition 4-G9 must be recorded.
4 – G11	Environmental risk management procedures Written procedures must be developed and implemented by an appropriately qualified person that ensure: a) all potential risks to the environment from the carrying out of the activity are identified and assessed, including: i) during routine operations; and ii) outside routine operations (e.g., maintenance, start up and shut down); and iii) during preparation, rehabilitation, and closure; and iv) in an emergency (e.g., fire, flood or other natural disaster); and b) for each potential risk identified, any necessary measures to prevent or minimise the potential for environmental harm are implemented; and c) staff understand their obligations under this environmental authority and the <i>Environmental Protection Act 1994</i>; and d) environmental risk management procedures are continually reviewed and improved, based on a reasonable risk-management approach.
4 – G12	Plant and equipment An appropriately qualified person must install, operate, calibrate, and maintain the plant and equipment required to carry out the activity (including monitoring devices) in a proper and effective manner.
4 – G13	Records of installation, calibration and maintenance carried out under condition G12 must be kept.

4 – G14	Record keeping Unless otherwise specified by a condition of this environmental authority, records must be: a) kept for 5 years; and b) provided to the administering authority upon request and in the format requested.
4 – G15	Chemical storage Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system.
4 – G16	Monitoring and sampling All monitoring and sampling required by the conditions of this environmental authority must be carried out, interpreted, and recorded by an appropriately qualified person.
4 – G17	Unless otherwise authorised in writing by the administering authority, all laboratory analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (NATA) accreditation for such analyses.
4 – G18	By 31 October 2024, an application to amend the financial assurance for the activity in accordance with section 312 of the <i>Environmental Protection Act 1994</i> , must be submitted to the administering authority.
4 – G19	From 31 October 2024, an application to amend the financial assurance for the activity in accordance with section 312 of the <i>Environmental Protection Act 1994</i> , must be submitted to the administering authority at least once every 5 years.
4 – G20	The amount and form of financial assurance decided by the administering authority in accordance with Chapter 5, Part 14 of the <i>Environmental Protection Act 1994</i> , must be given to the administering authority within 20 business days of the decision date.
Agency interest: Air	
Condition number	Condition
4 – A1	Odours or airborne contaminants must not cause environmental nuisance to any sensitive place or commercial place.
4 – A2	Dust and particulate matter emissions must not exceed the following concentrations at any sensitive place or commercial place: a) dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10.1 (or more recent editions), or b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM₁₀) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, when monitored in accordance with Australian Standard AS 3580.9.6 (or more recent editions) or any other method approved by the administering authority.

4 – A3	When requested by the administering authority, dust and particulate monitoring must be undertaken to investigate any complaint of environmental nuisance caused by dust and/or particulate matter, and the results notified within 14 days to the administering authority following completion of monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected dust sensitive place and at upwind control sites 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 particulate matter with an aerodynamic diameter of less than 10 micrometre (μm) (PM_{10}) suspended in the atmosphere over a 24hr averaging time.
Agency interest: Waste	
Condition number	Condition
4 – W1	All waste must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.
4 – W2	Only clean earth materials are permitted to be accepted as backfill to the extraction pits.
Agency interest: Water	
Condition number	Condition
4 – WT1	Contaminants must not be released to any waters in a manner that causes or is likely to cause environmental harm.
4 – WT2	Ensure that: a) All onsite drainage is constructed and maintained to ensure that runoff from disturbed areas, product stockpiles, and wastewater from screening and washing, drains into an excavation pit; and b) Any excavation pit used as a sediment retention pond is maintained to have sufficient freeboard to ensure there is adequate storage in addition to groundwater to contain runoff from a one (1) in ten (10) year six (6) hour storm event; and c) Upstream stormwater runoff is diverted from exposed or disturbed areas.
4 – WT3	Erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment. The size of Pits 1, 2 and 3 must not exceed 2 hectares of open pit at any one time but be sufficient to contain the run-off expected from all disturbed areas and stockpiles during a 24 hour storm with an average recurrence interval of 1 in 5 years.
4 – WT4	Pit Water Overflows from Pits 1, 2 and 3 identified in <i>Appendix 3 – Surface and groundwater monitoring locations</i> are only be released to waters when in compliance with the limits set out in <i>Table 1 - Sediment and pH release limits to water during pit overflow</i>.

Table 1 — Sediment and pH release limits to water during pit overflow

Monitoring Point	Monitoring Point	Parameter	Release limit	Monitoring Frequency
Discharge point at site boundary	Barron River	Turbidity	Less than 1 10% of Background ¹	Daily during any discharge off-site of waters from Pits 1, 2 and 3
		pH	No less than pH 5.5 or no greater than 8.0	
		Dissolved oxygen	The lesser of background ¹ or 2	

¹ Background values to be measured at a point at 500m upstream of any discharge point on an ebb tide, or 500m downstream on an incoming tide. Both samples must be carried out within 30mins of each other.

4 – WT5

Water quality at Pits 1, 2 and 3 must be monitored at the specified frequency for compliance with the limits set out in *Table 2 - Pit water quality monitoring program*.

Table 2 - Pit Water monitoring program

Monitoring Point	Quality Characteristics	Limits	Trigger Value ¹	Monitoring Frequency
Pit waters (active and inactive)	pH (field)	5-8.5	<5.2 and >8.5	Weekly
	Visual hydrocarbons	Visible	N/A	Weekly

¹ Trigger value is reached when the median² concentration of the quality characteristic of samples representative of pit waters falls outside of the pH range in Table 2.

² The Median must be calculated from no more than 5 consecutive samples.

If any of the trigger values for the parameters stated in Table 2 are exceeded the following must occur:

The administering authority must be notified within 14 days;

- An investigation must be completed in accordance with the 'Australian guidelines for water quality monitoring and reporting, 2000'³ methodology, into the potential for environmental harm.
- A written report must be provided to the administering authority within three (3) months of the date of the original exceedance, outlining:
 - o details of the investigation carried out; and
 - o actions taken to prevent environmental harm.

³ Australian and New Zealand Environment and Conservation Council (ANZECC), Agriculture and Resource Management Council of Australia and New Zealand (2000) 'Australian guidelines for water quality monitoring and reporting' (National Water Quality Management Strategy no. 7).

4 – WT6	The carrying out of the environmentally relevant activity must not cause any of the contaminant limits stated in <i>Table 2- Pit Water monitoring program</i> to be exceeded in any receiving waters.
4 – WT7	With the exception of sediment laden waters reporting to pond(s) as a result of a sediment and erosion control strategy, suitable banks and/or diversion drains must be installed and maintained to exclude stormwater runoff from entering any ponds or other structures used for the storage or treatment of contaminants or wastes.
4 – WT8	From the cessation of extraction within each pit: a) The pH, electrical conductivity must be monitored at a minimum of three locations within the pit quarterly for a period of five years. b) Ground water quality monitoring must also be carried out for the parameters given in <i>Table 3 - Groundwater monitoring program</i> in the ground water bores around the extraction area on a biannual basis for five years.
4 – WT9	Groundwater An effective groundwater monitoring program must be developed and implemented for the site. The program must include the installation of a groundwater monitoring network which: a) is devised, installed and maintained by a person possessing appropriate qualifications and experience in the fields of hydrogeology and groundwater monitoring program design to be able to competently make recommendations about these matters. b) include a sufficient number of bore(s) of compliance' to detect any impact on groundwater as a consequence of the extraction and screening operations, constructed in accordance with the "Minimum Construction Requirements for Water Bores in Australia" (Agricultural and Resource Management Council of Australia and New Zealand 1997), and provides the following: i. background groundwater quality in hydraulically up-gradient or background bore(s) that have not been affected by any release of contaminants to groundwaters; ii. the quality of groundwater down gradient of any release of contaminants to groundwater including groundwater passing the relevant bore(s) of compliance; iii. will be maintained to allow ease of collection of groundwater samples; and iv. provides representative groundwater samples for the aquifers being sampled. c) assessment of monitoring results to determine whether or not there has been any adverse change to the groundwater quality characteristics at locations hydraulically down gradient of the site.
4 – WT10	Notwithstanding the above conditions, should groundwater monitoring show a statistically significant adverse change of levels of contaminants over background values at locations hydraulically down gradient of the extraction pit then the administering authority must be notified within 14 days.
4 – WT11	Assessment of monitoring results must determine whether or not there has been any adverse change to the groundwater quality characteristics at locations hydraulically down gradient of the site.
4 – WT12	Groundwater monitoring bores must be representative of "background and potentially impacted" locations.

4 – WT13	Sampling of waters at each groundwater bore must be carried out on the same day.																																											
4 – WT14	All monitoring wells must be maintained in an operative condition and be reasonably accessible at all times to any authorised person.																																											
4 – WT15	Each groundwater monitoring bore must be fitted with a locked cap at all times other than at the time of sampling.																																											
4 – WT16	Groundwater quality must be monitored for the parameters and at the specified frequency in <i>Table 3 — Groundwater monitoring program</i> at the ground water bores installed as part of the network in Condition 4-WT9. Table 3 - Groundwater monitoring program <table><tr><th>Monitoring point</th><th>Quality Characteristics</th><th>Limit</th><th>Trigger value</th><th>Frequency</th></tr><tr><td rowspan="10">Groundwater bores</td><td>pH (field)</td><td>5 - 8.5</td><td>>5.2 and <8.5</td><td>Monthly</td></tr><tr><td>Electrical conductivity (field)</td><td>N/A</td><td>N/A</td><td>Monthly</td></tr><tr><td>Groundwater Level (AHD)</td><td>N/A</td><td>N/A</td><td>Monthly</td></tr><tr><td>Chloride (lab)</td><td rowspan="2">N/A</td><td rowspan="2">Chloride: Sulphate ration <4</td><td rowspan="2">Quarterly</td></tr><tr><td>Sulphate (lab)</td></tr><tr><td>Iron (mg/L)</td><td>6.64</td><td>1.34</td><td>Quarterly</td></tr><tr><td>Aluminium (mg/L)</td><td>0.2</td><td>0.0424</td><td>Quarterly</td></tr><tr><td>Copper (mg/L)</td><td>0.02</td><td>0.006</td><td>Quarterly</td></tr><tr><td>Zinc (mg/L)</td><td>0.03</td><td>0.0248</td><td>Quarterly</td></tr><tr><td>Arsenic (mg/L)</td><td>0.01</td><td>0.003</td><td>Quarterly</td></tr></table>	Monitoring point	Quality Characteristics	Limit	Trigger value	Frequency	Groundwater bores	pH (field)	5 - 8.5	>5.2 and <8.5	Monthly	Electrical conductivity (field)	N/A	N/A	Monthly	Groundwater Level (AHD)	N/A	N/A	Monthly	Chloride (lab)	N/A	Chloride: Sulphate ration <4	Quarterly	Sulphate (lab)	Iron (mg/L)	6.64	1.34	Quarterly	Aluminium (mg/L)	0.2	0.0424	Quarterly	Copper (mg/L)	0.02	0.006	Quarterly	Zinc (mg/L)	0.03	0.0248	Quarterly	Arsenic (mg/L)	0.01	0.003	Quarterly
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4 – WT17	The carrying out of the environmentally relevant activity must not cause any of the contaminant limits stated in <i>Table 3 - Groundwater monitoring program</i> to be exceeded at any monitoring point.																																											
4 – WT18	In the event that three (3) consecutive exceedances of the trigger limits in <i>Table 3 - Groundwater monitoring program</i> are recorded then the following must occur: a) The administering authority must be notified within 14 days; b) An investigation must be completed in accordance with the Australian and New Zealand Environment and Conservation Council, Agriculture and Resource Management Council of Australian and New Zealand (2000), 'Australian guidelines for water quality monitoring																																											

	and reporting' (National Water Quality Management Strategy No. 7). c) A written report must be provided to the administering authority within three (3) months of the date of the last (i.e. third) exceedance, outlining: i. Details of the investigation carried out; and ii. Actions taken to prevent environmental harm.
Agency Interest: Land	
Condition number	Condition
4 – L1	Contaminants must not be released to land.
4 – L2	All disturbed areas (e.g. borrow pits, stockpile and screening areas) must be progressively re-profiled and stabilised to ensure that at the cessation of activities, erosion is minimised.
4 – L3	Rehabilitation of disturbed areas must take place progressively as works are staged and new areas of extraction are commenced.
4 – L4	The site (including all disturbed areas such as slopes, borrow pits, stockpile and screening areas) must be rehabilitated in a manner such that: a) suitable pasture species of vegetation are planted and established; b) potential for erosion of the site is minimised; c) the quality of stormwater, other water and seepage released from the site is such that releases of contaminants such as suspended solids, turbidity, total dissolved salts, pH, total iron, total aluminium, and total manganese are not likely to cause environmental harm; d) the likelihood of environmental nuisance being caused by release of dust is minimised; e) the water quality of any residual water body meets relevant criteria for subsequent uses and does not have potential to cause environmental harm; f) the final landform is stable and not subject to slumping; and g) any actual and potential acid sulfate soils in or on the site are either not disturbed, or are submerged or treated, so as to not be likely to cause environmental harm.
4 – L5	The extent of disturbed area(s) must not exceed more than 2.5 ha at any one time with the exception of voids intended to remain open.
4 – L6	With the exception of void waters, the total area of unrehabilitated land as a result of the carrying out of the environmentally relevant activity must not exceed 2.5 hectares.
4 – L7	A buffer distance of at least 25m must be maintained between extraction area and the following Matters of State Environmental Significance (MSES): a) Regulated vegetation (Cat R – GBR riverine) b) Regulated vegetation (Essential habitat) c) Regulated vegetation (Cat B - Endangered or of concern)

	d) Wildlife habitat (endangered or vulnerable) e) Protected Area (Kamerunga Environmental Reserve)											
4 – L8	No extraction or screening or stockpiling activities are authorised to take place within the buffer areas required by condition 4-L7.											
4 – L9	The edge of all buffer areas must be identified in such a way as to be clearly identifiable to all employees undertaking the approved activity.											
4 – L10	Treatment and management of acid sulfate soils must comply with the latest edition of the <i>Queensland acid sulfate soil technical manual</i> (available on the Queensland government website).											
4 – L11	Each different type of sand product (i.e. 'fill sand', 'bedding sand' and 'concrete sand') derived from the site must be laboratory tested at a rate of at least 1 sample per month and the samples must be collected by a suitably qualified person and submitted for chromium suite analysis inclusive of acid base accounting.											
4 – L12	To minimise the likelihood of acid and dissolved metal contamination the site manager must: a) Return process waters back into the disposal pond in a manner that minimises further oxidation in the disposal pond. b) Monitor discharges from the processing operations weekly and make necessary changes to the process to meet the weekly trigger values in the <i>Table 4 – Weekly trigger values</i> below. c) Ensure that any exceedance of a trigger value is accompanied with comments relating to what action was undertaken to resolve the non-conformance. Table 4 – Weekly trigger values <table><tr><th rowspan="2">Water Type</th><th colspan="2">Trigger Value</th></tr><tr><th>pH</th><th>Frequency</th></tr><tr><td>Water discharged from hydrocyclonic process</td><td><5.2 and >8.5</td><td>Weekly</td></tr><tr><td>Any other process water</td><td><5.2 and >8.5</td><td>Weekly</td></tr></table>	Water Type	Trigger Value		pH	Frequency	Water discharged from hydrocyclonic process	<5.2 and >8.5	Weekly	Any other process water	<5.2 and >8.5	Weekly
Water Type	Trigger Value											
	pH	Frequency										
Water discharged from hydrocyclonic process	<5.2 and >8.5	Weekly										
Any other process water	<5.2 and >8.5	Weekly										
4 – L13	In the event of any exceedance of a trigger value for a period of four consecutive weeks, the offending process must be halted until the problem can be remedied and/or remediation is undertaken to ensure that the trigger values are met.											
Agency Interest: Noise												
Condition number	Condition											
4 – N1	Noise from the activity must not cause an environmental nuisance at any nuisance sensitive place or commercial place.											

4 – N2

Noise from the activity must not include substantial low frequency noise components and must not exceed the levels identified in *Table 5 – Noise limits* at any sensitive place or commercial place.

Table 5 – Noise Limits

Noise level dB(A) measured as	Monday to Saturday			Sundays and public holidays		
	7am – 6pm	6pm – 10pm	10pm – 7am	7am – 6pm	6pm – 10pm	10pm – 7am
	Noise measured at a 'Noise sensitive place'					
L _{A10,adj,10mins}	50	45	35	50	45	35
L _{A1,adj,10mins}	55	50	40	55	50	40
	Noise measured at a 'Commercial Place'					
L _{A10,adj,10mins}	55	50	40	55	50	40
L _{A1,adj,10mins}	60	55	45	60	55	45

Associated 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.

4) All monitoring must be performed by an appropriately qualified person(s).

5) Monitoring must include:

i. L_{Aeq, adj, T} and L_{AMax};

ii. Background noise (Background) as L_{A 90, adj, T};

iii. the level and frequency of occurrence of any impulsive or tonal noise;

iv. atmospheric conditions including wind speed and direction;

v. effects due to extraneous factors such as traffic noise; and

vi. location, date and time of recording.

4 – N3

When requested by the administering authority noise monitoring must be undertaken to investigate any complaint of noise annoyance. Monitoring must include:

a) L_{A10,adj,10mins};

b) L_{A1,adj,10mins};

c) the level and frequency of occurrence of impulsive or tonal noise;

d) atmospheric conditions including wind speed and direction;

e) effects due to extraneous factors such as traffic noise;

f) location, date and time of recording.

4 – N4	Vibration emitted from the activity must not cause an environmental nuisance at any nuisance sensitive place or commercial place.											
4 – N5	Vibration emitted from activities must not exceed the levels specified in <i>Table 6 - Vibration nuisance at a sensitive place</i>. Table 6 - Vibration nuisance at a sensitive place <table><tr><th>Monitoring Point</th><th>Monday to Saturday</th><th>Sundays and public holidays</th></tr><tr><td>Houses and low rise residential buildings and commercial buildings not included below.</td><td>5mm/s</td><td>No blasting to occur</td></tr><tr><td>Commercial and industrial buildings or structures of reinforced concrete or steel construction.</td><td>15mm/s</td><td>No blasting to occur</td></tr></table>			Monitoring Point	Monday to Saturday	Sundays and public holidays	Houses and low rise residential buildings and commercial buildings not included below.	5mm/s	No blasting to occur	Commercial and industrial buildings or structures of reinforced concrete or steel construction.	15mm/s	No blasting to occur
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Commercial and industrial buildings or structures of reinforced concrete or steel construction.	15mm/s	No blasting to occur										
4 – N6	When requested by the administering authority, vibration monitoring and recording must be undertaken to investigate any complaint of vibration nuisance, and the results notified within 14 days to the administering authority. Monitoring must Include: a) peak particle velocity (mm/s); b) location of the blast's within the site (including which bench level); c) atmospheric conditions including temperature, relative humidity and wind speed and direction; d) the level and frequency of occurrence of impulsive or tonal noise; e) atmospheric conditions including wind speed and direction; f) effects due to extraneous factors; and g) location, date and time of recording.											

Part 4 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.

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 and Science or its successor.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills or experience relevant to the EA requirement and can give authoritative assessment, advice and analysis in relation to the EA requirements using the relevant protocols, standards, methods or literature.

Background noise level means $L_{A90,T}$ being the A-weighted sound pressure level exceeded for 90 percent of the time period of not less than (15) minutes using Fast response.

Commercial place means a place used as an office or for business or commercial purposes,

Disturbed areas include areas:

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

Dust sensitive place means:

- a dwelling, mobile home or caravan park, residential marina or other residential place;
- a motel, hotel or hostel;
- a kindergarten, school, university or other educational institution;
- a medical centre or hospital;
- a protected area;
- a park or gardens; or
- a place used as an office or for business or commercial purposes and includes the curtilage of any such place.

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

- a house unit, motel nursing home or other building or part of a building;
- a caravan, mobile home or other vehicle or structure on land;
- a watercraft in a marina.

$L_{A10, \text{adj}, 10 \text{ mins}}$ means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10 minute measurement period, using Fast response.

$L_{A\text{max}, \text{adj}, T}$ means the average maximum A-weighted sound pressure level, adjusted for noise character, and measured over a time period of no less than fifteen(15) minutes, using Fast response.

$L_{A\text{eq}, \text{adj}, T}$ means the A-weighted sound pressure level, within the meaning given by AS1055.1, for a 15 minute time interval.

$L_{A1, \text{adj}, 15 \text{ mins}}$ means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 15 minute measurement period, using Fast response.

Land means land excluding waters and the atmosphere.

Licensed place means the place to which this document relates, as the case may be.

Mg/L means milligrams per litre.

NATA means National Association of Testing Authorities.

Noise sensitive place means

- a dwelling, 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; or
- park or gardens

Nuisance sensitive place includes:

- 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 thoroughfare, park, or gardens; or
- 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.

Protected area means:

- a protected area under the *Nature Conservation Act 1992*; or
- a marine park under the *Marine Parks Act 2004*; or
- a World Heritage Area.

Site means land or tidal waters on or in which it is proposed to carry out the development approved under this development approval.

Statistically significant means when the difference between groups of data is sufficient for a statistical test to reject the null hypothesis. For example, a requirement for a statistical test is that you have a minimum of two hypotheses, the null hypothesis and one or more alternative hypotheses. If you have data from two groups of bores (say A = background values and B = values at locations hydraulically down gradient of the landfill unit), and you wish to test whether A is different from B, the null hypothesis would be that A and B are from the same population (no significant difference). After performing the statistical test, you will either accept or reject the null hypothesis.

Tidal water means the sea and any part of a harbour or watercourse ordinarily within the ebb and flow of the tide at spring tides.

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.

Watercourse means a river, creek or stream in which water flows permanently or intermittently:

- in a natural channel, whether artificially improved or not; or
- in an artificial channel that has changed the course of the watercourse.

You means the holder of this development approval or owner / occupier of the land which is the subject of this development approval.

Appendix 3- Surface and groundwater monitoring bores



END OF ENVIRONMENTAL AUTHORITY