



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

[s 1]

The Parliament of Queensland enacts— 1

Part 1 Preliminary 2

Clause 1 Short title 3

This Act may be cited as the *North Stradbroke Island Protection and Sustainability and Another Act Amendment Act 2013*. 4
5
6

Clause 2 Commencement 7

This Act, other than part 3, commences on a day to be fixed by proclamation. 8
9

Part 2 Amendment of North Stradbroke Island Protection and Sustainability Act 2011 10
11
12

Clause 3 Act amended 13

This part amends the *North Stradbroke Island Protection and Sustainability Act 2011*. 14
15

Clause 4 Amendment of s 2 (Object of Act) 16

(1) Section 2, from ‘substantially’ to ‘2025’— 17

omit, insert— 18

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 19
20
21

	rehabilitation of land in the region to happen up until the end of 2040)	1 2
(2)	Section 2—	3
	<i>insert—</i>	4
	(c) to assist the transition of the economy of the region from reliance on the mining industry to other industries.	5 6 7
Clause 5	Amendment of s 5 (Meaning of North Stradbroke Island Region)	8 9
	Section 5, editor’s note—	10
	<i>omit, insert—</i>	11
	<i>Editor’s note—</i>	12
	The map titled ‘NSI 1’ may be viewed on the department’s website at < www.dnrm.qld.gov.au >.	13 14
Clause 6	Amendment of s 9 (Termination of mining lease 1109)	15
(1)	Section 9, heading, after ‘1109’—	16
	<i>insert—</i>	17
	if not renewed	18
(2)	Section 9(1), from ‘, and’ to ‘renewed’—	19
	<i>omit.</i>	20
(3)	Section 9(2)—	21
	<i>insert—</i>	22
	<i>Note—</i>	23
	However, see section 11B for mining lease 1109.	24

[s 7]

Clause 7	Amendment of s 10 (Particular NSI mining interests not to be renewed)	1 2
(1)	Section 10(3)—	3
	<i>insert—</i>	4
	<i>Note—</i>	5
	However, see section 11B for mining lease 1105.	6
(2)	Section 10(4), definition <i>relevant NSI mining interest</i> , paragraph (b), second occurring—	7 8
	<i>renumber</i> as paragraph (c).	9
Clause 8	Amendment of s 11 (Renewal of particular NSI mining leases)	10 11
(1)	After section 11(2)(b)(i)—	12
	<i>insert—</i>	13
	<i>Note—</i>	14
	However, see section 11A for mining lease 1120.	15 16
(2)	After section 11(5)—	17
	<i>insert—</i>	18
	<i>Note—</i>	19
	However, see section 11B for mining leases 1117 and 1120.	20 21
Clause 9	Insertion of new ss 11A–11J	22
	After section 11—	23
	<i>insert—</i>	24
	11A Mining lease 1120 no longer subject to particular condition for renewal	25 26
(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.	27 28 29 30

-
- (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).

[s 9]

11C Application for renewal of mining leases	1
(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 3 4
(2) The application must be—	5
(a) made in the approved form; and	6
(b) accompanied by the fee prescribed under a regulation; and	7 8
(c) accompanied by a statement about the following matters—	9 10
(i) the term for which the mining lease is sought to be renewed;	11 12
(ii) for parcels of land the whole or part of which are the subject of the application—	13 14 15
(A) a description of the parcels; and	16
(B) the current use of the land; and	17
(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.	18 19 20 21
(3) In this section—	22
<i>renewal period</i> means the period that is—	23
(a) at least 6 months, or any shorter period allowed by the Minister, before the current term of the lease expires; and	24 25 26
(b) not more than 1 year before the current term expires.	27 28

11D Decision on application	1
(1) If the Minister considers that an application under section 11C has been properly made the Minister must renew the relevant mining lease.	2 3 4
(2) The renewed lease is subject to—	5
(a) the conditions stated in section 11E; and	6
(b) any conditions prescribed under a regulation; and	7 8
(c) any conditions decided by the Minister.	9
(3) As soon as practicable after renewing the lease, the Minister must give the holder a written notice stating—	10 11 12
(a) when the renewal starts; and	13
(b) any conditions decided by the Minister to which the renewed lease is subject.	14 15
11E Provisions about particular leases if renewed	16
(1) The following apply for any renewal of mining lease 1109—	17 18
(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;	19 20 21 22
(b) the mining lease ends at the end of 31 December 2020 and can not be renewed beyond that date.	23 24 25
(2) The following apply for any renewal of mining lease 1105, 1117 or 1120 if, because of the renewal, the lease ends after 31 December 2035—	26 27 28 29
(a) after 31 December 2035, the winning of a mineral from the place where it occurs in the	30 31

[s 9]

area of the lease is not an authorised activity for the lease;	1 2
(b) the mining lease ends at the end of 31 December 2040 and can not be renewed beyond that date.	3 4 5
(3) In this section—	6
<i>authorised activity</i> , for a lease, see the Mineral Resources Act, schedule 2.	7 8
11F Limitation of review and appeal	9
(1) This section applies in relation to a decision of the Minister made under section 11D.	10 11
(2) Unless the Supreme Court decides that the decision is affected by jurisdictional error, the decision—	12 13 14
(a) is final and conclusive; and	15
(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	16 17 18 19 20 21
(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.	22 23 24 25
11G Continuation of lease while application being dealt with	26 27
(1) Subsection (2) applies, subject to section 11I, if—	28 29
(a) a properly made application for renewal of a mining lease under section 11C is not	30 31

-
- withdrawn or granted before the lease's
expiry day ends; and 1
2
- (b) after the expiry day, the holder— 3
- (i) continues to pay rental on the lease and 4
other amounts required to be paid 5
under the Mineral Resources Act; and 6
- (ii) otherwise complies with this Act and 7
the lease conditions. 8
- (2) The lease continues in force subject to the rights, 9
entitlements and obligations in effect 10
immediately before the end of the expiry day 11
until the application is withdrawn, refused or 12
granted. 13
- (3) In this section— 14
- expiry day*, for a mining lease, means the day the 15
lease expires under its terms. 16

11H When term of renewed lease starts 17

- (1) If, under section 11D, a mining lease (other than 18
mining lease 1109) is renewed before its expiry 19
day ends, the term of the renewed lease starts on 20
the day after the expiry day. 21
- (2) If the lease is renewed after the expiry day, the 22
term of the renewed lease is taken to have started 23
on the day after the expiry day. 24
- (3) In this section— 25
- expiry day*, for a mining lease, means the day the 26
lease expires under its terms. 27

11I When new conditions of renewed lease start 28

- (1) If a renewed mining lease is subject to conditions 29
(the *new conditions*) different from, or not 30
included in, the lease conditions applying 31

[s 9]

- 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)	1
		2
	Section 14—	3
	<i>insert</i> —	4
	(2) Subsection (1) does not apply to the renewal of a mining lease under section 11D.	5
		6
Clause 11	Amendment of s 15 (Purpose of div 3)	7
	Section 15, ‘amendment’—	8
	<i>omit, insert</i> —	9
	replacement and further amendment	10
Clause 12	Replacement of ss 16 to 21	11
	Sections 16 to 21—	12
	<i>omit, insert</i> —	13
	17 Replacement of environmental authority MIN100971509	14
		15
	(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 <i>new authority</i>).	16
		17
		18
		19
		20
	(2) The new authority is taken to be an environmental authority for the Environmental Protection Act.	21
		22
		23
	(3) The replacement does not limit the application of any provisions of the Environment Protection Act to the new authority.	24
		25
		26
Clause 13	Insertion of new ss 23 and 24	27
	Part 3—	28
	<i>insert</i> —	29

[s 14]

- 23 Approved forms** 1
- (1) The chief executive may approve forms for use under this Act. 2
3
 - (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. 4
5
6

- 24 Regulation-making power** 7
- (1) The Governor in Council may make regulations under this Act. 8
9
 - (2) A regulation may be made about the following matters— 10
11
 - (a) the fees to be paid under this Act; 12
 - (b) the conditions which may be imposed for the renewal of a mining lease under section 11D. 13
14
15

- Clause 14 Insertion of new sch 2A** 16
- After schedule 2— 17
- insert—* 18

Schedule 2A Environmental authority EPML00575913 19
20
21

section 17 22

Department of Environment and Heritage Protection

Permit¹

Environmental Protection Act 1994

Environmental authority

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

Permit¹ 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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Permit
Environmental authority

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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	<p>conditions of this environmental authority</p> <ul style="list-style-type: none"> (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	<p>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.</p> <p>The management plan must:</p> <ul style="list-style-type: none"> (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 indicators¹ 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: <ul style="list-style-type: none"> (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). <p>The administering authority must approve or refuse the management plan within 20 business days of being submitted to the administering authority.</p> <p>Disturbance of land on the area marked 'C' on the map that is annexure A to this environmental authority:</p> <ul style="list-style-type: none"> (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)**.

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 Environmental authority

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: <ul style="list-style-type: none"> (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: <ul style="list-style-type: none"> (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: <ul style="list-style-type: none"> (a) results and interpretation of any samples taken and analysed.

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	(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 for 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	

Permit
 Environmental authority

G20	<p>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:</p> <p>(a) Status of compliance with the conditions of the environmental authority;</p> <p>(b) Monitoring results and their conformance with the trigger level(s); and</p> <p>(c) Details of environmental incidents and complaints.</p>
Agency Interest: Air	
Dust Nuisance	
A1	<p>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.</p>
Point Source Releases to Air / Dust and Particulate Monitoring	
A2	<p>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:</p> <p>(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 <i>Australian Standard AS3580.10.1 Methods for sampling and analysis of ambient air—Determination of particulate matter—Deposited matter – Gravimetric method</i>.</p> <p>(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:</p> <ol style="list-style-type: none"> 1. <i>Australian Standard AS3580.9.6 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM₁₀ high volume sampler with size-selective inlet – Gravimetric method</i>; or 2. <i>Australian Standard AS3580.9.9 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM₁₀ low volume sampler—Gravimetric method</i>. <p>(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 <i>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</i>.</p> <p>(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 <i>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</i>.</p>

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Permit
 Environmental authority

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	<p>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.</p> <p>Table N1 – Noise limits</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="7" style="background-color: #c00000; color: white;">Sensitive Place</th> </tr> <tr> <th rowspan="2" style="text-align: left;">Noise level dB(A) measure d as:</th> <th colspan="3">Monday to Saturday</th> <th colspan="2">Sundays and Holidays</th> <th>Public</th> </tr> <tr> <th>7am to 6pm</th> <th>6pm to 10pm</th> <th>10pm to 7am</th> <th>9am to 6pm</th> <th>6pm to 10pm</th> <th>10pm to 9am</th> </tr> </thead> <tbody> <tr> <td>LAeq, adj, 15 mins</td> <td>CV = 50 AV = 5</td> <td>CV = 45 AV = 5</td> <td>CV = 40 AV = 0</td> <td>CV = 45 AV = 5</td> <td>CV = 40 AV = 5</td> <td>CV = 35 AV = 0</td> </tr> <tr> <td>LA1, adj, 15 mins</td> <td>CV = 55 AV = 10</td> <td>CV = 50 AV = 10</td> <td>CV = 45 AV = 5</td> <td>CV = 50 AV = 10</td> <td>CV = 45 AV = 10</td> <td>CV = 40 AV = 5</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="7" style="background-color: #c00000; color: white;">Commercial Place</th> </tr> <tr> <th rowspan="2" style="text-align: left;">Noise level dB(A) measure d as:</th> <th colspan="3">Monday to Saturday</th> <th colspan="3">Sundays and Public Holidays</th> </tr> <tr> <th>7am to 6pm</th> <th>6pm to 10pm</th> <th>10pm to 7am</th> <th>7am to 6pm</th> <th>6pm to 10pm</th> <th>10pm to 7am</th> </tr> </thead> <tbody> <tr> <td>LAeq, adj, 15 mins</td> <td>CV = 55 AV = 10</td> <td>CV = 50 AV = 10</td> <td>CV = 45 AV = 5</td> <td>CV = 50 AV = 10</td> <td>CV = 45 AV = 10</td> <td>CV = 40 AV = 5</td> </tr> </tbody> </table> <p><i>Table N1 – Noise limits notes:</i> 1. CV = Critical Value</p>						Sensitive Place							Noise level dB(A) measure d as:	Monday to Saturday			Sundays and Holidays		Public	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) measure d 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
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	<p>2. <i>AV = Adjustment Value</i></p> <p>3. <i>To calculate noise limits in Table N1:</i> <i>If $bg \leq (CV - AV)$:</i> <i>Noise limit = $bg + AV$</i> <i>If $(CV - AV) < bg \leq CV$:</i> <i>Noise limit = CV</i> <i>If $bg > CV$:</i> <i>Noise limit = $bg + 0$</i></p> <p>4. <i>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</i></p> <p>5. <i>bg = background noise level (LA90, adj, 15 mins) measured over 3-5 days at the nearest sensitive receptor</i></p> <p>6. <i>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.</i></p>
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	<p>The GMP must comply with the following requirements:</p> <ul style="list-style-type: none"> (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	<p>The groundwater monitoring network referred to in condition GW2 must:</p> <ul style="list-style-type: none"> (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 .																																																																					
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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.																																																																					

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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	<p>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.</p> <p>Table L3 – Species to be Present in Post- 30 June 1987 Revegetation</p> <table border="1"> <thead> <tr> <th data-bbox="300 516 527 575">Species</th> <th data-bbox="527 516 731 575">Common Name</th> <th data-bbox="731 516 1059 575">Mines where species present pre-mining activity</th> </tr> </thead> <tbody> <tr> <td data-bbox="300 575 527 606"><i>Melichrus procumbens</i></td> <td data-bbox="527 575 731 606">-</td> <td data-bbox="731 575 1059 606">Bayside, Enterprise, Gordon and Ibis</td> </tr> <tr> <td data-bbox="300 606 527 637"><i>Calytrix tetragona</i></td> <td data-bbox="527 606 731 637">fringe-myrtle</td> <td data-bbox="731 606 1059 637">Gordon and Ibis</td> </tr> <tr> <td data-bbox="300 637 527 667"><i>Eriachne insularis</i></td> <td data-bbox="527 637 731 667">wanderie grass</td> <td data-bbox="731 637 1059 667">Bayside, Enterprise, Gordon and Ibis</td> </tr> <tr> <td data-bbox="300 667 527 698"><i>Boronia saffrolifera</i></td> <td data-bbox="527 667 731 698">safrole boronia</td> <td data-bbox="731 667 1059 698">Vance</td> </tr> <tr> <td data-bbox="300 698 527 775"><i>Banksia spinulosa var collina</i></td> <td data-bbox="527 698 731 775">golden candlesticks</td> <td data-bbox="731 698 1059 775">Enterprise and Vance</td> </tr> <tr> <td data-bbox="300 775 527 835"><i>Petrophile canescens</i></td> <td data-bbox="527 775 731 835">conesticks</td> <td data-bbox="731 775 1059 835">Amity, Bayside, Dunwich, Enterprise, Gordon, Ibis, Vance and Yarraman</td> </tr> <tr> <td data-bbox="300 835 527 866"><i>Petrophile shirleyae</i></td> <td data-bbox="527 835 731 866">conesticks</td> <td data-bbox="731 835 1059 866">Enterprise and Vance</td> </tr> <tr> <td data-bbox="300 866 527 930"><i>Podocarpus spinulosus</i></td> <td data-bbox="527 866 731 930">spiny-leaf podocarp or dwarf plum pine</td> <td data-bbox="731 866 1059 930">Enterprise and Vance</td> </tr> <tr> <td data-bbox="300 930 527 993"><i>Eucalyptus planchoniana</i></td> <td data-bbox="527 930 731 993">planchon's stringybark</td> <td data-bbox="731 930 1059 993">Amity, Bayside, Enterprise Gordon, Ibis, Vance and Yarraman</td> </tr> </tbody> </table>	Species	Common Name	Mines where species present pre-mining activity	<i>Melichrus procumbens</i>	-	Bayside, Enterprise, Gordon and Ibis	<i>Calytrix tetragona</i>	fringe-myrtle	Gordon and Ibis	<i>Eriachne insularis</i>	wanderie grass	Bayside, Enterprise, Gordon and Ibis	<i>Boronia saffrolifera</i>	safrole boronia	Vance	<i>Banksia spinulosa var collina</i>	golden candlesticks	Enterprise and Vance	<i>Petrophile canescens</i>	conesticks	Amity, Bayside, Dunwich, Enterprise, Gordon, Ibis, Vance and Yarraman	<i>Petrophile shirleyae</i>	conesticks	Enterprise and Vance	<i>Podocarpus spinulosus</i>	spiny-leaf podocarp or dwarf plum pine	Enterprise and Vance	<i>Eucalyptus planchoniana</i>	planchon's stringybark	Amity, Bayside, Enterprise Gordon, Ibis, Vance and Yarraman
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		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	<p>The revegetation criteria specified in Table L2 and Table L4 for the number of species do not apply:</p> <p>(a) where specific projects approved by the administering authority have been undertaken to increase fauna species diversity and abundance; and</p> <p>(b) to the fringing vegetation surrounding artificially created water bodies or watercourses approved by the administering authority.</p> <p><u>Note-</u> For the purposes of this condition, the following are considered to have been approved by the administering authority:</p> <p>(i) <i>Eucalyptus tereticornis</i> planted at the Bayside Mine for koalas;</p> <p>(ii) unnamed artificial wetland at the Bayside Mine that is inhabited by significant wallum frogs, other frog species, invertebrates and freshwater turtles; and</p> <p>(iii) Dam 1 and Dam 4 artificial wetlands at the Yarraman Mine that are inhabited by significant wallum frogs.</p>			
L19	<p>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.</p> <p>(a) <i>Pinus</i> spp; and</p> <p>(b) <i>Poaceae</i> spp, including <i>Brachiaria decumbens</i> (signal grass), <i>Megathyrus maximus var.pubiglumis</i> (green panic), <i>Megathyrus maximus var. maximus</i> (guinea grass), <i>Mellinis minutiflora</i> (molasses grass), <i>Andropogon virginicus</i> (whiskey grass) and <i>Mellinis repens</i> (red natal grass).</p>			
L20	<p>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.</p>			

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Water Quality	
L21	<p>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:</p> <ul style="list-style-type: none"> (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 <i>Monitoring and Sampling Manual 2009 (Version 2, September 2010)</i> 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) <i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality</i> 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	<p>The reference site required by condition L21(b):</p> <ul style="list-style-type: none"> (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 holder prior to use; (d) must be in a similar ecological setting.
L23	<p>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.</p>
Contaminated Land and Groundwater	
L24	<p>Before applying for surrender of a mining lease, the holder 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.</p>
L25	<p>Notwithstanding condition L21, a Site Investigation Report, prepared in accordance with the <i>Environmental Protection Act 1994</i> and <i>Guidelines for contaminated land professionals (DEHP, 2012)</i> or revisions or more recent editions of this document as they become available, must be submitted to the administering authority to:</p> <ul style="list-style-type: none"> (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).

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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 <i>Third Party Reviewer Terms of Reference</i> 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 <i>Monitoring and Sampling Manual 2009 (Version 2, September 2010)</i> .
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	<p>Acceptance criteria for water level are not deemed to be met until:</p> <p>(a) an analysis of water level monitoring is undertaken to compare:</p> <ul style="list-style-type: none"> (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 <p>(b) water levels of the nominated waterbodies specified in Table L5 post-mining activity:</p> <ul style="list-style-type: none"> (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. <p>(c) it is demonstrated that there is no adverse impact on vegetation communities that are reliant upon a range in water level.</p>
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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
	Blaksley Lagoon	Yes	Yes

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	Gordon	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
	Ibis	Ibis Lagoon	No	Yes
		Dakka Bin Wet Heaths	No	Yes
		Bumbaree Swamp	No	Yes
		Little Canalpin Creek	Yes	No
		Little Canalpin Swamp	Yes	No
		Canaipin Swamp	Yes	No
		Jaragil Lagoon	Yes	No
		Mungaree Lagoon	Yes	No
		Odgee Lagoon	Yes	No
		Lamberts Swamp	Yes	No
		Enterprise	Freshwater Creek	No
	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 <i>Nature Conservation Act 1992</i> 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

'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.

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<p>'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)).</p>
<p>'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.</p>
<p>'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.</p>
<p>'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.</p>
<p>'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.</p>
<p>'disturbance' of land includes:</p> <ol style="list-style-type: none"> (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.
<p>'EA' means environmental authority.</p>
<p>'EC' means electrical conductivity.</p>
<p>'environment' has the meaning given in the <i>Environmental Protection Act 1994</i>.</p>
<p>'environmental authority' means environmental authority under the <i>Environmental Protection Act 1994</i>.</p>
<p>'environmental harm' has the meaning given in the <i>Environmental Protection Act 1994</i>.</p>
<p>'Environmental Management Register (EMR)' means the register kept by the administering authority under Chapter 7, Part 8 of the <i>Environmental Protection Act 1994</i>.</p>
<p>'environmental nuisance' has the meaning given in the <i>Environmental Protection Act 1994</i>.</p>
<p>'environmental value(s)' has the meaning given in the <i>Environmental Protection Act 1994</i>.</p>
<p>'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:</p> <ul style="list-style-type: none"> • predictions based on historical data; • knowledge based intuition; • numerical analysis; and

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<ul style="list-style-type: none"> • modelling. 	
<p>'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.</p>	
<p>'geomorphology unit' means a sub-province as mapped by the Geological Survey of Queensland in Cranfield, L.C and Tuttle, J. (2002) <i>South-East Queensland Region Geoscience Data Set SEQ GIS Version 2 – Data for exploration and land use</i> or revisions of this data set as they become available.</p>	
<p>'holder of this environmental authority' means the holder of this environmental authority.</p>	
<p>'infrastructure' means water storage dams, levees, roads and tracks, buildings and other structures built for the purpose of the mining activity.</p>	
<p>'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.</p>	
<p>'land' means land excluding waters and the atmosphere, that is, the term has a different meaning from the term as defined in the <i>Environmental Protection Act 1994</i>. For the purposes of the <i>Acts Interpretation Act 1954</i>, it is expressly noted that the term 'land' in this environmental authority relates to physical land and not to interests in land.</p>	
<p>'land use' – means the selected post mining use of the land, which is planned to occur after the cessation of mining operations.</p>	
<p>'landform' – means the elevation, slope and aspect of the land that make up the surface of the earth.</p>	
<p>'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.</p>	
<p>'m' means metres.</p>	
<p>'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.</p>	
<p>'mine path' means the total are of disturbance as a result of the mining activity nominated in the plan of operations as stripped and/or cleared area.</p>	
<p>'mine site' means, where relevant, each of the following:</p>	
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)

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ML1103, ML1118.	North Stradbroke Island - Dunwich
'mining activity' means that specified in the <i>Environmental Protection Act 1994</i> .	
'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 , conducting baseline environmental studies 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 <i>Allocasuarina torulosa</i> , <i>Angophora leiocarpa</i> , <i>Banksia spp.</i> , <i>Callitris spp.</i> , <i>Corymbia spp.</i> , <i>Eucalyptus spp.</i> , and <i>Lophostemon confertus</i> .	
'plan of operations' means that specified in the <i>Environmental Protection Act 1994</i> .	
'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 <i>Nature Conservation Act 1992</i> ; or (a) a marine park under the <i>Marine Parks Act 1992</i> ; 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) <i>Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland</i> , 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 <i>Queensland Professional Engineers Act 2002</i> .	
'rehabilitation' means the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.	

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<p>'relevant water quality parameters' means pH, conductivity, turbidity or suspended solids, aluminium, iron, zinc and silicon.</p>
<p>'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.</p>
<p>'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 environmental authority holder. Rehabilitation must be compared with those representative unmined areas that most typically reflect erosion within the authorised mining tenement(s).</p>
<p>'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 environmental authority holder. Rehabilitation must be compared with those representative unmined plots that most typically reflect the pre-mining activity vegetation community that the environmental authority holder is seeking to redevelop in the rehabilitation.</p>
<p>'risk' means the change of something happening that will have an impact on objectives.</p>
<p>'risk management' means the culture, processes and structures that are directed towards realizing potential opportunities whilst managing adverse effects.</p>
<p>'risk treatment' means the process of selection and implementation of measures to modify risk.</p>
<p>'sensitive place' means;</p> <ul style="list-style-type: none"> • 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 <i>Nature Conservation Act 1992</i>, the <i>Marine Parks Act 1992</i> 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.
<p>'stakeholders' means an individual or group concerned with or affected by the environmental performance of the holder of the environmental authority.</p>
<p>'statistically significant(ly)' means when the difference between groups of data is sufficient for a statistical test to reject the <i>null hypothesis</i> (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).</p>
<p>'tailings' means the sand and slimes generated from the mining activity.</p>
<p>'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:</p>

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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**.

Permit
Environmental authority

'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: $VDI = (Tv - Mv) / AMB$ <p>Where VDI = Volume Difference Index Mv = Volume of material mined from a mining block (m³ 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 (m³ as placed) AMB = Area of the mining block referred to in Mv (m²)</p>
'waste' means that specified in the <i>Environmental Protection Act 1994</i> .
'water quality' means the chemical, physical and biological condition of water.
'watercourse' has the same meaning given in the <i>Water Act 2000</i> .
'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

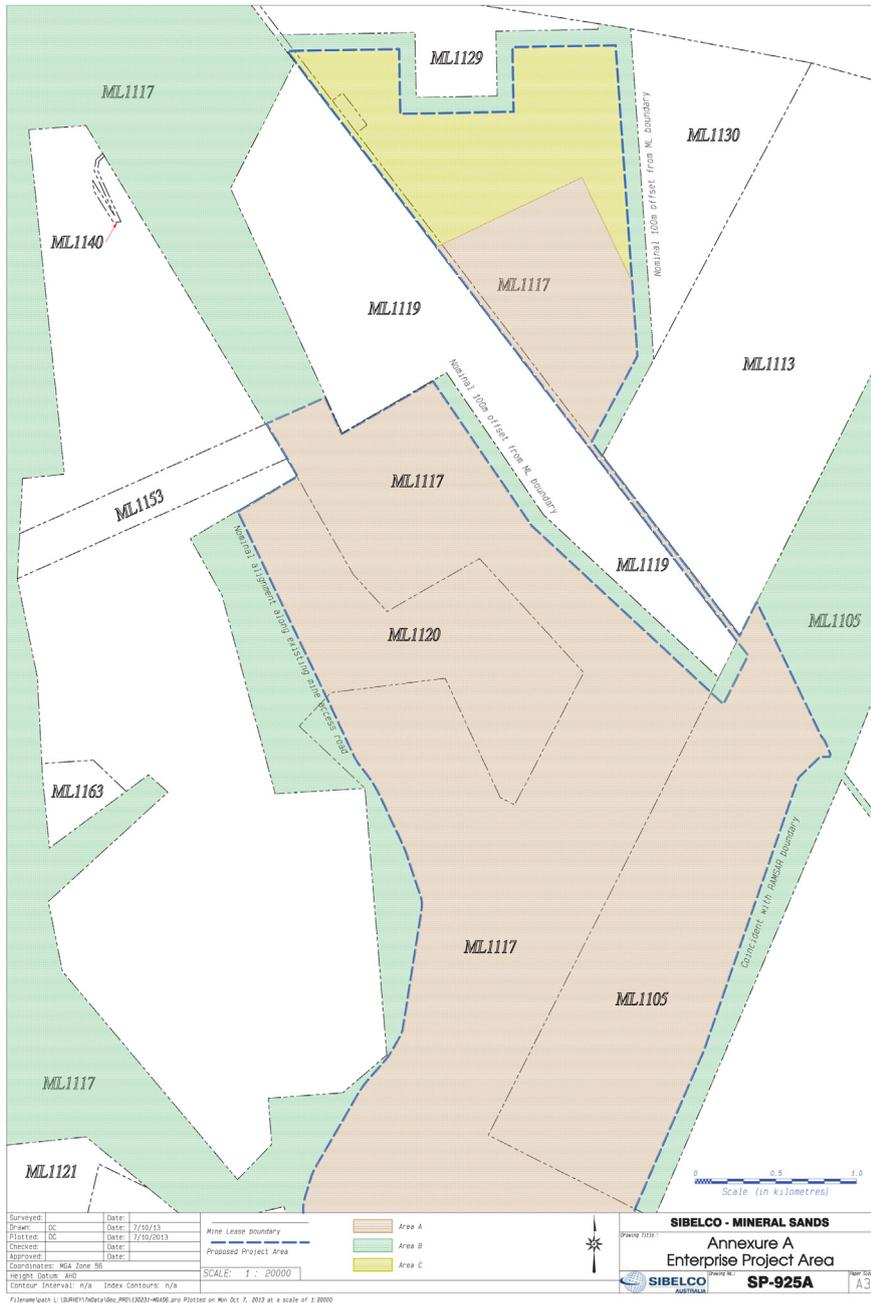
Attachments

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

North Stradbroke Island Protection and Sustainability and Another Act Amendment Bill 2013
 Part 2 Amendment of North Stradbroke Island Protection and Sustainability Act 2011

[s 14]

1



Clause 15	Amendment of sch 3 (Dictionary)	1
	Schedule 3, definition <i>environmental authority</i> —	2
	<i>omit.</i>	3
Part 3	Amendment of Vegetation Management Framework Amendment Act 2013	4 5 6
Clause 16	Act amended	7
	This part amends the <i>Vegetation Management Framework Amendment Act 2013</i> .	8 9
Clause 17	Amendment of s 47 (Insertion of new pt 2, div 6, sdiv 1A)	10
	(1) Section 47, inserted section 22DAB(2)(d) and (3)—	11
	<i>omit.</i>	12
	(2) Section 47, inserted 22DAB(2)(e) to (h)—	13
	<i>renumber</i> as section 47, inserted section 22DAB(d) to (g).	14
	(3) Section 47, inserted section 22DAB(4), ‘subsection (2)(g)’—	15
	<i>omit, insert</i> —	16
	subsection (2)(f)	17
	(4) Section 47, inserted section 22DAB(4)—	18
	<i>renumber</i> as section 47, inserted section 22DAB(3).	19
	(5) Section 47, inserted section 22DAC(1)(e) and (i)—	20
	<i>omit.</i>	21

[s 17]

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|-----|---|---|
| (6) | Section 47, inserted section 22DAC(1)(f), ‘section | 1 |
| | 22DAB(2)(g)’— | 2 |
| | <i>omit, insert—</i> | 3 |
| | section 22DAB(2)(f) | 4 |
| (7) | Section 47, inserted section 22DAC(1)(h), ‘relates; and’— | 5 |
| | <i>omit, insert—</i> | 6 |
| | relates. | 7 |
| (8) | Section 47, inserted section 22DAC(1)(f) to (h)— | 8 |
| | <i>renumber</i> as section 47, inserted section 22DAC(1)(e) to (g). | 9 |

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