Permit

Environmental Protection Act 1994

Environmental authority EA0002065

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

Environmental authority number: EA0002065

Environmental authority takes effect on 07-12-2020

Environmental authority holder(s)

Name(s)	Registered address
Pacific Silica Pty Ltd	565 Bestmann Road NINGI QLD 4511

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 16 on rp895526
ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 163 on c311148
ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 20 on sp281304
ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 24 on rp161634

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ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 17 on rp895527
ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 162 on c311229
ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 1 on rp150960
ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 16 on rp895526
ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 163 on c311148
ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 9 on cg208
ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 24 on rp161634
ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 1 on rp902709
ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 1 on rp150960

ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 6 on rp106243
ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 9 on cg208
ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 20 on sp281304
ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 1 on rp902709
ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 17 on rp895527
ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 162 on c311229
ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t	LOT 6 on rp106243

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 Planning Act 2016 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.

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

Date issued: 14 May 2021

Enquiries:
Extraction, Energy and Chemical Industries Assessment
Department of Environment and Science

Phone: 1300 130 372
Email: palm@des.qld.gov.au

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)

Conditions of environmental authority

Agency interest: General	
Condition number	**Condition**
G1	Activities under this environmental authority must be conducted in accordance with the following limitations: (a) The amount of material removed from the site must not exceed 460,000 tonnes per annum. (b) The amount of material screened onsite must not exceed 460,000 tonnes per annum. (c) Activities must only take place within the 'extraction area' defined in drawing in Appendix A – Site Plan (Drawing 1535.DRG.076) and bounded by the GPS locations identified in Appendix B – Setout Points. (d) The only material permitted to be extracted is sand. (e) Material extracted under this authority must not be sold as a mineral.
G2	Record must be kept to demonstrate compliance with condition G1(e).
G3	All reasonable and practicable **measures** must be taken to prevent or minimise environmental harm caused by the activities.
G4	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	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
G6	Environmental monitoring results must be kept until surrender of this environmental authority. All other information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and records required by the conditions of this environmental authority must be provided to the **administering authority, or nominated delegate** upon request**,** within the required timeframe and in the specified format.

G7	An **appropriately qualified person** 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.
G8	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (**NATA**) certification, or an equivalent certification, for such analyses. The only exception to this condition is the in situ monitoring of turbidity, pH, electrical conductivity and dissolved oxygen.
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.
G10	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 *Environmental Protection Act 1994*; and (f) ensure that reviews of environmental performance are undertaken at least annually.
G11	A flood contingency plan must be developed that includes: (a) an assessment of the risk of flood waters developing on or entering the site; (b) an assessment of risk of such flood causing the discharge of contaminants from the site; (c) a plan for managing the water quality of any onsite waters to ensure compliance with conditions W1; (d) a plan for managing potential sources of contaminants caused by the flooding, including, but not limited to: 1. onsite contaminants that have been generated, exposed or mobilised by the extraction and screening activities; and 2. contaminants imported onto the site via flood waters.
G12	Storage of chemicals and fuels in bulk or in containers of greater than 15 litres must be within a secondary containment system.

G13	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.

Agency interest: Air

Condition number	Condition
A1	Other than as permitted within this environmental authority, odours or airborne contaminants must not cause environmental nuisance to any **sensitive place** or **commercial place**.
A2	Dust and particulate matter 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.

Agency interest: Land

Condition number	Condition

L1	**Land** that has been disturbed for **activities** conducted under this environmental authority must be rehabilitated in a manner such that: a) suitable native species of vegetation for the location are established and sustained for earthen surfaces; b) potential for erosion is minimised; c) the quality of water released from the site, including seepage, does not cause environmental harm; d) potential for environmental nuisance caused by dust is minimised; e) the water quality of any residual water body does not have potential to cause environmental harm; and f) the final landform is stable and protects public safety.
L2	Rehabilitation of **disturbed areas** required under condition L1, must take place progressively as works are staged and new extraction areas are commenced.
L3	Treatment and management of acid sulfate soils must comply with the guidance provided in the current edition of the *Queensland Acid Sulfate Soil Technical Manual*.

Agency interest: Acoustic

Condition number	Condition
N1	Other than as permitted within this environmental authority, noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.

<table>
<tr><td>N2</td><td>Noise from the activity must not exceed the levels identified in Table - Noise limits when measured in accordance with the associated monitoring requirements. Table - Noise limits
<table>
<tr><td rowspan="3"></td><td colspan="3">Monday to Saturday</td><td rowspan="2">Sundays and Public Holidays</td></tr>
<tr><td>6 am – 7 am</td><td>7 am–6 pm</td><td>6pm–6 am</td></tr>
<tr><td colspan="4">Noise measured at any sensitive place or commercial place</td></tr>
<tr><td>$L_{Aeq, adj\ T}$</td><td>37dBA</td><td>42dBA</td><td>No audible noise</td><td>No audible noise</td></tr>
</table>
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.</td></tr>
<tr><td>N3</td><td>When required by the administering authority, noise monitoring must be undertaken in accordance with the associated monitoring requirements of Table - Noise Limits, and the results notified within 14 days to the administering authority. Monitoring must include: a) $L_{Aeq, adj, T}$
b) Background noise (Background) as $L_{A\ 90, adj, T}$
c) $MaxL_{pA,T}$
d) the level and frequency of occurrence of any impulsive or tonal noise
e) atmospheric conditions including wind speed and direction
f) effects due to extraneous factors such as traffic noise
g) recording of location, date and time of measurements.</td></tr>
<tr><td>N4</td><td>Blasting or the generation of substantial low frequency noise is not permitted.</td></tr>
<tr><td colspan="2">Agency interest: Water</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
</table>

W1	Other than as permitted within this environmental authority, contaminants must not be released to any **waters**.
W2	Erosion and sediment control measures must be implemented and maintained to minimise erosion and sedimentation.

W3

Surface water within the extraction pond:

a) must be monitored in accordance with *Table – Surface Water Quality* and the associated monitoring requirements; and

b) must not exceed the limits in *Table – Surface Water Quality.*

Table – Surface Water Quality

Monitoring point	Water Quality Parameter	Unit	Monitoring Frequency	Trigger Value	Limit	Limit type
Surface water within the extraction pond	Water Level	m (AHD)	Weekly	N/A	1.25	Minimum
	pH	pH units	Weekly	N/A	5	Median*
	pH	pH units	Weekly	N/A	3	Minimum
	Electrical Conductivity	µS/cm	Weekly	N/A	4,500	Median*
	Aluminium (dissolved)	mg/L	Monthly	1	5	Maximum
	Aluminium (total)	mg/L	Monthly	6	30	Maximum
	Iron (dissolved)	mg/L	Monthly	45	80	Maximum
	Iron (total)	mg/L	Monthly	55	110	Maximum
	Cations and Anions (calcium, chloride, magnesium, sodium, potassium, sulfate and alkalinity)	mg/L	Monthly	N/A	N/A	N/A

*Median means the limit is applied to the median of five consecutive samples (on a rolling basis)

Associated monitoring requirements

1. Monitoring must be in accordance with the methods prescribed in the most current edition of the administering authority's Monitoring and Sampling Manual.

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	2. All water samples must be representative of the general condition of the water body. 3. The spatial location and number of monitoring points should represent the water quality across the extraction pond. 4. All determinations must employ analytical practical quantification limits of sufficient sensitivity to enable comparisons to be made against water quality objectives/triggers/limits relevant to the particular water quality parameter. 5. All monitoring devices must be calibrated and maintained according to the manufacturer's instruction manual.
W4	If monitoring in accordance condition W3 finds that a trigger value for a water quality parameter in *Table - Surface Water Quality* is exceeded on three consecutive occasions, the following must occur: a) The administering authority must be notified within 24 hours of becoming aware of the final exceedance; and b) Within 20 business days of becoming aware of the final exceedance, a report must be submitted to the administering authority that details: 1. the cause of the exceedance of the trigger levels; 2. the degree to which surrounding waters (including groundwater) have been impacted as a result of the exceedances; 3. measures that have or will be undertaken to: a. ensure the exceedances do not continue to occur; and b. mitigate any impact to waters caused as a result of the exceedances; and 4. timeframe for measures to be implemented.
W5	Water levels must be maintained in all surface waters to ensure that all Acid Sulfate Soils or Potential Acid Sulfate Soils remain submerged.
W6	The water in all sediment ponds and extraction ponds must be: a) managed to ensure that the activity does not cause drawdown of groundwater levels in areas surrounding the site; and b) managed to ensure that the acidification of soils or waters does not occur.

Agency interest: Groundwater

Condition number	Condition
GW1	The activity must not cause the release of contaminants to groundwaters.

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GW2

Groundwater must be monitored in accordance with *Table - Groundwater Monitoring Locations and Quality* and *Appendix C – Northern Extraction Area Water Monitoring Bores* and the associated monitoring requirements.

Table – Groundwater Monitoring Locations and Quality

Monitoring Location ID: Latitude, Longitude	Water Quality Parameter	Unit	Monitoring Frequency	Trigger Value
WM05: -27.08109, 153.0876)	pH	pH	Weekly	4 – 8
	Electrical Conductivity	µS/cm	Weekly	3,120
	Aluminium (dissolved)	mg/L	Monthly	1.5
	Aluminium (total)	mg/L	Monthly	6
	Iron (dissolved)	mg/L	Monthly	70
	Iron (total)	mg/L	Monthly	74
WM71: -27.07799, 153.09357	pH	pH	Weekly	3.2-8
	Electrical Conductivity	µS/cm	Weekly	5,300
	Aluminium (dissolved)	mg/L	Monthly	2.1
	Aluminium (total)	mg/L	Monthly	3
	Iron (dissolved)	mg/L	Monthly	226.5
	Iron (total)	mg/L	Monthly	358
WM84: -27.07277, 153.09436	pH	pH	Weekly	5 - 8
	Electrical Conductivity	µS/cm	Weekly	542
	Aluminium (dissolved)	mg/L	Monthly	0.8

	Aluminium (total)	mg/L	Monthly	17
	Iron (dissolved)	mg/L	Monthly	4
	Iron (total)	mg/L	Monthly	13
WM86: -27.08201, 153.08319	pH	pH	Weekly	5 – 8
	Electrical Conductivity	µS/cm	Weekly	3,740
	Aluminium (dissolved)	mg/L	Monthly	3

	Aluminium (total)	mg/L	Monthly	26
	Iron (dissolved)	mg/L	Monthly	80
	Iron (total)	mg/L	Monthly	85
WM103: -27.08008, 153.07395	pH	pH	Weekly	3.2-8
	Electrical Conductivity	µS/cm	Weekly	6,610
	Aluminium (dissolved)	mg/L	Monthly	24
	Aluminium (total)	mg/L	Monthly	31
	Iron (dissolved)	mg/L	Monthly	10
	Iron (total)	mg/L	Monthly	120
WM104: -27.07091, 153.07147	pH	pH	Weekly	4.3-8
	Electrical Conductivity	µS/cm	Weekly	130
	Aluminium (dissolved)	mg/L	Monthly	0.3
	Aluminium (total)	mg/L	Monthly	9

	Iron (dissolved)	mg/L	Monthly	0.3
	Iron (total)	mg/L	Monthly	5
WM105: -27.07068, 153.07857	pH	pH	Weekly	3.8-8
	Electrical Conductivity	µS/cm	Weekly	7,256
	Aluminium (dissolved)	mg/L	Monthly	3.2
	Aluminium (total)	mg/L	Monthly	15
	Iron (dissolved)	mg/L	Monthly	168
	Iron (total)	mg/L	Monthly	207
WM106: -27.07233, 153.08872	pH	pH	Weekly	3.7-8
	Electrical Conductivity	µS/cm	Weekly	3,260
	Aluminium (dissolved)	mg/L	Monthly	12
	Aluminium (total)	mg/L	Monthly	22

	Iron (dissolved)	mg/L	Monthly	195
	Iron (total)	mg/L	Monthly	200
All Bores	Standing Water Level	m (AHD)	Weekly	Interpretation purposes
All Bores	Cations and Anions (calcium, chloride, magnesium, sodium, potassium, sulfate and alkalinity)	mg/L	Monthly	Interpretation purposes

	Associated monitoring requirements 1. Monitoring must be undertaken at the frequency stated. 2. All groundwater monitoring must be conducted in accordance with the most current edition of the administering authority's Monitoring and Sampling Manual. 3. All determinations must employ analytical practical quantification limits of sufficient sensitivity to enable comparisons to be made against the water quality trigger values relevant to the particular quality characteristic. 4. All monitoring devices must be calibrated and maintained according to the manufacturer's instruction manual.
GW3	If monitoring in accordance condition GW2 finds that a trigger value for a water quality parameter in *Table - Groundwater Monitoring Locations and Quality* is exceeded on three consecutive occasions, the following must occur: a) The administering authority must be notified within 24 hours of becoming aware of the final exceedance; and b) Within 20 business days of becoming aware of the final exceedance, a report must be submitted to the administering authority that details: 1. the cause of the exceedance of the trigger levels; 2. the degree to which surrounding waters (including groundwater) have been impacted as a result of the exceedances; 3. measures that have or will be undertaken to: a. ensure the exceedances do not continue to occur; and b. mitigate any impact to waters caused as a result of the exceedances; and 4. timeframe for measures to be implemented.
GW4	A report detailing the results of the surface water and groundwater monitoring must be completed annually and submitted to the administering authority upon request. The report must include: a) Summary statistics (number of samples, minimum, maximum, 80th and 95th percentile) and box and time series plots of all data for all monitoring points. b) An assessment of long term trends in water quality and level. c) A comparison of ionic composition between monitoring points (surface and groundwater) over time. d) A determination of potential impacts to groundwater quality.

<table>
<tr><th colspan="2">Agency interest: Environmental Offsets</th></tr>
<tr><th>Condition number</th><th>Condition</th></tr>
<tr><td>O1</td><td>Significant residual impacts to prescribed environmental matters are not authorised under this authority unless the impact is specified in Table – Authorised significant residual impacts to prescribed environmental matters. The impacts specified in Table – Authorised significant residual impacts to prescribed environmental matters are only authorised to the maximum extent of impact prescribed in Table – Authorised significant residual impacts to prescribed environmental matters.
Table – Authorised significant residual impacts to prescribed environmental matters
<table>
<tr><th>Prescribed Environmental matters</th><th>Location of Impact</th><th>Maximum Extent of Impact of each MSES</th></tr>
<tr><td>MSES – Regulated vegetation (essential habitat)</td><td rowspan="4">‘Impact Area’ indicated as Appendix D – Proposed MSES Impact Areas</td><td>59 ha</td></tr>
<tr><td>MSES – Regulated Vegetation intersecting a wetland</td><td>59 ha</td></tr>
<tr><td>MSES – Wetlands of High Ecological Significance</td><td>59 ha</td></tr>
<tr><td>MSES – Protected Wildlife Habitat</td><td>59 ha</td></tr>
</table></td></tr>
<tr><td>O2</td><td>An environmental offset must be undertaken for the maximum extent of impact to each prescribed environmental matter in Table – Authorised significant residual impacts to prescribed environmental matters in accordance with the Environmental Offsets Act 2014.
Note: The Environmental Offsets Act 2014 includes a number of ‘deemed conditions’ that are also apply to the activity.</td></tr>
<tr><td>O3</td><td>The impacts authorised in Condition O1 may be carried out in stages.</td></tr>
<tr><td>O4</td><td>The environmental offset requirement detailed in condition O2 can be delivered for each stage of impact.</td></tr>
<tr><td>O5</td><td>Prior to the commencement of each stage, the administering authority must be provided with a report, completed by an appropriately qualified person, which analyses the following:</td></tr>
</table>

	a) For the forthcoming stage – the estimated impact to each prescribed environmental matter; and b) For the previous stage(s), if applicable – the actual impact to each prescribed environmental matter, to date.

Definitions

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

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

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

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

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

Blasting is the use of explosives to fracture:

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

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

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

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

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.

Disturbed areas includes areas:

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

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

Environmental value –

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

Flood events, means flooding of the site:

- caused by overland flow from a 24 hour duration precipitation event with an average recurrence interval of once in 20 years in the catchment immediately up gradient of the site.

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

$L_{Aeq, adj, T}$ 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.

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

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

Measures has the broadest interpretation and includes:

- Procedural measures such as standard operating procedures for dredging operations, environmental risk assessment, management actions, departmental direction and competency expectations under relevant guidelines
- Physical measures such as plant, equipment, physical objects (such as bunding, containment systems etc.), ecosystem monitoring and bathymetric surveys. **Mineral** as defined in the Mineral Resource Act 1989.

NATA means National Association of Testing Authorities.

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

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

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

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

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

Release of a contaminant into the environment means to:

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

Release of a contaminant into the environment means to:

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

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

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

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area under the Nature Conservation Act 1992, the Marine Parks Act 2004 or a World Heritage Area; or
- a public park or garden; or
- for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2008.

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

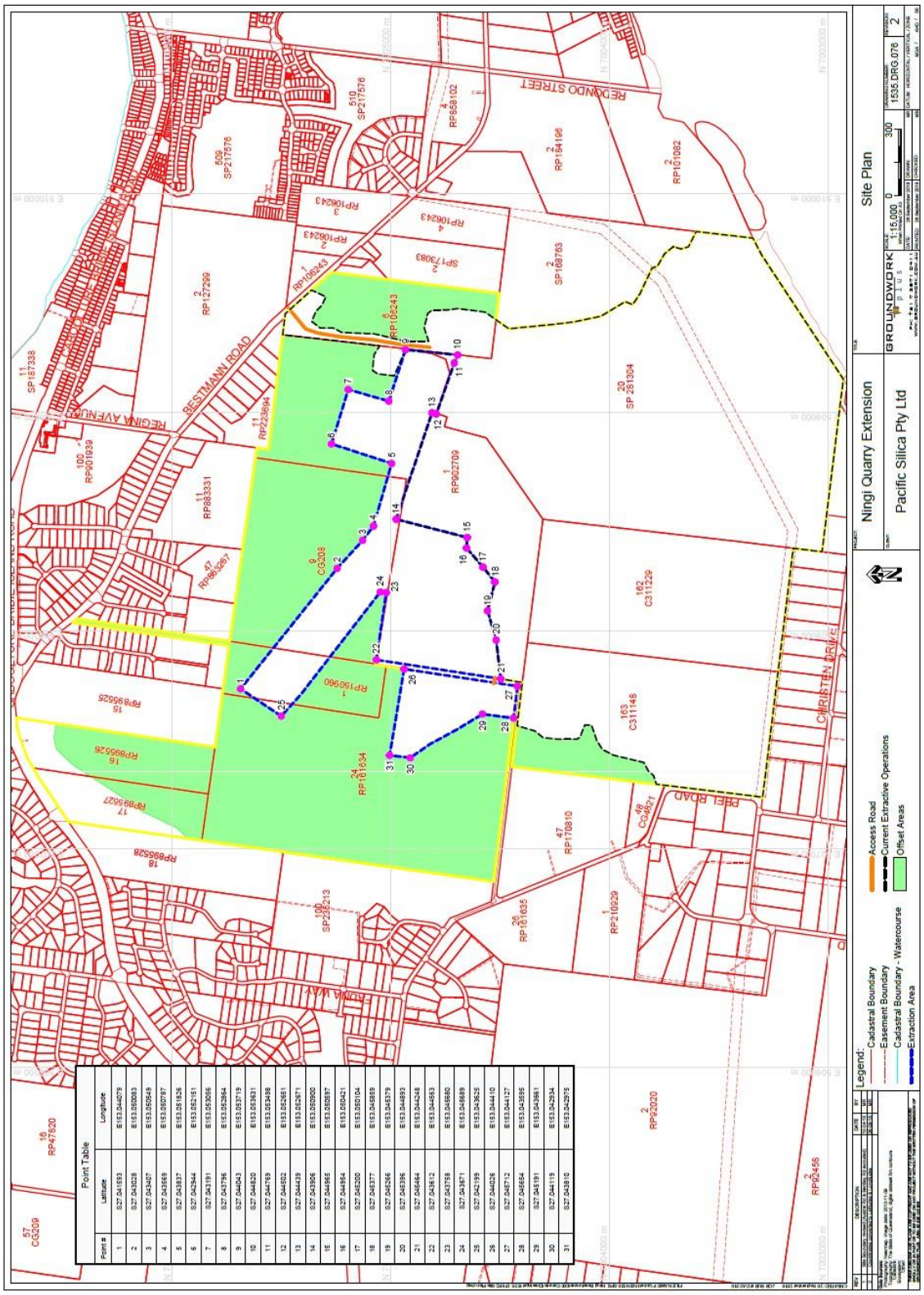
Uncontrolled discharges means the discharge of waters without any action being undertaken to cause the discharge, or increase the volume of the discharge.

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

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

You means the holder of the environmental authority.

Appendix A – Site Plan (Drawing 1535.DRG.076)



Appendix B Set out Points

ABN 46 640 294 485

Point Table		
Point #	Latitude	Longitude
1	S27.041593	E153.044079
2	S27.043028	E153.050083
3	S27.043407	E153.050549
4	S27.043569	E153.050787
5	S27.043837	E153.051826
6	S27.042944	E153.052151
7	S27.043191	E153.053056
8	S27.043796	E153.052864
9	S27.044043	E153.053719
10	S27.044820	E153.053631
11	S27.044769	E153.053498
12	S27.044502	E153.052651
13	S27.044439	E153.052671
14	S27.043906	E153.050900
15	S27.044965	E153.050597
16	S27.044954	E153.050421
17	S27.045200	E153.050104
18	S27.045377	E153.045859
19	S27.045266	E153.045379
20	S27.045396	E153.044893
21	S27.045464	E153.044248
22	S27.043612	E153.044563
23	S27.043758	E153.045680
24	S27.043671	E153.045689
25	S27.042199	E153.043625
26	S27.044026	E153.044410
27	S27.045712	E153.044127
28	S27.045654	E153.043595
29	S27.045191	E153.043661
30	S27.044119	E153.042934
31	S27.043810	E153.042975

Appendix C Northern Extraction Area Water Monitoring Bores

ABN 46 640 294 485

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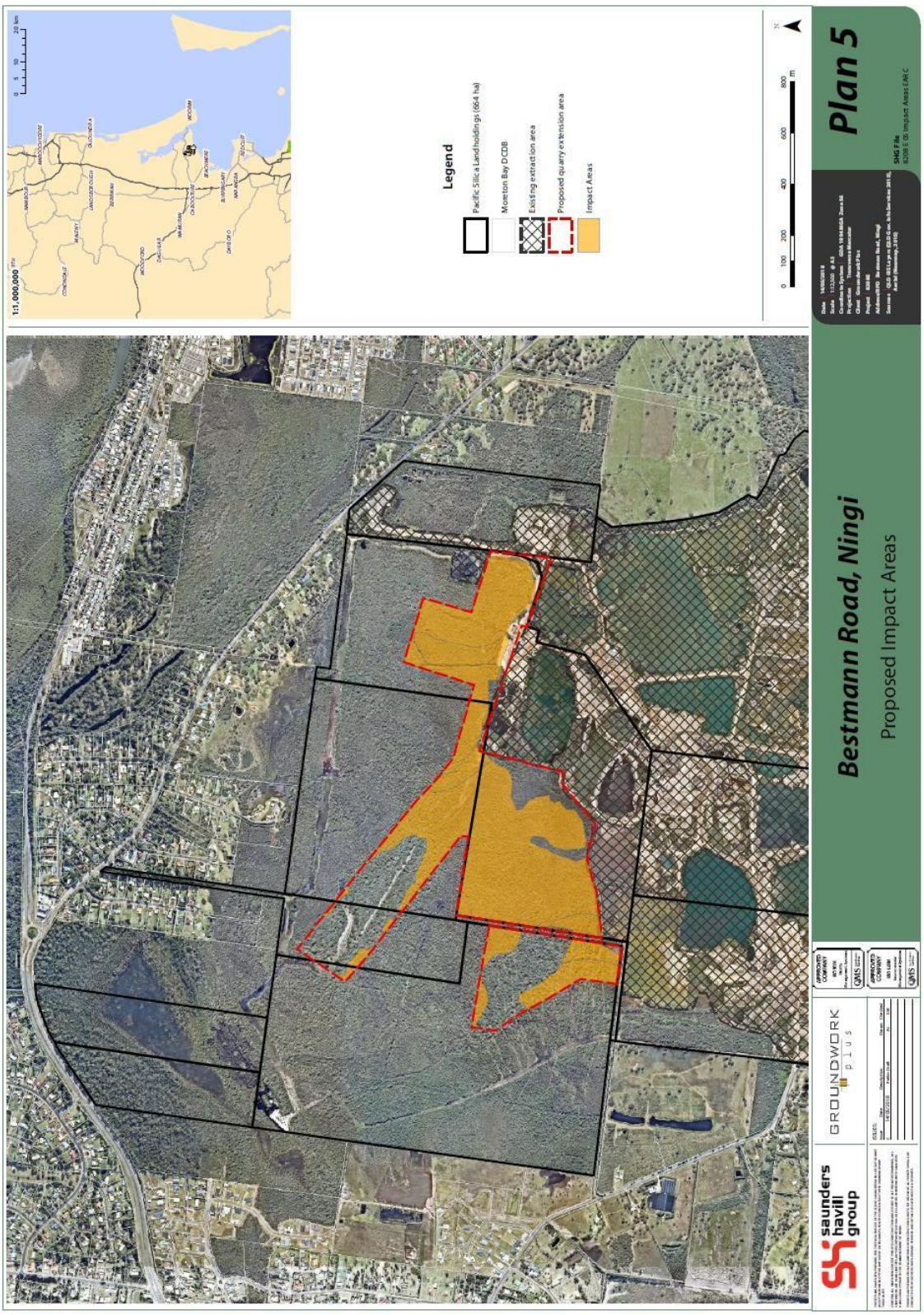
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WM105
WM106
WM84
WM71
WM05
WM103
WM86
PACIFIC SILICA PTY LTD
NORTHERN EXTRACTION AREA
WATER MONITORING BORES
FIGURE:

Appendix D Proposed MSES Impact Areas

ABN 46 640 294 485

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