Queensland

North Stradbroke Island Protection and Sustainability and Another Act Amendment Bill 2013

Includes amendments agreed during Consideration

Queensland

North Stradbroke Island Protection and Sustainability and Another Act Amendment Bill 2013

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2013

A Bill

for

An Act to amend the *North Stradbroke Island Protection and Sustainability Act 2011* and the *Vegetation Management Framework Amendment Act 2013* for particular purposes

The Parliament of Queensland enacts—

Part 1 Preliminary

Clause 1 Short title

This Act may be cited as the *North Stradbroke Island Protection and Sustainability and Another Act Amendment Act 2013*.

Clause 2 Commencement

This Act, other than part 3, commences on a day to be fixed by proclamation.

Part 2 Amendment of North Stradbroke Island Protection and Sustainability Act 2011

Clause 3 Act amended

This part amends the *North Stradbroke Island Protection and Sustainability Act 2011*.

Clause 4 Amendment of s 2 (Object of Act)

(1) Section 2, from 'substantially' to '2025'—

omit, insert—

manage the duration of mining interests over land in the North Stradbroke Island Region, and end mining in the region by the end of 2035 (but allow for

rehabilitation of land in the region to happen up until the end of 2040)

(2) Section 2—

insert—

(c) to assist the transition of the economy of the region from reliance on the mining industry to other industries.

Clause 5 Amendment of s 5 (Meaning of North Stradbroke Island Region)

Section 5, editor's note—

omit, insert—

Editor's note—

The map titled 'NSI 1' may be viewed on the department's website at <www.dnrm.qld.gov.au>.

Clause 6 Amendment of s 9 (Termination of mining lease 1109)

(1) Section 9, heading, after '1109'—

insert—

if not renewed

(2) Section 9(1), from ', and' to 'renewed'—

omit.

(3) Section 9(2)—

insert—

Note—

However, see section 11B for mining lease 1109.

Clause 7 Amendment of s 10 (Particular NSI mining interests not to be renewed)

(1) Section 10(3)—

insert—

Note—

However, see section 11B for mining lease 1105.

(2) Section 10(4), definition *relevant NSI mining interest*, paragraph (b), second occurring—

renumber as paragraph (c).

Clause 8 Amendment of s 11 (Renewal of particular NSI mining leases)

(1) After section 11(2)(b)(i)—

insert—

Note—

However, see section 11A for mining lease 1120.

(2) After section 11(5)—

insert—

Note—

However, see section 11B for mining leases 1117 and 1120.

Clause 9 Insertion of new ss 11A–11J

After section 11—

insert—

11A Mining lease 1120 no longer subject to particular condition for renewal

(1) On the commencement of this section, mining lease 1120 is no longer subject to the condition stated opposite the mining lease in schedule 1, column 3.

(2) Subsection (1) applies despite section 11(2)(b)(i) and anything to the contrary in the Mineral Resources Act that applies to the mining lease in relation to that condition.

11B Mining leases 1105, 1109, 1117 and 1120 can be renewed

(1) This section applies to each of the following mining leases—

(a) 1105;

(b) 1109;

(c) 1117;

(d) 1120.

(2) The mining lease can, under sections 11C to 11E, be renewed.

(3) Subsection (2) applies—

(a) for mining lease 1105—despite section 10(2) and (3); and

(b) for mining lease 1109—despite section 9(2); and

(c) for mining leases 1117 and 1120—despite section 11(5) and (6); and

(d) despite anything to the contrary in the Mineral Resources Act that applies to the mining lease in relation to that condition.

(4) Also, to remove any doubt, it is declared subsection (2) applies to mining leases 1117 and 1120 despite section 8(3) and (4).

11C Application for renewal of mining leases

(1) The holder of mining lease 1105, 1109, 1117 or 1120 may, within the renewal period, apply to the Minister for renewal of the mining lease.

(2) The application must be—

(a) made in the approved form; and

(b) accompanied by the fee prescribed under a regulation; and

(c) accompanied by a statement about the following matters—

(i) the term for which the mining lease is sought to be renewed;

(ii) for parcels of land the whole or part of which are the subject of the application—

(A) a description of the parcels; and

(B) the current use of the land; and

(C) the name and address of the owner of the land and the name and address of any other land that may be used to access the land.

(3) In this section—

renewal period means the period that is—

(a) at least 6 months, or any shorter period allowed by the Minister, before the current term of the lease expires; and

(b) not more than 1 year before the current term expires.

11D Decision on application

(1) If the Minister considers that an application under section 11C has been properly made the Minister must renew the relevant mining lease.

(2) The renewed lease is subject to—

(a) the conditions stated in section 11E; and

(b) any conditions prescribed under a regulation; and

(c) any conditions decided by the Minister.

(3) As soon as practicable after renewing the lease, the Minister must give the holder a written notice stating—

(a) when the renewal starts; and

(b) any conditions decided by the Minister to which the renewed lease is subject.

11E Provisions about particular leases if renewed

(1) The following apply for any renewal of mining lease 1109—

(a) after 31 December 2015, the winning of a mineral from the place where it occurs in the area of the lease is not an authorised activity for the lease;

(b) the mining lease ends at the end of 31 December 2020 and can not be renewed beyond that date.

(2) The following apply for any renewal of mining lease 1105, 1117 or 1120—

(a) the winning of a mineral from the place where it occurs in the area of the lease is an authorised activity for the lease;

(b) if, because of the renewal, the lease ends after 31 December 2035—

(i) after 31 December 2035, the winning of a mineral from the place where it occurs in the area of the lease is not an authorised activity for the lease; and

(ii) the mining lease ends at the end of 31 December 2040 and can not be renewed beyond that date.

(3) In this section—

authorised activity, for a lease, see the Mineral Resources Act, schedule 2.

11F Limitation of review and appeal

(1) This section applies in relation to a decision of the Minister made under section 11D.

(2) Unless the Supreme Court decides that the decision is affected by jurisdictional error, the decision—

(a) is final and conclusive; and

(b) can not be challenged, appealed against, reviewed, or called in question in any other way, under the Environmental Protection Act or any other Act or law (whether by the Supreme Court, or another court, a tribunal or another entity); and

(c) is not subject to any declaratory, injunctive or other order of the Supreme Court, another court, a tribunal or another entity on any ground.

11G Continuation of lease while application being dealt with

(1) Subsection (2) applies, subject to section 11I, if—

(a) a properly made application for renewal of a mining lease under section 11C is not withdrawn or granted before the lease's expiry day ends; and

(b) after the expiry day, the holder—

(i) continues to pay rental on the lease and other amounts required to be paid under the Mineral Resources Act; and

(ii) otherwise complies with this Act and the lease conditions.

(2) The lease continues in force subject to the rights, entitlements and obligations in effect immediately before the end of the expiry day until the application is withdrawn or granted.

(3) In this section—

expiry day, for a mining lease, means the day the lease expires under its terms.

11H When term of renewed lease starts

(1) If, under section 11D, a mining lease (other than mining lease 1109) is renewed before its expiry day ends, the term of the renewed lease starts on the day after the expiry day.

(2) If the lease is renewed after the expiry day, the term of the renewed lease is taken to have started on the day after the expiry day.

(3) In this section—

expiry day, for a mining lease, means the day the lease expires under its terms.

11I When new conditions of renewed lease start

(1) If a renewed mining lease is subject to conditions (the ***new conditions***) different from, or not

included in, the lease conditions applying immediately before its renewal, the new conditions apply from the later of the following—

(a) the start of the term of the renewed lease;

(b) the day the renewal is granted.

(2) However, if the lease is continued in force under section 11G the holder must pay rental on the lease from the day after its expiry day at the rate that would have been payable, from time to time, if the renewed mining lease had been renewed on the day after the expiry day.

(3) Subsection (2) applies even though payment of rental may be a condition of the lease.

11J Application of Mineral Resources Act not limited

(1) Subject to section 11E, the renewal of a mining lease under section 11D does not limit the application of any provisions of the Mineral Resources Act to the renewed mining lease, including, for example, provisions about cancelling a mining lease or reducing its area.

(2) To remove any doubt, it is declared that a reference to a mining lease renewed under section 11D is taken to be a reference to a mining lease—

(a) originally granted under the Mineral Resources Act, but renewed under this Act; and

(b) to which the Mineral Resources Act continues to apply under this section.

Clause 10 Amendment of s 14 (Prohibition on grant of NSI mining interest)

Section 14—

insert—

(2) Subsection (1) does not apply to the renewal of a mining lease under section 11D.

Clause 11 Amendment of s 15 (Purpose of div 3)

Section 15, 'amendment'—

omit, insert—

replacement and further amendment

Clause 12 Replacement of ss 16 to 21

Sections 16 to 21—

omit, insert—

17 Replacement of environmental authority MIN100971509

(1) On the commencement of this section, environmental authority MIN100971509, issued under the Environmental Protection Act, is replaced by the environmental authority shown in schedule 2A (the ***new authority***).

(2) The new authority is taken to be an environmental authority for the Environmental Protection Act.

(3) The replacement does not limit the application of any provisions of the Environmental Protection Act to the new authority.

Clause 13 Insertion of new ss 23 and 24

Part 3—

insert—

23 Approved forms

(1) The chief executive may approve forms for use under this Act.

(2) A form may be approved for use under this Act that is combined with, or is to be used together with, an approved form under another Act.

24 Regulation-making power

(1) The Governor in Council may make regulations under this Act.

(2) A regulation may be made about the following matters—

(a) the fees to be paid under this Act;

(b) the conditions which may be imposed for the renewal of a mining lease under section 11D.

Clause 14 Insertion of new sch 2A

After schedule 2—

insert—

Schedule 2A Environmental authority EPML00575913

section 17

Department of Environment and Heritage Protection

Permit[1]

Environmental Protection Act 1994

Environmental authority

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

Permit[1] number: EPML00575913

The anniversary date of this environmental authority is 30 April. An annual return and the payment of the annual fee which is currently $26,496.00 will be due each year on this day.

Environmental authority holder(s)

Name	Registered address
Stradbroke Rutile Pty Ltd T/A Stradbroke Rutile Pty Ltd	100 Eastern Parade GILLMAN SA 5013

Environmentally relevant activity and location details

Environmentally relevant activity(ies)	Location(s)	Description
Mining - ML mineral sand	ML1159, ML1164, ML 1121	North Stradbroke Island - Gordon Mine (20 kms south of Dunwich)
	ML1123	North Stradbroke Island - Vance Mine (4 kms north east of Dunwich)
	ML1109, ML1122.	North Stradbroke Island - Yarraman Mine (2kms south west of Point Lookout)
	ML1117, ML1121, ML1174, ML1175.	North Stradbroke Island - Ibis Mine (3 kms south east of Dunwich)
	ML1105, ML1113, ML1117, ML1119, ML1120, ML1129, ML1130, ML1153, ML1162, ML1163, ML1116	North Stradbroke Island - Enterprise Mine (5 kms south east of Dunwich)
	ML 1140, ML1117, ML1105, ML1119, ML1153, ML1162, ML1163.	North Stradbroke Island – Bayside Mine (Approx 2 km south of Dunwich)
	ML1112, ML1160, ML1172.	North Stradbroke Island - Amity (1.5 kms south east of Amity)
	ML1103, ML1118.	North Stradbroke Island - Dunwich

Additional information for applicants

Environmentally relevant activities

[1] Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation

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

An environmental authority authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the authority 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 if an owner or occupier of land becomes aware a notifiable activity (as defined in Schedule 3 and Schedule 4) is being carried out on the land, or that the land has been, or is being, contaminated by a hazardous contaminant, the owner or occupier must, within 22 business days after becoming so aware, give written notice to the chief executive.

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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)

Conditions of environmental authority

Location:

Land description: ML1103; ML1105; ML1109; ML1112; ML1113; ML1116; ML1117; ML1118; ML1119; ML1120; ML1121; ML1122; ML1123; ML1129; ML1130; ML1140; ML1153; ML1159; ML1160; ML1162; ML1163; ML1164; ML1172; ML1174; ML1175.

Relevant activity/ies:

Mining - ML mineral sand

The environmentally relevant activity(ies) conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency Interest: General	
General	
Condition Number	**Conditions**
G1	This **environmental authority** authorises **environmental harm** referred to in the conditions. Where there is no condition or this **environmental authority** is silent on a matter, the lack of a condition or silence does not authorise **environmental harm**.
G2	In carrying out the **mining activity** authorised by this **environmental authority** on ML1120, ML1117 and ML1105, **disturbance** of **land**: (a) may occur in the areas marked 'A' on the map (SP-925A) that is annexure A to this **environmental authority;** (b) must not occur in the areas marked 'B' on the map (SP-925A) that is annexure A to this **environmental authority;** and (c) may occur in the areas marked 'C' on the map (SP-925A) that is annexure A to this **environmental authority**, but only in accordance with condition (G5).
G3	In carrying out the **mining activity** authorised by this **environmental authority** on ML1109, **disturbance** of **land** must not be conducted within a Category A or B environmentally sensitive area
G4	The **holder of this environmental authority** must: (a) install all measures, plant and equipment necessary to ensure compliance with the

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	conditions of this **environmental authority** (b) maintain such measures, plant and equipment in a proper and efficient condition (c) operate such measures, plant and equipment in a proper and efficient manner (d) ensure all instruments and devices used for the measurement or monitoring of any parameter under any condition of this **environmental authority** are properly calibrated.
G5	The **holder of this environmental authority** must prepare a management plan for the area marked 'C' on the map that is annexure A to this **environmental authority** for approval by the **administering authority.** The management plan must: (a) identify the **environmental value(s)** of the area marked 'C' on the map that is annexure A to this **environmental authority** and their location within ML1117; (b) provide an assessment of the potential adverse and beneficial impacts of the **mining activity** on the **environmental value(s)** identified in (a) above; (c) use the principles in the **risk management** system referred to in condition G13 to state the **control measures** to protect the **environmental value(s)** and the **key environmental value(s)**; (d) state **trigger level(s)** for indicators[1] of potential impacts on the **environmental value(s)** and **key environmental values** - the **trigger level(s)** must be set to alert the **holder of this environmental authority** of potential **environmental harm** prior to any unauthorised **environmental harm** occurring; and (e) include: (i) details of the level and nature of **stakeholders(s)** consultation undertaken during the development of the management plan; and (ii) a summary of the concerns and interest raised by **stakeholder(s).** The **administering authority** must approve or refuse the management plan within 20 business days of being submitted to the **administering authority**. **Disturbance** of **land** on the area marked 'C' on the map that is annexure A to this **environmental authority**: (f) must not commence unless the management plan is approved by the **administering authority**; and (g) must be carried out in accordance with the approved management plan.

[1] NOTE: Indicators could include water level, water quality, stability, abundance of a significant species, variance between pre and post mining landform, concentrations of a contaminant in air, water or soil, indicators of impacts on an **environmental value(s)** between **pre-mining activity** and **post-mining activity,** but on the basis that they take account of naturally occurring variations in the **environmental value(s)**.

Monitoring	
G6	Except where specified otherwise in another condition of this **environmental authority**, all monitoring records or reports required by this **environmental authority** must be kept for a period of not less than 5 years.
G7	A monitoring program must be conducted within the **zone of impact** to monitor any potential **environmental harm**.
G8	A written monitoring plan that describes the monitoring program must be prepared and maintained. The written monitoring plan must include as a minimum: (a) locations for monitoring/sampling; (b) parameters monitored; (c) frequency of monitoring/sampling; and (d) **trigger level(s)** for each location.
G9	The written monitoring plan must be submitted to the **administering authority** by 31 May each year.
G10	The monitoring plan must include a process for dealing with the exceedance of the **trigger level(s)** including the following steps: (a) evaluation of the **risk** associated with the exceedance in accordance with the **risk treatment** process; (b) implementation of the actions arising from the **risk treatment** process which may include measures to prevent unauthorised **environmental harm**; and (c) an obligation to notify the **administering authority** of the exceedance as soon as practicable and to notify the outcome of the **risk treatment** process.
Financial Assurance	
G11	The activity must not be carried out until the **holder of this environmental authority** has given financial assurance to the **administering authority** as security for compliance with this **environmental authority** and any costs or expenses, or likely costs or expenses, mentioned in section 298 of the Act.
G12	The amount of financial assurance must be reviewed by the **holder of this environmental authority** when a **plan of operations** is amended or replaced or the authority is amended.
Risk management	
G13	The **holder of this environmental authority** must develop and implement a risk management system for mining activities which mirrors the content requirement of the Standard for Risk Management (ISO31000:2009), or the latest edition of an Australian standard for risk management, to the extent relevant to environmental management, by no later than 3 months from the date this **environmental authority** takes effect
Notification of emergencies, incidents and exceptions	
G14	The **holder of this environmental authority** must notify the **administering authority** by written notification within 24 hours, after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with, the conditions of this **environmental authority**.
G15	Within 10 business days following the initial notification of an emergency or incident, or receipt of monitoring results, whichever is the latter, further written advice must be provided to the administering authority, including the following: (a) results and interpretation of any samples taken and analysed.

	(b) outcomes of actions taken at the time to prevent or minimise unlawful **environmental harm**. (c) proposed actions to prevent a recurrence of the emergency or incident.
Complaints	
G16	The **holder of this environmental authority** must record all environmental complaints received about the mining activities including: (a) name, address and contact number of the complainant (b) time and date of complaint (c) reasons for the complaint (d) investigations undertaken (e) conclusions formed (f) actions taken to resolve the complaint (g) any abatement measures implemented (h) person responsible for resolving the complaint.
G17	The **holder of this environmental authority** must, when requested by the **administering authority**, undertake relevant specified monitoring within a reasonable timeframe nominated or agreed to by the **administering authority** to investigate any complaint of **environmental harm**. The results of the investigation (including an analysis and interpretation of the monitoring results) and abatement measures, where implemented, must be provided to the **administering authority** within 10 business days of completion of the investigation, or no later than 10 business days after the end of the timeframe nominated by the **administering authority** to undertake the investigation.
Third Party Reporting	
G18	The **holder of this environmental authority** must: (a) within 1 year of the commencement of this **environmental authority**, obtain from an **appropriately qualified person** a report on compliance with the conditions of this **environmental authority**; (b) obtain further such reports at regular intervals, not exceeding 3 yearly intervals, from the completion of the report referred to above; and (c) provide each report to the **administering authority** within 90 days of its completion.
G19	Where a condition of this **environmental authority** requires compliance with a standard, policy or guideline published externally to this **environmental authority** and the standard is amended or changed subsequent to the issue of this **environmental authority**, the **holder of this environmental authority** must: (a) comply with the amended or changed standard, policy or guideline within 2 years of the amendment or change being made, unless a different period is specified in the amended standard or relevant legislation, the time specified in that condition; (b) until compliance with the amended or changed standard, policy or guideline is achieved, continue to remain in compliance with the corresponding provision that was current immediately prior to the relevant amendment or change.
Annual Environmental Report	

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G20	An Annual Environmental Report (AER) that assesses the environmental performance of the **holder of this environmental authority** must be submitted to the **administering authority** at each **annual return**. The report must address: (a) Status of compliance with the conditions of the **environmental authority**; (b) Monitoring results and their conformance with the **trigger level(s)**; and (c) Details of environmental incidents and complaints.
Agency Interest: Air	
Dust Nuisance	
A1	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 an **authorised person**) of **environmental nuisance** at any **sensitive place**, and the results must be notified within fourteen (14) days to the **administering authority** following completion of monitoring.
Point Source Releases to Air / Dust and Particulate Monitoring	
A2	The **holder of this environmental authority** shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the dust and particulate matter emissions generated by the mining activities do not cause exceedances of the following levels when measured at any **sensitive** 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 AS3580.10.1 Methods for sampling and analysis of ambient air—Determination of particulate matter—Deposited matter – Gravimetric method*. (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, for no more than 5 exceedances recorded each year, when monitored in accordance with the most recent version of either: 1. *Australian Standard AS3580.9.6 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM_{10} high volume sampler with size-selective inlet – Gravimetric method*; or 2. *Australian Standard AS3580.9.9 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM_{10} low volume sampler—Gravimetric method.* (c) A concentration of particulate matter with an aerodynamic diameter of less than 2.5 micrometres (PM2.5) suspended in the atmosphere of 25 micrograms per cubic metre over a 24-hour averaging time, when monitored in accordance with the most recent version of *AS/NZS3580.9.10 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM (sub)2.5(/sub) low volume sampler—Gravimetric method.* (d) A concentration of particulate matter suspended in the atmosphere of 90 micrograms per cubic metre over a 1 year averaging time, when monitored in accordance with the most recent version of *AS/NZS3580.9.3:2003 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—Total suspended particulate matter (TSP)—High volume sampler gravimetric method*.

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Agency Interest: Waste Management	
WM1	Unless otherwise permitted by the conditions of this **environmental authority** or with prior approval from the **administering authority** and in accordance with a relevant standard operating procedure, waste must not be burnt.
WM2	The **holder of this environmental authority** may burn vegetation cleared in the course of carrying out extraction activities provided the activity does not cause **environmental harm** at any **sensitive place** or **commercial place**.
Tailings Disposal	
WM3	The disposal of zircon mags must be at least 10 metres below final rehabilitation **constructed landform**.
WM4	The **trigger level** for radiation is 0.12µSv per hour above background, at one (1) metre above ground level.
WM5	Radiation levels must be monitored at the dry mill tailings disposal areas within one (1) month of the completion of the final **constructed landform** reshaping activities.
Agency Interest: Noise	
Noise Nuisance	
N1	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 an **authorised person**) of **environmental nuisance** at any **sensitive place** or **commercial place**, and the results must be notified within fourteen (14) days to the **administering authority** following completion of monitoring.
Noise limits	
N2	The **holder of this environmental authority** must ensure that noise generated by the mining activities does not cause the criteria in **Table N1 – Noise limits** to be exceeded at a **sensitive place** or **commercial place**.

Table N1 – Noise limits

Sensitive Place						
Noise level dB(A) measured as:	**Monday to Saturday**			**Sundays and Public Holidays**		
	7am to 6pm	6pm to 10pm	10pm to 7am	9am to 6pm	6pm to 10pm	10pm to 9am
LAeq, adj, 15 mins	CV = 50 AV = 5	CV = 45 AV = 5	CV = 40 AV = 0	CV = 45 AV = 5	CV = 40 AV = 5	CV = 35 AV = 0
LA1, adj, 15 mins	CV = 55 AV = 10	CV = 50 AV = 10	CV = 45 AV = 5	CV = 50 AV = 10	CV = 45 AV = 10	CV = 40 AV = 5
Commercial Place						
Noise level dB(A) measured as:	**Monday to Saturday**			**Sundays and Public Holidays**		
	7am to 6pm	6pm to 10pm	10pm to 7am	7am to 6pm	6pm to 10pm	10pm to 7am
LAeq, adj, 15 mins	CV = 55 AV = 10	CV = 50 AV = 10	CV = 45 AV = 5	CV = 50 AV = 10	CV = 45 AV = 10	CV = 40 AV = 5

Table N1 – Noise limits notes:
1. CV = Critical Value

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	2. AV = Adjustment Value *3. To calculate noise limits in Table N1:* *If bg ≤ (CV – AV):* *Noise limit = bg + AV* *If (CV – AV) < bg ≤ CV:* *Noise limit = CV* *If bg > CV:* *Noise limit = bg + 0* *4. In the event that measured bg (**LA90, adj, 15 mins**) is less than 30 dB(A), then 30 dB(A) can be substituted for the measured background level* *5. bg = background noise level (**LA90, adj, 15 mins**) measured over 3-5 days at the nearest sensitive receptor* *6. If the project is unable to meet the noise limits as calculated above alternative limits may be calculated using the processes outlined in the "Planning for Noise Control" guideline.*
Agency Interest: Groundwater	
GW1	The **holder of this environmental authority** must develop and implement, an ongoing Groundwater Monitoring Program (GMP) as part of mine planning and the **mining activity.**
GW2	The GMP must comply with the following requirements: (a) the development of a suitable groundwater monitoring network (i.e bores/ piezometers), to monitor the level and flow of groundwater potentially impacted by the ongoing **mining activity**; (b) **pre-mining activity** conceptual modelling; (c) **pre-mining activity** predictive groundwater computer models; (d) standing water levels and total well depths in metres must be measured and recorded during each monitoring event and must be reported as the depth in metres from the top edge of the highest point of the casing collar to the water surface within the bore; (e) groundwater level trends and flows must be compared to groundwater models for model verification and confirmation or reassessment of groundwater level and flow predictions; and (f) evaluation of the **risk** of changes in groundwater levels and flows including appropriate modifications to the **mine path** and **control measures** to appropriately manage water levels to prevent or minimise **environmental harm.**
GW3	The groundwater monitoring network referred to in condition GW2 must: (a) be installed and maintained by an **appropriately qualified person**; and (b) be constructed in accordance with the Agriculture and Resource Management Council of Australia and New Zealand manual titled Minimum Construction Requirements for Water Bores in Australia, Edition 2, Revised September 2003, or more recent editions or supplements to that document as such become available.
GW4	Any record made of the results of groundwater monitoring made in accordance with conditions GW2 and GW3 must be kept for not less than fifteen (15) years from the date the record was made.

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GW5	The **holder of this environmental authority** must ensure that the groundwater monitoring data gathered in accordance with this **environmental authority** is analysed and interpreted to assess the nature and extent of any **environmental harm** from the **mining activity**. The assessment must also include, but not be limited to, the location, nature (confined, unconfined etc.) of each aquifer, define groundwater contours and indicate direction of flow. The data collation, analysis and assessment must be conducted by an **appropriately qualified person** and must be submitted to the **administering authority** upon request.
Agency Interest: Land and rehabilitation	
L1	Rehabilitation must commence progressively in accordance with the **plan of operations**.
Rehabilitation acceptance criteria	
L2	All **land** disturbed by the **mining activity** must be rehabilitated as **native bushland** to ensure sustainable natural ecosystems at the point of progressive certification and surrender.
L3	All **land** disturbed by the **mining activity** must be free from **waste** (excluding **tailings** generated from the **mining activity** that is used to construct **landform**).
Landform	
L4	All **constructed landform** built **pre- 1 January 2007** must at least comply with the criteria specified in Table L1. **Table L1 – Pre-1 January 2007 Landform Criteria**

Mine Site	Description of Area	Total Area	Type 1 Criteria		Type 2 Criteria		Type3 Criteria
		Area (ha)	Area (ha)	Proportion (%)	Area (ha)	Proportion (%)	Proportion (%)
Amity	Amity	269.3	40.6	15.1	221.9	82.4	72.2
Bayside	Bayside	748.6	166.9	22.3	473.8	63.3	100.0
Gordon	Gordon	1212.0	359.9	29.7	621.7	51.3	83.7
Ibis	Ibis	453.3	117.4	25.9	309.1	68.2	94.3
Yarraman	Yarraman	89.1	3.9	4.4	71.8	80.6	67.7
Enterprise and Yarraman	Yellow Violet complex	540.7	223.8	41.4	539	99.7	95.6
Enterprise and Bayside	Blue Lake complex	644.5	447.9	69.5	643.2	99.8	90.7

L5	In the event that the areas listed in Table L1 are re-disturbed by the **mining activity** resulting in the reconstruction of **landform post- 1 January 2007**, the criteria referred to in condition L7 will apply to the re-mined area.

L6	In the event that the areas listed in Table L1 are re-disturbed by the **mining activity** resulting in changes to the **pre- 1 January 2007** values for area and proportion listed in Table L1, the **holder of this environment authority** must advise the **administering authority** in the **plan of operations** the changed values for area or proportion that will apply to the landform **pre-1 January 2007.**
L7	Subject to condition L9, all **constructed landform** built **post- 1 January 2007** must comply with the following criteria: (a) slopes of **constructed landform** do not exceed 25 degrees from horizontal; and (b) 80% of the area of the **mining block** must have the **aspect element(s)** that existed in the **mining block, pre-mining activity**, returned to the same location in the **constructed landform** where the **volume difference index (VDI)** of any **mining block** is within the range of -2.5 to +5.5; and (c) regardless of the **volume difference index (VDI)** in conditions L7(b): (i) at least 75% of the area of the **constructed landform** at each **mine site** must contain the **terrain element(s)** present in the **baseline topography** within the same **geomorphology unit**; (ii) the area covered by each **terrain element(s)** within the **geomorphology unit** in the **constructed landform** must not be less than 30% of the area covered by that **terrain element(s)** in the **baseline topography** within the same **geomorphology unit**; and (iii) the number of **terrain element(s)** in a **mining block** must represent; (A) at least 80% of the number of **terrain element(s)** present in the **baseline topography** in that **mining block** where the **volume difference index (VDI)** of the **mining block** is positive; or (B) at least 50% of the number of **terrain element(s)** present in the **baseline topography** in that **mining block** where the **volume difference index (VDI)** of the **mining block** is negative.
L8	In the event that the **landform** in a **mining block** cannot comply with the criteria in condition L7(c) due to compliance with conditions L7(a) and L7(b), the requirements of condition L7(a) and L7(b) take precedence to the extent of any inconsistency.
L9	The **constructed landform** does not have to comply with the criteria in condition L7 where the construction of the **landform** compromises the safety of employees.
L10	In constructing **landform** in areas specified in Table L1, it is preferable for the **baseline topography** to be used for determining the **aspect element(s)**, rather than the **pre-mining topography**.
Geotechnical stability	
L11	The geotechnical stability of the **constructed landform** must have a **factor of safety** of not less than 1.3.
L12	A **Registered Professional Engineer of Queensland (RPEQ)** possessing suitable qualifications and experience must certify the geotechnical stability required by condition L11 has been achieved in the **constructed landform.**

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Erosion	
L13	All **land** disturbed by the **mining activity** must: (a) meet the criteria in conditions in L15 and L17 regarding revegetation; and (b) have the equivalent proportions of **litter** to that present in **representative unmined areas** within the **authorised mining tenement(s)**.
Revegetation	
L14	The assessment of revegetated areas must comprise of sampling consistent with the **Queensland Herbarium Mapping Methodology** with appropriate modification for scale.
L15	Subject to condition L13 all **land** disturbed by the **mining activity** that has been revegetated **post- 30 June 1987** must comply with the criteria specified in Table L2.

Table L2 – Post- 30 June 1987 Revegetation Criteria

Performance Measure Category	Stratum	Performance Measure
Number of Species	Trees	All **native** species present in the **representative unmined plots** are present in the **rehabilitation**.
	Trees and Understorey	The **native** species present in the **rehabilitation** is not **statistically significantly** less than 75% of the **native** species present in the **representative unmined plots** for the **vegetation community.**
		All significant species listed in **The Register of the National Estate** must be present in the **rehabilitation**.
Density	Trees	The mean stem count of all **native** tree species greater than 2 m in height in the **rehabilitation** is not **statistically significantly** less than 75% of the mean value recorded in the **representative unmined plots** for the **vegetation community**.
		For each **native** tree species present in the **rehabilitation**, the mean stem count of **native** trees greater than 2 m in height in the **rehabilitation** is not **statistically significantly** less than 50% of the mean value recorded for the same **native** tree species in the **representative unmined plots** for the **vegetation community.**
	Trees and Understorey	The mean stem count of **native** species in the **rehabilitation** is not **statistically significantly** less than 75% of the mean value recorded in the **representative unmined plots** for the **vegetation community.**
Cover	Trees	The mean **projective foliage cover (PFC)** of **native** species in the **rehabilitation** is not **statistically significantly** less than 75% of the mean value recorded in the **representative unmined plots** for the **vegetation community**.
	Understorey	The mean **projective foliage cover (PFC)** of **native** species in the **rehabilitation** is not **statistically significantly** less than 75% of the mean value recorded in the **representative**

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			unmined plots for the **vegetation community**.
		Ground	The mean **projective foliage cover (PFC)** of **native** species in the **rehabilitation** is not **statistically significantly** less than 65% of the mean value recorded in the **representative unmined plots** for the **vegetation community.**

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L16 Notwithstanding condition L15, the species specified in Table L3 must be present in all **land** disturbed by the **mining activity** that has been revegetated **post- 30 June 1987.**

Table L3 – Species to be Present in Post- 30 June 1987 Revegetation

Species	Common Name	Mines where species present pre-mining activity
Melichrus procumbens	-	Bayside, Enterprise, Gordon and Ibis
Calytrix tetragona	fringe-myrtle	Gordon and Ibis
Eriachne insularis	wanderrie grass	Bayside, Enterprise, Gordon and Ibis
Boronia safrolifera	safrole boronia	Vance
Banksia spinulosa var collina	golden candlesticks	Enterprise and Vance
Petrophile canescens	conesticks	Amity, Bayside, Dunwich, Enterprise, Gordon, Ibis, Vance and Yarraman
Petrophile shirleyae	conesticks	Enterprise and Vance
Podocarpus spinulosus	spiny-leaf podocarp or dwarf plum pine	Enterprise and Vance
Eucalyptus planchoniana	planchon's stringybark	Amity, Bayside, Enterprise Gordon, Ibis, Vance and Yarraman

L17 Subject to condition L13 all **land** disturbed by the **mining activity** that has been revegetated **pre- 30 June 1987** must comply with the criteria specified in Table L4.

Table L4 – Pre- 30 June 1987 Revegetation Criteria

Performance Measure Category	Stratum	Performance Measure
Number of species	**Trees**	The **projective foliage cover (PFC)** of *Acacia concurrens* (black wattle) in the **rehabilitation** is less than 40%.
	Trees and **Understorey**	For each **vegetation community**, the mean number of **native** species recorded in the **rehabilitation** is not less **statistically significantly** than 50% of the mean recorded in the **representative unmined plots.**
Density	**Trees**	For each **vegetation community,** the mean stem count of each **nominated species** greater than 2 m in height in the **rehabilitation** is between 50 to 200% of the mean value recorded in the **representative unmined plots.**
Cover	**Trees**	For each **vegetation community**, the mean **projective foliage cover (PFC)** of **native** species in the **rehabilitation** is not statistically significantly less than 75% of the mean value recorded in the **representative unmined plots.**

		Understorey	For each **vegetation community,** the mean **projective foliage cover (PFC)** of **native** species in the **rehabilitation** is not **statistically significantly** less than 50% of the mean value recorded in the **representative unmined plots.**
		Ground	For each **vegetation community,** the mean **projective foliage cover (PFC)** of **native** species in the **rehabilitation** is not **statistically significantly** less than 40% of the mean value recorded in the **representative unmined plots.**
L18	The revegetation criteria specified in Table L2 and Table L4 for the number of species do not apply: (a) where specific projects approved by the **administering authority** have been undertaken to increase fauna species diversity and abundance; and (b) to the fringing vegetation surrounding artificially created water bodies or watercourses approved by the **administering authority**. Note- For the purposes of this condition, the following are considered to have been approved by the **administering authority**: (i) *Eucalyptus tereticornis* planted at the Bayside Mine for koalas; (ii) unnamed artificial wetland at the Bayside Mine that is inhabited by significant wallum frogs, other frog species, invertebrates and freshwater turtles; and (iii) Dam 1 and Dam 4 artificial wetlands at the Yarraman Mine that are inhabited by significant wallum frogs.		
L19	The following weed species must not be present in the **rehabilitation** in densities that prevent the revegetation criteria in Table L2 and Table L4 from being achieved. (a) *Pinus* spp; and (b) *Poaceae* spp, including *Brachiaria decumbens* (signal grass), *Megathyrus maximus var.pubiglumis* (green panic), *Megathyrus maximus var. maximus* (guinea grass), *Mellinis minutiflora* (molasses grass), *Andropogon virginicus* (whiskey grass) and *Mellinis repens* (red natal grass).		
L20	All **land** disturbed by the **mining activity** and rehabilitated **post- 30 June 1987** that have already been mined and rehabilitated prior to 30 June 1987 must comply with condition L17.		

Water Quality	
L21	The quality of **waters** must meet one of the following criteria in the order of preference listed and be accompanied by justification to support the use of that criteria: (a) the difference in **relevant water quality parameters** between **pre-mining activity** and **post-mining activity** is not **statistically significant** (i.e. "historic assessment") - most preferred criteria; (b) the difference in **relevant water quality parameters** between the **post-mining activity** receiving water quality and the quality in a reference site is not **statistically significant** for the corresponding time period (i.e. "reference site assessment"); (c) water quality guidelines developed in accordance with the process specified in the *Monitoring and Sampling Manual 2009 (Version 2, September 2010)* or revisions or more recent editions of this document as they become available for the water and for the **relevant water quality parameters** and criteria in these guidelines have been consistently achieved **post-mining activity**. (d) water quality guidelines developed in accordance with the process specified in the Australian and New Zealand Environment and Conservation Council (**ANZECC**) *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* dated 2000 or revisions or more recent editions of this document as they become available for the water and for the **relevant water quality parameters** and criteria in these guidelines have been consistently achieved **post-mining activity** (i.e "**ANZECC** process")- least preferred criteria.
L22	The reference site required by condition L21(b): (a) must not have been impacted by the **mining activity**; and (b) must be nominated by the **holder of this environmental authority;** and (c) must be acceptable to the **administering authority** prior to use; (d) must be in a similar ecological setting.
L23	The water quality monitoring required to be undertaken by condition L21 must be undertaken at a frequency of not less than quarterly whilst **mining operations** are being undertaken and not less than biannually when **mining operations** have ceased.
Contaminated Land and Groundwater	
L24	Before applying for surrender of a mining lease, the **holder of this environmental authority** must (if applicable) provide to the **administering authority** a site investigation report under the Act, in relation to any part of the mining lease which has been used for notifiable activities or which the holder is aware is likely to be contaminated land, and also carry out any further work that is required as a result of that report to ensure that the land is suitable for its final land use.
L25	Notwithstanding condition L21, a Site Investigation Report, prepared in accordance with the *Environmental Protection Act 1994* and *Guidelines for contaminated land professionals (DEHP, 2012)* or revisions or more recent editions of this document as they become available, must be submitted to the **administering authority** to: (a) demonstrate that the subject **land** and the groundwater affected by the diesel spill at the Amity Mine is suitable for the intended use; and (b) enable the **administering authority** to remove the site from the **Environmental**

	Management Register (EMR).
L26	Notwithstanding condition L21, a Salinity Investigation Report of the groundwater of the Amity Mine dredge areas and associated water expressions (i.e. Amity Swamp) must be submitted to the **administering authority** to: (a) provide and analyse water quality monitoring results; and (b) enable recommendations on the assessment of the rehabilitation success.
L27	The information required by conditions L25 and L26 must be reviewed and certified by a Third Party Reviewer before being submitted to the **administering authority**.
L28	A Third Party Reviewer must be appointed under the Environmental Protection Agency's (EPA's) Operational Policy *Third Party Reviewer Terms of Reference* or revisions or more recent editions of this document as they become available.
L29	Water quality monitoring required for the Salinity Investigation Report must be undertaken by a suitably qualified person in accordance with the latest edition of the *Monitoring and Sampling Manual 2009 (Version 2, September 2010)*.
L30	Water quality monitoring required for the Salinity Investigation Report must be undertaken from a sufficient number of sampling locations to provide **representative** data and enable an assessment of the rehabilitation success.
Water level	
L31	**Acceptance criteria** for water level are not deemed to be met until: (a) an analysis of water level monitoring is undertaken to compare: (i) the historical water levels of the nominated waterbodies specified in Table L5, including **pre-mining activity** and **post-mining activity**, for a period of not less than ten (10) years; and (ii) seasonal variations for a period of not less than five (5) years; and (iii) the impact, if any, of the **mining activity** on the water levels of the nominated waterbodies specified in Table L5; and (b) water levels of the nominated waterbodies specified in Table L5 **post-mining activity**: (i) are not **statistically significant** to the **pre-mining activity** water levels; or (ii) any **statistically significant** variation to the **pre-mining activity** water levels must not be due to the **mining activity**. (c) it is demonstrated that there is no adverse impact on vegetation communities that are reliant upon a range in water level.

Table L5 – Nominated Waterbodies

Mine Site	Waterbody Name	Within authorised mining tenement(s)	Not within authorised mining tenement(s)
Amity	Welsby Lagoon	No	Yes
	Amity Swamp	Yes	No
	Flinders Swamp	No	Yes
Bayside	Kounpee Trench (also known as Wallen Wallen	Yes	No
	Wallen Wallen Swamp	Yes	No
	Lake Kounpee North	Yes	No
	Kounpee Swamp	Yes	Yes
	Lake Kounpee	Yes	Yes

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		Blaksley Lagoon	Yes	Yes
		Shag Lagoon	Yes	Yes
		Black Snake Lagoon	Yes	Yes
	Gordon	South Lagoon and Unnamed wetlands	Yes	Yes
		Canaipa Swamp	Yes	No
		Native Companion Lagoon	Yes	Yes
		Duck Lagoon	Yes	Yes
	Ibis	Ibis Central Lagoon	No	Yes
		Ibis Lagoon	No	Yes
		Dakka Bin Wet Heaths	No	Yes
		Bumbaree Swamp	No	Yes
		Little Canalpin Creek	Yes	No
		Little Canalpin Swamp	Yes	No
		Canalpin Swamp	Yes	No
		Jaragil Lagoon	Yes	No
		Mungaree Lagoon	Yes	No
		Odgee Lagoon	Yes	No
		Lamberts Swamp	Yes	No
	Enterprise	Freshwater Creek	No	Yes
		Eighteen Mile Swamp	Yes	Yes
		TAZI Trench	No	Yes
		Herring Lagoon	Yes	Yes
	Yarraman	Yarraman Dam 1	Yes	No
		Yarraman Dam 4	Yes	No
		Yarraman Lake	Yes	Yes
		Keyhole Lakes 2 and 3	No	Yes
		Fisherman's Creek	Yes	Yes
L32	The water level monitoring required to be undertaken by condition L31 must be undertaken at a frequency of not less than quarterly.			
Fauna				
L33	The **holder of this environmental authority** must demonstrate that populations of endangered, vulnerable rare or near threatened wildlife, as specified in the *Nature Conservation Act 1992* and subordinate legislation, on the **authorised mining tenement(s)** will return to levels equivalent to other similar habitats on North Stradbroke Island.			

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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.

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

'administering authority' means the Environmental Protection Agency or its successor.

'annual return' means the return required by the annual notice (under section 308 of the *Environmental Protection Act 1994*) for the **environmental authority** for the **mining activity**.

'aspect element(s)' means a discreet area containing a specific range of aspect values delineated at a mapping scale of 1:25,000. Aspect is the dominant orientation of the landform element at that location. The **aspect elements** and their values are specified in the table below:

Aspect Element	East/West Aspect (degrees)		North/South Aspect (degrees)	
	Mean	Standard Deviation	Mean	Standard Deviation
1	15.5	24.9	93.1	20.3
2	93.0	56.2	116.5	46.0
3	113.9	33.0	39.0	25.5
4	53.0	28.4	132.7	28.1
5	37.3	28.5	61.8	22.1
6	143.3	27.7	61.6	22.2
7	107.9	31.9	148.6	27.6
8	165.7	24.5	96.3	18.7
9	94.1	26.0	20.4	18.1
10	140.4	30.6	122.1	23.8
11	61.0	29.4	40.7	24.2
12	146.4	35.7	72.9	27.0
13	151.0	28.6	112.1	21.7
14	22.5	24.1	74.7	18.4
15	151.8	25.1	68.2	19.7
16	135.3	27.2	52.8	20.6
17	33.7	29.0	114.5	24.5
18	166.1	25.5	85.1	18.0
19	132.8	31.9	127.1	26.7
20	29.5	53.6	32.0	51.3
21	68.6	34.5	142.6	33.3
22	138.1	41.8	71.9	32.1
23	51.9	33.9	52.7	24.2
24	163.5	23.2	78.1	15.8

'appropriately qualified person' means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relating to the subject matter using the relevant protocols, standards, methods or literature.

'authorised mining tenement(s)' means those mining tenements listed on page 1 of this **environmental authority.**

'authorised person' means a person holding office as an authorised person under an appointment

under the *Environmental Protection Act 1994* by the chief executive.
'ANZECC' means the Australian and New Zealand Environmental Council (ANZECC) and its successor/s (i.e. the Environment Protection and Heritage Council (EPHC) and the Natural Resource Management Ministerial Council (NRMMC)).
'baseline topography' means the topography of the **authorised mining tenement(s)** on North Stradbroke Island as at 1964. This topography is considered to be the **pre-mining activity** topography where areas have historically been mined.
'commercial place' means a workplace used as an office or for business or commercial purposes, which is not part of the **mining activity** and does not include employees' accommodation or public roads.
'constructed landform' means those parts of the **authorised mining tenement(s)** that have been mined and/or received **tailings** for disposal. This includes dredge and dry mining pits, final voids and off-path tailings areas.
'control measures' means actions that can be taken in order to minimise **environmental impact(s)** or **environmental harm**. Control measures can be, but are not limited to planning, procedural or engineering controls. Control measures has the same intent as **risk treatment**.
'disturbance' of land includes: (a) compacting, removing, covering, exposing or stockpiling of earth; (b) removal or destruction of vegetation or topsoil or both to an extent where the land has been made susceptible to erosion; (c) carrying out mining within a watercourse, waterway, wetland or lake; (d) the submersion of areas by tailings or hazardous contaminant storage and dam/structure walls; (e) constructing new temporary infrastructure, including any infrastructure (roads, tracks, bridges, culverts, dam/structures, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after the **mining activity** has ceased; or (f) releasing of contaminants into the soil, or underlying geological strata.
'EA' means environmental authority.
'EC' means electrical conductivity.
'environment' has the meaning given in the *Environmental Protection Act 1994.*
'environmental authority' means **environmental authority** under the *Environmental Protection Act 1994.*
'environmental harm' has the meaning given in the *Environmental Protection Act 1994.*
'Environmental Management Register (EMR) means the register kept by the **administering authority** under Chapter 7, Part 8 of the *Environmental Protection Act 1994.*
'environmental nuisance' has the meaning given in the *Environmental Protection Act 1994.*
'environmental value(s)' has the meaning given in the *Environmental Protection Act 1994.*
'expected impact(s)' means the predicted changes under normal conditions of a value subject to the influence of the authorised **mining activity**. Methods available for the determination of expected impacts include: • predictions based on historical data; • knowledge based intuition;

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- numerical analysis; and
- modelling.

'factor of safety' means the ratio of resisting forces to driving forces. The resisting force is the friction developed in a material along a potential failure plane under given loading conditions. The driving force is primarily gravity but can also include vibration loading and unbalanced groundwater pressures.

'geomorphology unit' means a sub-province as mapped by the Geological Survey of Queensland in Cranfield, L.C and Tuttle, J. (2002) *South-East Queensland Region Geoscience Data Set SEQ GIS Version 2 – Data for exploration and land use* or revisions of this data set as they become available.

'holder of this environmental authority' means the holder of this **environmental authority.**

'infrastructure' means water storage dams, levees, roads and tracks, buildings and other structures built for the purpose of the **mining activity**.

'key environmental value(s)' means naturally occurring surface water bodies with associated aquatic flora and fauna communities that represent a surface expression of the main groundwater aquifer or are perched above the main aquifer due to the presence of one or more indurated layers.

'land' means land excluding waters and the atmosphere, that is, the term has a different meaning from the term as defined in the *Environmental Protection Act 1994*. For the purposes of the *Acts Interpretation Act 1954*, it is expressly noted that the term 'land' in this **environmental authority** relates to physical land and not to interests in land.

'land use' – means the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

'landform' – means the elevation, slope and aspect of the **land** that make up the surface of the earth.

'litter' means the uppermost layer of organic material in a soil, consisting of freshly fallen or slightly decomposed organic materials such as leaves, twigs and sticks, which have accumulated on the ground surface.

'm' means metres.

'measures' includes any measures to prevent or minimise environmental impacts of the mining activity such as bunds, silt fences, diversion drains, capping, and containment systems.

'mine path' means the total area of disturbance as a result of the **mining activity** nominated in the **plan of operations** as stripped and/or cleared area.

'mine site' means, where relevant, each of the following:

ML1159, ML1164, ML 1121	North Stradbroke Island - Gordon Mine (20 kms south of Dunwich)
ML1123	North Stradbroke Island - Vance Mine (4 kms north east of Dunwich)
ML1109, ML1122.	North Stradbroke Island - Yarraman Mine (2kms south west of Point Lookout)
ML1117, ML1121, ML1174, ML1175.	North Stradbroke Island - Ibis Mine (3 kms south east of Dunwich)
ML1105, ML1113, ML1117, ML1119, ML1120, ML1129, ML1130, ML1153, ML1162, ML1163, ML1116	North Stradbroke Island - Enterprise Mine (5 kms south east of Dunwich)
ML 1140, ML1117, ML1105, ML1119, ML1153, ML1162, ML1163.	North Stradbroke Island – Bayside Mine (Approx 2 km south of Dunwich)

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ML1112, ML1160, ML1172.	North Stradbroke Island - Amity (1.5 kms south east of Amity)
ML1103, ML1118.	North Stradbroke Island - Dunwich

'mining activity' means that specified in the *Environmental Protection Act 1994.*
'mining block' means an area of the **mine path** or pit that is represented by a line perpendicular to the centreline of the **mine path** or pit, measured at 100 metre (m) intervals along the centreline. Where a dredge path or dry mining pit intersect, the dry mining pit is considered to be part of the dredge path.
'mining operations' means, for the purposes of this **environmental authority**, clearing, topsoil stripping, dredging or otherwise extracting, **infrastructure** development (includes but is not limited to roads, intrusive exploration activities, water and electricity transmission, stockpiles), **tailings** placement etc, but excludes measures taken solely to control **environmental impact(s)** or limit **risk**, monitoring, **rehabilitation** and gaining access to areas for these purposes.
'NATA' means National Association of Testing Authorities, Australia
'native' means that provided in the **Queensland Herbarium Mapping Methodology.**
'native bushland' means vegetation originating naturally on North Stradbroke Island.
'nominated species' means *Allocasuarina torulosa, Angophora leiocarpa, Banksia spp., Callitris spp., Corymbia spp., Eucalyptus spp.,* and *Lophostemon confertus.*
'plan of operations' means that specified in the *Environmental Protection Act 1994.*
'post-mining activity' means after **mining operations** have been completed.
'post- 30 June 1987' means revegetation undertaken after 30 June 1987.
'post- 1 January 2007' means the construction of **landform** undertaken on or after 1 January 2007.
'pre-mining activity' means prior to **mining operations** commencing.
'pre-mining topography' means the topography as encountered by the **post-1 January 2007, mining activity** at the time of that mining.
'pre-30 June 1987' means revegetation undertaken on or before 30 June 1987.
'pre-1 January 2007' means the construction of **landform** undertaken before 1 January 2007.
'protected area' means – a protected area under the *Nature Conservation Act 1992*; or (a) a marine park under the *Marine Parks Act 1992*; or (b) a World Heritage Area.
'protective foliage cover (pfc)' means that provided in the **Queensland Herbarium Mapping Methodology.**
'Queensland Herbarium Mapping Methodology' means Neldner, V.J., Wilson, B.A, Thompson, E.J. and Dillewaard, H.A. (2005) *Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland,* Version 3.1 updated September 2005, Queensland Herbarium, Environmental Protection Agency, Brisbane pp.128 or revisions of this document and methodology as they become available.
'Registered Professional Engineer of Queensland (RPEQ)' means a professional engineer registered under the Queensland *Professional Engineers Act 2002.*
'**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**

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and, where relevant, includes remediation of contaminated land.
'relevant water quality parameters' means pH, conductivity, turbidity or suspended solids, aluminium, iron, zinc and silicon.
'representative' means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the **mining activity**.
'representative unmined areas' means, at each **mine site**, two (2) or more representative control plots that are established in typical areas of similar chemical and physical characteristics, as nominated by the **holder of this environmental authority. Rehabilitation** must be compared with those **representative unmined areas** that most typically reflect erosion within the **authorised mining tenement(s).**
'representative unmined plots' means, at each **mine site**, two (2) or more representative control plots that are established in typical areas of each **pre-mining activity vegetation community ,** as nominated by the **holder of this environmental authority. Rehabilitation** must be compared with those **representative unmined plots** that most typically reflect the **pre-mining activity vegetation community** that the **holder of this environmental authority** is seeking to redevelop in the **rehabilitation.**
'risk' means the change of something happening that will have an impact on objectives.
'risk management' means the culture, processes and structures that are directed towards realizing potential opportunities whilst managing adverse effects.
'risk treatment' means the process of selection and implementation of measures to modify **risk**.
'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 public park or gardens (excluding a **protected area** under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area); 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 employees accommodation or public roads.
'stakeholders' means an individual or group concerned with or affected by the environmental performance of the **holder of this environmental authority.**
'statistically significant(ly)' means when the difference between groups of data is sufficient for a statistical test to reject the *null hypothesis* (i.e. where the data has been analysed using a valid statistical analysis tool and there is a 95% probability that the conclusions are correct).
'tailings' means the sand and slimes generated from the **mining activity**.
'terrain element(s)' means a discreet area containing a specific range of elevation, slope and aspect values delineated at a mapping scale of 1:10,000. The terrain elements and their values are specified in the table below:

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Terrain Element	Elevation (m)		East Aspect (degrees)		North Aspect (degrees)		Slope (degrees)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
1	48.5	14.0	130.1	35.1	50.9	24.7	3.4	2.4
2	2.4	2.1	116.8	54.3	97.5	48.4	0.6	0.9
3	59.3	8.4	73.0	45.4	135.2	31.1	3.5	2.3
4	75.3	12.5	164.3	22.9	90.3	19.2	8.8	3.9
5	39.9	9.5	156.7	29.3	101.2	26.2	5.6	3.7
6	93.5	8.5	32.9	34.2	73.6	26.6	4.1	2.2
7	65.9	10.6	56.2	28.2	139.7	33.1	11.3	4.7
8	161.3	17.8	147.6	32.2	107.3	30.3	9.2	4.8
9	83.7	10.5	126.6	33.6	46.9	25.9	4.8	2.5
10	33.9	7.1	43.2	38.3	112.7	40.0	3.4	2.5
11	37.6	11.1	25.0	17.3	111.4	19.9	12.8	4.3
12	115.3	16.6	71.1	41.9	138.3	26.1	5.6	3.1
13	2.9	2.5	36.5	33.3	75.6	37.3	0.7	1.2
14	76.8	15.7	69.1	29.7	32.1	18.7	17.2	4.3
15	92.0	16.1	137.5	22.8	51.4	18.4	14.6	4.5

Terrain Element	Elevation (m)		East Aspect (degrees)		North Aspect (degrees)		Slope (degrees)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
16	36.0	23.0	42.4	13.7	132.5	13.2	29.6	6.2
17	119.1	10.1	66.5	34.0	38.1	23.8	7.4	4.2
18	92.1	15.5	120.6	28.0	144.0	20.5	15.7	4.6
19	110.5	7.2	148.3	31.1	71.5	27.4	4.9	2.6
20	123.5	10.6	164.1	17.4	94.3	20.3	9.8	3.2
21	58.5	10.9	135.5	21.5	133.7	20.9	10.1	3.8
22	130.7	23.2	17.7	16.7	85.6	22.1	17.4	4.3
23	48.0	10.0	145.9	22.1	57.9	20.0	15.4	4.3
24	91.7	12.6	43.1	23.5	51.2	19.2	10.8	3.4
25	57.6	9.8	168.3	12.3	95.5	15.2	19.4	4.6
26	47.5	21.8	156.8	14.6	71.7	20.8	28.2	4.8
27	25.4	7.9	53.0	67.2	24.1	32.6	6.4	9.5
28	142.9	11.1	61.5	65.5	92.7	27.3	5.4	3.1
29	106.4	11.2	17.7	20.3	90.1	20.7	10.7	3.6
30	140.5	9.4	135.9	27.5	51.6	21.9	5.7	2.8
31	38.2	10.4	66.9	24.6	150.7	19.0	11.9	5.9
32	26.7	10.1	169.4	12.1	87.5	14.5	16.4	5.3
33	66.9	8.0	31.6	34.1	73.1	26.9	5.2	3.3
34	42.4	11.2	53.0	29.0	45.1	21.9	8.5	4.5
35	59.9	18.8	44.5	19.9	48.1	18.5	26.1	5.3
36	22.4	12.9	85.9	28.7	25.3	15.8	18.5	7.1
37	100.5	16.6	167.2	14.2	94.2	17.3	18.7	4.9
38	4.2	4.3	48.1	24.4	132.8	26.0	2.7	3.2
39	89.6	8.8	103.2	40.4	143.3	27.2	5.2	3.1
40	109.8	13.2	39.4	23.1	127.5	22.1	21.0	5.1
41	147.8	18.2	107.3	38.8	142.5	21.0	14.0	4.6
42	51.5	9.4	13.3	17.4	88.5	17.2	12.2	4.8
43	7.1	6.2	128.8	27.8	45.3	24.9	3.3	3.3
44	23.4	10.1	130.6	27.1	135.3	23.6	9.5	5.8
45	78.3	9.6	15.3	15.3	96.1	18.9	16.3	5.0
46	13.0	7.4	29.3	33.3	87.2	30.1	5.9	4.1
47	45.8	22.4	25.4	16.2	68.1	18.8	23.1	4.9
48	160.1	15.5	52.0	38.7	56.6	30.4	7.9	3.9

'the Act' means the *Environmental Protection Act 1994*.

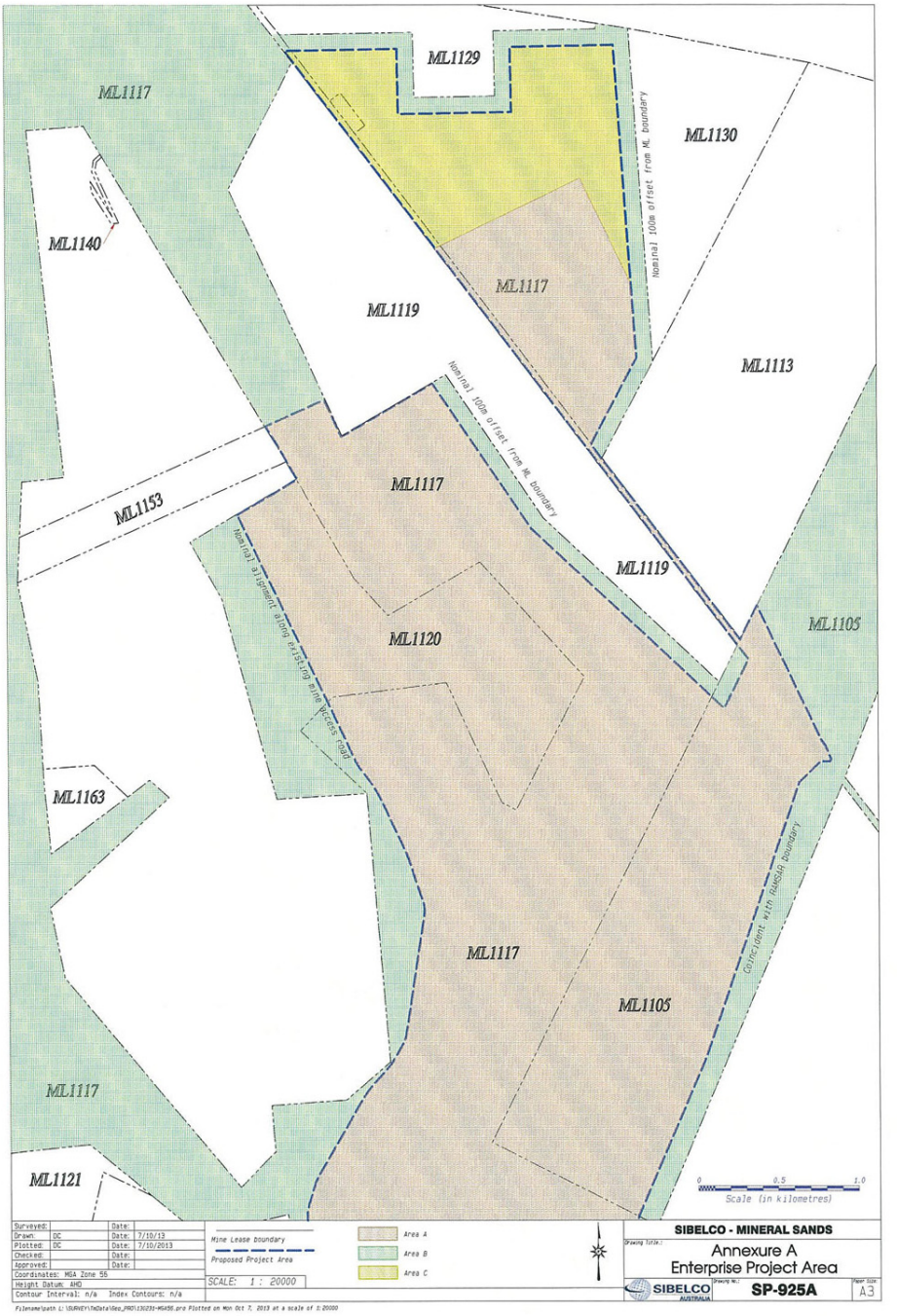
'trees' means the definition of predominant stratum (or layer) provided in the **Queensland Herbarium Mapping Methodology.**

'trigger level(s)' means the level of change in an **environmental value(s)** that initiates a **risk management** response to prevent **environmental harm**.
'understorey' means that provided in the **Queensland Herbarium Mapping Methodology.**
'µS/cm' means micro siemens per centimetre.
'vegetation community' means that provided in the **Queensland Herbarium Mapping Methodology.**
'volume difference index (VDI)' is expressed by the following formula: VDI = (Tv – Mv) / AMB Where VDI = Volume Difference Index Mv = Volume of material mined from a **mining block** (m^3 in situ) Tv = Volume of **tailings** from another **mining block** used to fill the same **mining block** referred to in Mv after it was mined (m^3 as placed) AMB = Area of the **mining block** referred to in Mv (m^2)
'waste' means that specified in the *Environmental Protection Act 1994.*
'water quality' means the chemical, physical and biological condition of water.
'watercourse' has the same meaning given in the *Water Act 2000.*
'**waters**' includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), groundwater or any part-thereof.
'zone of impact' means those areas, whether on or off the **authorised mining tenement(s)**, where the **mining activity** could or do result in a change in the **environment**. Also refer to the definition for **environmental impact(s).**

END OF PERMIT

Attachments

Annexure A Enterprise Project Area – Drawing Number SP-925A


ML1129
ML1117
ML1130
Nominal 100m offset from ML boundary
ML1140
ML1119
ML1117
ML1113
Nominal 100m offset from ML boundary
ML1153
ML1117
ML1119
Nominal alignment along existing dirt access road
ML1105
ML1120
ML1163
ML1117
Coincident with Russell boundary
ML1105
ML1117
ML1121
0
0.5
1.0
Scale (in kilometres)
Surveyed:
Drawn: DC
Plotted: DC
Checked:
Approved:
Coordinates: MGA Zone 56
Height Datum: AHD
Contour Interval: n/a
Index Contours: n/a
Date:
Date: 7/10/13
Date: 7/10/2013
Date:
Date:
Mine Lease boundary
Proposed Project Area
SCALE: 1 : 20000
Area A
Area B
Area C
SIBELCO - MINERAL SANDS
Drawing Title:
Annexure A
Enterprise Project Area
SIBELCO AUSTRALIA
Drawing No.:
SP-925A
Paper Size:
A3

Clause 15 Amendment of sch 3 (Dictionary)

Schedule 3, definition *environmental authority*—

omit.

Part 3 Amendment of Vegetation Management Framework Amendment Act 2013

Clause 16 Act amended

This part amends the *Vegetation Management Framework Amendment Act 2013*.

Clause 17 Amendment of s 47 (Insertion of new pt 2, div 6, sdiv 1A)

(1) Section 47, inserted section 22DAB(2)(d) and (3)—

omit.

(2) Section 47, inserted 22DAB(2)(e) to (h)—

renumber as section 47, inserted section 22DAB(d) to (g).

(3) Section 47, inserted section 22DAB(4), 'subsection (2)(g)'—

omit, insert—

subsection (2)(f)

(4) Section 47, inserted section 22DAB(4)—

renumber as section 47, inserted section 22DAB(3).

(5) Section 47, inserted section 22DAC(1)(e) and (i)—

omit.

(6) Section 47, inserted section 22DAC(1)(f), 'section 22DAB(2)(g)'—

omit, insert—

section 22DAB(2)(f)

(7) Section 47, inserted section 22DAC(1)(h), 'relates; and'—

omit, insert—

relates.

(8) Section 47, inserted section 22DAC(1)(f) to (h)—

renumber as section 47, inserted section 22DAC(1)(e) to (g).