

Permit

Environmental Protection Act 1994

Environmental authority EPML00349813

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

Environmental authority number: EPML00349813

Environmental authority takes effect on 09 November 2020

Environmental authority holder(s)

Name(s)	Registered address
VISY GLASS OPERATIONS (AUSTRALIA) PTY LTD	137 Montague Rd SOUTH BRISBANE QLD 4101 Australia

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Schedule 3 12: Mining mineral sand	ML1124
Schedule 3 12: Mining mineral sand	ML7064

Additional information for applicants

Environmentally relevant activities

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

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

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

Contaminated land

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

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days);

that is causing, or is reasonably likely to cause, serious or material environmental harm.

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

Take effect

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

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

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Sustainable Planning Act 2009* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

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

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

Rebecca McAuley
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Date issued: 09 November 2020

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Department of Environment and Science

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Obligations under the *Environmental Protection Act 1994*

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

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

Schedule A: General

- A1-1 Mining activities on the authorised tenements may only be conducted between 6am Monday to 6am Sunday.

Financial assurance

- A2-1 The environmental authority holder is to give the administering authority a financial assurance in the amount and form and at a time required by the administering authority.
- A2-2 Provide a financial assurance in the amount and form required by the administering authority prior to the commencement of activities proposed under this environmental authority.
- A2-3 The financial assurance is to remain in force until the administering authority is satisfied that no claim on the assurance is likely.

NOTE: Where progressive rehabilitation is completed and acceptable to the administering authority, progressive reductions to the amount of financial assurance will be applicable where rehabilitation has been completed in accordance with the acceptance criteria defined within this environmental authority.

Maintenance of Measures, Plant and Equipment

- A3-1 The holder must:
- a) Install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; and
 - b) Maintain such measures, plant and equipment in a proper condition; and
 - c) Operate such measures, plant and equipment in a proper manner.

Monitoring

- A4-1 Record, compile and keep for a minimum of five years all monitoring results required by this environmental authority and make available for inspection all or any of these records upon request by the administering authority.
- A4-2 The holder of this environmental authority is responsible for ensuring a water-monitoring program is performed which complies with the following requirements:
- a) All determinations of the quality of contaminants released to waters must be made in accordance with methods prescribed in the Environmental Protection Agency, *Water Quality Sampling Manual, third edition, December 1999*, or more recent editions or supplements to that document as such become available.
 - b) All determinations of the quality of contaminants released must be performed by an appropriately qualified person.

Storage and Handling of Flammable and Combustible Liquids

- A5-1 Spillage of all chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm (other than trivial harm) and maintained in accordance with Section 5.9 of AS 1940 - Storage and Handling of Flammable and Combustible Liquids of 1993.

END OF CONDITIONS FOR SCHEDULE A

Schedule B: Air

Dust nuisance

- B1-1 Subject to Conditions (B1-2) and (B1-3) the release of dust or particulate matter or both resulting from the mining activity must not cause an environmental nuisance, at any sensitive place.
- B1-2 When requested by the administering authority, dust and particulate monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- B1-3 If the environmental authority holder can provide evidence through monitoring that the following limits are not being exceeded then the holder is not in breach of (B1-1):
- Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with AS 3580.10.1 Methods for sampling and analysis of ambient air –Determination of particulates - Deposited matter - Gravimetric method of 1991; and
 - A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (μm) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a sensitive place downwind of the operational land, when monitored in accordance with:
 - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet - Gravimetric method, when monitored in accordance with AS 3580.9.6 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM (sub) 10 high volume sampler with size-selective inlet - Gravimetric method of 1990; or
 - Any alternative method of sampling PM10, which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.

NOTE: The proponent must decide which monitoring method is appropriate in accordance with condition (B1-3) (a) or (b) or both.

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B1-4 If the monitoring indicates exceedance of the relevant limits in Condition (B1-3), then the environmental authority holder must:

- a) address the complaint including the use of appropriate dispute resolution if required; or
- b) immediately implement dust abatement measures so that emissions of dust from the activity do not result in further environmental nuisance.

END OF CONDITIONS FOR SCHEDULE B

Schedule C: Water

Release to Waters

C1-1 Receiving waters affected by the release of process water or storm water contaminated by the mining activities or both must be monitored at the locations and frequencies defined in Schedule C - Table 1 and Figure 4 - ACI Operations Pty Ltd, North Stradbroke Island Project, Environmental Management Overview Strategy. Mining Lease Nos 1124, 1132 and 7064, PJM 50106. January 2002 and comply with the contaminant limits defined in Schedule C - Table 2.

Schedule C – Table 1 (Receiving Water Monitoring Locations and Frequency)

Monitoring Point	Easting (GDA94 Zone 56)	Northing (GDA94 Zone 56)	Monitoring frequency
1	0543251	6962832	Quarterly (or in the event of a rainfall event exceeding 25mm in 24 hours)
3	0543398	6962472	Quarterly (or in the event of a rainfall event exceeding 25mm in 24 hours)
4	0543590	6962097	Quarterly (or in the event of a rainfall event exceeding 25mm in 24 hours)

NOTE: This does not apply to tailings dams

Schedule C – Table 2 (Receiving Water Contaminant Limits)

Parameter	Units	Minimum	Maximum
pH	pH units	3.5	6.0
Conductivity	µS/cm		150
Turbidity	NTU		35
Calcium	mg/L		2.0
Sodium	mg/L		20
Chloride	mg/L		32
Nitrate (N as NO ₃)	mg/L		0.75
Phosphate (P as PO ₄)	mg/L		2.0
Sulphate (SO ₄)	mg/L		9.0
Suspended solids	mg/L		30

NOTE: This does not apply to tailings dams

Groundwater

- C2-1 Groundwater affected by the mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 3 and Figure 4 - ACI Operations Pty Ltd, North Stradbroke Island Project, Environmental Management Overview Strategy, Mining Lease Nos 1124, 1132 and 7064, PJM 50106. January 2002 and comply with the contaminant limits defined in Schedule C – Table 4.

Schedule C – Table 3 (Groundwater Monitoring Locations and Frequency)

Monitoring Point	Easting (GDA94 Zone 56)	Northing (GDA94 Zone 56)	Surface RL (m)	Groundwater top RL (m)	Monitoring frequency
1	0543267	6962484	26	7	Quarterly
3	0543459	6962045	21	7	Quarterly

- C2-2 Subject to Condition (C2-1), groundwater contaminant limits must not exceed the contaminant limits defined in Schedule C - Table 4.

Schedule C – Table 4 (Groundwater Contaminant Limits)

Parameter	Units	Minimum	Maximum
pH		3.5	6.0
Conductivity	µS/cm		150
Turbidity	NTU		35
Calcium	mg/L		2.0
Sodium	mg/L		20
Chloride	mg/L		32
Nitrate (N as NO ₃)	mg/L		0.75
Phosphate (P as PO ₄)	mg/L		2.0
Sulphate (SO ₄)	mg/L		9.0

NOTE: This does not apply to tailings dams

- C2-3 Subject to Condition (C2-1), groundwater levels must be monitored and groundwater draw down fluctuations in excess of two meters per year, not resulting from the pumping of licensed bores, must be notified within 14 days to the administering authority following completion of monitoring.
- C2-4 The method of sampling of groundwater must comply with that set out in the latest edition of the Environmental Protection Agency's Water Quality Sampling Manual.

END OF CONDITIONS FOR SCHEDULE C

Schedule D: Noise and Vibration

Noise Nuisance

- D1-1 Subject to Conditions (D1-2) and (D1-3) noise from the mining activity must not cause an environmental nuisance, at any sensitive place.
- D1-2 When requested by the administering authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- D1-3 If the environmental authority holder can provide evidence through monitoring that the limits defined in Schedule D - Table 1 are not being exceeded then the holder is not in breach of Condition (D1-1). Monitoring must include:
- $L_{A10, adj, 10 \text{ mins}}$; and
 - the level and frequency of occurrence of impulsive or tonal noise; and
 - atmospheric conditions including wind speed and direction; and
 - location, date and time of recording.

Schedule D – Table 1

Time period	Noise level at a noise sensitive place measured as the adjusted maximum sound pressure level $L_{A10, adj, 10 \text{ mins}}$
7am – 6pm	dB(A) or background noise level plus 5 dB(A), whichever is the greater
6pm – 10pm	
10pm – 7am	dB(A) or background noise level plus 3 dB(A), whichever is the greater
Time period	Noise level at a commercial place measured as the adjusted maximum sound pressure level $L_{A10, ad, 10 \text{ mins}}$
7am – 6pm	dB(A) or background noise level plus 10 dB(A), whichever is the greater
6pm – 10pm	
10pm – 7am	dB(A) or background noise level plus 8 dB(A), whichever is the greater

NOTE: The method of measurement and reporting of noise levels must comply with the latest editions of the Environmental Protection Agency's Noise Manuals.

- D1-4 If the monitoring indicates exceedance of the limits in Schedule D - Table 1, then the environmental authority holder must:

- a) address the complaint including the use of appropriate dispute resolution if required; or
 - b) immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance.
- D1-5 The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

END OF CONDITIONS FOR SCHEDULE D

Schedule E: Waste

Off-site movement

- E1-1 Regulated waste must only be removed from the licensed place by a person can legally transport this waste under the *Environmental Protection Act 1994*.
- E1-2 Regulated waste must only be removed to a place that can legally accept this waste under the *Environmental Protection Act 1994*.

Notification of improper disposal of regulated waste

- E1-3 If the holder of this development approval becomes aware that a person has removed waste from the licensed place and disposed of the waste in a manner which is not authorised by this development approval or improper or unlawful, then the holder of this development approval must, as soon as practicable, notify the administering authority of all relevant facts, matters and circumstances known concerning the disposal.

END OF CONDITIONS FOR SCHEDULE E

Schedule F: Land Management

Rehabilitation landform criteria

- F1-1 All areas significantly disturbed by mining activities must be rehabilitated to the final land description as defined in Schedule F - Table 1.

Schedule F – Table 1 (Final land use and rehabilitation approval schedule)

Disturbance type	Disturbance area (ha)	Pre-mine land description	Post-mine land description	Pre-mine land capability classification	Post-mine land capability classification	Analogue site identification
Nursery	0.10	Native ecosystem	Landowner*	1	Landowner*	
Maintenance workshop	0.04	Native ecosystem	Landowner*	1	Landowner*	

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Administration buildings	2.76	Native ecosystem	Landowner*	1	Landowner*	
Vehicle parking	0.10	Native ecosystem	Landowner*	1	Landowner*	
Processing plant	5.0	Native ecosystem	Landowner*	1	Landowner*	
Stockpile	10.0	Native ecosystem	Landowner*	1	Landowner*	
Mine area	573.0	Native ecosystem	Landowner*	1	Landowner*	V1, V12, V13, V17, V20
Haul roads	7.0	Native ecosystem	Landowner*	1	Landowner*	
Access roads	13.0	Native ecosystem	Landowner*	1	Landowner*	
Tracks	17.0	Native ecosystem	Landowner*	1	Landowner*	

*Post-mine classification to be determined by landowner

F1-2 Progressive rehabilitation must commence when areas become available within the operational land.

Native ecosystem outcome

F2-1 Areas, which are to be progressively rehabilitated to native ecosystem, must comply with the following outcomes:

- a) areas, which are to be progressively rehabilitated to native ecosystem, must comply with the following outcomes; and
- b) all areas disturbed by mining activities must be rehabilitated to the landform design criteria proposed as a result of rehabilitation program undertaken as per condition (F2-2); and
- c) landforms are stable with erosion comparable to analogue sites; and
- d) landforms have been reshaped as close as practicable to the aspect orientation appropriate to the climax community.

F2-2 Maintain a rehabilitation program of disturbed areas (including landform design criteria) to meet the outcomes in (F2-1).

Infrastructure

F3-1 All infrastructure, constructed by or for the environmental authority holder during the mining activities including water storage structures, must be removed from the site prior to mining lease surrender, except where agreed in writing by the post mining land owner/holder.

END OF CONDITIONS FOR SCHEDULE F

Schedule G: Community

Complaint response

- G1-1 All complaints received must be recorded including details of complainant, reasons for the complaint investigations undertaken, conclusions formed and actions taken. This information must be made available for inspection by the administering authority on request.

END OF CONDITIONS FOR SCHEDULE G

Schedule H: Definitions

Words and phrases used throughout this licence are defined below except where identified in the EP Act of subordinate legislation. Where a word or term is not defined, the ordinary English meaning applies, and regard should be given to the Macquarie Dictionary.

Interpretation

"EIS" means the environmental impact statement titled *"ENVIRONMENTAL IMPACT STATEMENT Proposed Silica Sand Extraction MLA 7064 Adjoining Existing ACI Mining Lease ML 1124 NORTH STRADBROKE ISLAND, QLD, August 1999"*.

Although legally the environmental authority is the enforceable document, not the EIS, if there was any need for interpretation of the conditions, then the interpretation should be in the context of the EIS if applicable.

"EMOS" means the environmental management overview strategy report titled *"ACI Operations Pty Ltd - North Stradbroke Island Project PJM 50106 ENVIRONMENTAL MANAGEMENT OVERVIEW STRATEGY Mining lease no's 1124, 1132 and 7064 PJM 50106, January 2002"*, and *"ACI Operations Pty Ltd, North Stradbroke Island Project, ENVIRONMENTAL MANAGEMENT OVERVIEW STRATEGY Mining Lease Nos 1132 and 1124, PJM 50106. March 1995 Amended October 2000"*.

Although legally the environmental authority is the enforceable document, not the EMOS, if there was any need for interpretation of the conditions, then the interpretation should be in the context of the most recent EMOS.

Definitions

"**acceptance criteria**" means the measures by which the actions implemented to rehabilitate the land are deemed to be complete (same as completion criteria).

"**ambient** (or total) noise" at a place, means the level of noise at the place from all sources (near and far), measured as the Leq for an appropriate time interval.

"**appropriately qualified person**" means any person who conforms to the EPA operational policy for an "appropriately qualified person (analyst)" in accordance with Section 490(7) of the *Environmental Protection Act 1994*.

"authority" means environmental authority (mining activities) under the *Environmental Protection Act 1994*.

"climax community" flora and fauna communities have attained a stable biological diversity and have reached equilibrium with the surrounding ecosystems.

"commercial place" means a place used as an office or for business or commercial purposes, other than a place within the boundaries of the operational land.

"environmental authority holder" means the holder of this environmental authority.

" $L_{A\ 10, \text{adj}, 10 \text{ mins}}$ " 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.

" $L_{A\ 1, \text{adj}, 10 \text{ mins}}$ " means the A-weighted sound pressure level, (adjusted for tonal character and Impulsiveness of the sound) exceeded for 1% of any 10-minute measurement period, using Fast response.

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

"land" in the "land schedule" of this document means land excluding waters and the atmosphere.

"land capability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land suitability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land use" term to describe the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

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

"noxious" means harmful or injurious to health or physical wellbeing, other than trivial harm.

"offensive" means causing reasonable offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive, other than trivial harm.

"protected area" means:

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

"progressive rehabilitation" means rehabilitation (defined below) undertaken progressively OR a staged approach to rehabilitation as mining operations are ongoing.

"rehabilitation" means the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.

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

"self-sustaining" means an area of land, which has been rehabilitated and has maintained the required acceptance criteria without human intervention for a period nominated by the administering authority.

"sensitive place" means:

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- an educational institution; or
- a medical centre or hospital; or
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or
- a public park or gardens; or
- a place used as a workplace, an office or for business or commercial purposes, which is not part of the mining activity and does not include employee's accommodation or public roads.

"stable" means geotechnical stability of the rehabilitated landform where instability related to the excessive settlement and subsidence caused by consolidation/settlement of the wastes deposited, and sliding/slumping instability has ceased.

"waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), and any underground water, any part thereof.

END OF ENVIRONMENTAL AUTHORITY