

Permit

Environmental Protection Act 1994

Environmental authority P-EA-100334017

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

Environmental authority number: P-EA-100334017

Environmental authority takes effect on the day the DA is granted.

Environmental authority holder(s)

Name(s)	Registered address
Queensland Pacific Metals Pty Ltd	Level 17, 307 Queen Street, Brisbane 4000 QLD

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
8(1a) - Chemical Storage - storing 50t or more of chemicals of dangerous goods class 1 or class 2, division 2.3 in containers of at least 10m ³ 8(3) - Chemical Storage - storing more than 500m ³ of chemicals of class C1 or C2 combustible liquids under AS 1940 or dangerous goods class 3 15 - Fuel Burning - using fuel burning equipment that is capable of burning at least 500kg of fuel in an hour 31(2b) - Mineral Processing - processing, in a year, the following quantities of mineral products, other than coke, more than 100,000t 33 - Crushing, milling, grinding or screening more than 5,000t of material in a year 50(1b) – Mineral And Bulk Material Handling - handling minerals or bulk materials in a way that involves loading or unloading minerals or bulk	Lot 19 on RP901592 Lot 20 on E124189

Environmentally relevant activity/activities	Location(s)
materials from 1 ship to another ship at a rate of 100t or more a day 63(1bi) - Sewage Treatment – total daily peak design capacity of 100 to 1500EP with treated effluent discharged to an infiltration trench or irrigation scheme	

Additional information for applicants

Environmentally relevant activities

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

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

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

Contaminated land

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

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days) that is causing, or is reasonably likely to cause, serious or material environmental harm.

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

Take effect

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

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

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Planning Act 2016* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

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

The anniversary day of this environmental authority is the same day each year as the effective date. The payment of the annual fee will be due each year on this day. An annual return will be due each year on 01 April.

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



Signature

1 November 2022

Date

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

Enquiries:
Minerals Business Centre
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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)

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access state controlled roads), the Department of Resources (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

Conditions of environmental authority

Schedule A — General

A1	In carrying out the activities authorised by this environmental authority, disturbance of land in Figure I1 : a) May occur in the areas marked 'A'; and b) Must not occur in the areas marked 'B'.
A2	Activities authorised under this environmental authority must be conducted in accordance with the following annual limitations: a) Manufacture of 67,000 tonnes (t) of nickel sulfate; b) Manufacture of 8,000 t of cobalt sulfate; c) Manufacture of 690,000 t of hematite; d) Manufacture of 4,000 t of HPA; and e) Manufacture of 40,000 t of magnesite.
A3	All reasonable and practicable measures must be taken to prevent or minimise environmental harm caused, or likely to be caused, by the activities.
A4	This environmental authority does not authorise a relevant act ¹ unless a condition of the environmental authority specifically authorises that relevant act to occur. ¹ A relevant act is defined in section 493A of the Environmental Protection Act 1994 as an act that causes serious or material environmental harm or an environmental nuisance; an act that contravenes a noise standard; or a deposit of a contaminant, or release of stormwater run-off, mentioned in section 440ZG.
A5	Any contravention of a condition of this environmental authority must be reported to the administering authority within 24 hours of becoming aware of the contravention.
A6	The reporting of breaches required in condition A5 must include the following details: a) Date; and b) Time; and c) Duration; and d) Location; and e) What happened; and f) Why did it happen; and g) Conditions breached; and h) Actions taken to contain and rectify; and i) Actions to prevent a recurrence.
A7	Within 20 business days (or a longer period agreed to in writing by the administering authority) of a report made under condition A5 , an investigation must be undertaken, completed and recorded to determine: a) the potential circumstances and actions that may have contributed to the contravention; and b) reasonable measures that will be implemented to address the cause of the contravention to prevent future contraventions of this nature.
A8	Measures identified under condition A7 must be implemented within: a) 20 business days of completion of the investigation required by condition A7 being finalised; or b) a longer period agreed to in writing by the administering authority.

A9	<p>The following details must be recorded for all contraventions of the environmental authority:</p> <ul style="list-style-type: none"> a) date and time the contravention occurred (if known); and b) nature and details of the contravention; and c) investigations carried out in response to the contravention as required by condition A7; and d) the results of investigations; and e) measures taken under condition A7.
A10	<p>Environmental risk management procedures</p> <p>Prior to commencement of activities authorised under this environmental authority, written procedures must be developed and implemented that include:</p> <ul style="list-style-type: none"> a) identification of all potential risks to the environment from the activity, including: <ul style="list-style-type: none"> I. during routine operations; and II. outside routine operations; and III. during preparation, rehabilitation and closure; and IV. in an emergency (e.g., fire or natural disaster); and b) measures to be implemented to prevent or minimise the potential for environmental harm for each of the potential risks identified; and c) processes to annually review environmental risks, incidents, complaints and improve performance.
A11	<p>Plant and equipment</p> <p>All plant and equipment (including monitoring devices) must be installed, operated, calibrated, and maintained:</p> <ul style="list-style-type: none"> a) by an appropriately qualified person; and b) in a proper and effective manner; and c) in accordance with the manufacturer's instructions; and d) in accordance with any written procedures developed under condition A6 for the plant and equipment.
A12	<p>Documentation and record keeping</p> <p>All documentation and records must be:</p> <ul style="list-style-type: none"> a) kept until surrender of the environmental authority (or longer period as specified in a condition of this environmental authority); and b) provided to the administering authority upon request and within a timeframe specified by the administering authority.
A13	<p>All documents (including plans, procedures, and programs) and records required by this environmental authority must be:</p> <ul style="list-style-type: none"> a) developed and endorsed in writing as being compliant with the conditions of this environmental authority by an appropriately qualified person; and b) implemented in accordance with the requirements stated within the document; and c) in effect at all times during the carrying out of the activity (including preparation, rehabilitation and closure); and d) reviewed and re-endorsed in writing as being in compliance with the conditions of this environmental authority by an appropriately qualified person at least annually.
A14	<p>All monitoring and sampling required by the conditions of this environmental authority must be carried out, interpreted, and recorded by an appropriately qualified person.</p>

A15	<p>All monitoring and sampling required by this environmental authority must be carried out in accordance with the requirements of the most current published edition or version of the following documents (as relevant to the monitoring and sampling being undertaken):</p> <ul style="list-style-type: none"> a) For waters (including groundwater), the Queensland Government's 'Monitoring and Sampling Manual 2018 – Environmental Protection (Water) Policy 2009'. b) For noise, the Queensland Government's 'Noise Measurement Manual' (ESR/2016/2195), the relevant Australian Standard and the Environmental Protection Regulation 2019 (Chapter 5, Part 4). c) For ambient air quality (including dust), the relevant Australian Standards. If monitoring requirements are not described in the Australian Standards, monitoring protocols must be in accordance with a method approved by any other Australian, European or Northern American jurisdiction/EPAs. d) For site assessment of contamination of soil, soil vapour or groundwater, the 'National Environment Protection (Assessment of Site Contamination) Measure 1999' (as amended 2013) and its associated guidelines and the 'PFAS National Environmental Management Plan 2.0' (Department of Agriculture, Water and Environment 2020).
A16	<p>Staff training</p> <p>All staff must be trained in, and made aware of, their obligations under this environmental authority (including any procedures required by the environmental authority) and the <i>Environmental Protection Act 1994</i> at induction and at least annually thereafter.</p>
A17	Records must be kept of all persons trained under condition A16 and the date they received the training.
A18	<p>Unless otherwise authorised in writing by the administering authority, all analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (NATA) accreditation for such analyses.</p> <p>The only exception to this condition is for <i>in situ</i> monitoring of field parameters for surface water and groundwater, and real time air quality monitoring as required.</p>
A19	An annual monitoring report must be prepared and submitted to the administering authority on request by 1 August each year, for the preceding financial year.
A20	<p>Risk management</p> <p>The holder of this environmental authority must develop and implement a risk management system for activities which mirrors the content requirement of the Standard for Risk Management (ISO31000:2018), or the latest edition of an Australian Standard for risk management, to the extent relevant to environmental management.</p>
A21	<p>Emergency response and contingency planning</p> <p>Prior to commencement of activities authorised under this environmental authority, an emergency response/contingency plan must be developed and implemented to manage unacceptable risks identified in the risk management system or the associated monitoring.</p>
A22	<p>The emergency response/contingency plan must address the following matters:</p> <ul style="list-style-type: none"> a) response procedures to be implemented to reduce the likelihood of environmental harm arising from incidents of unacceptable risk; b) response procedures to minimise the extent and duration of environmental harm by an incident; c) the practices and procedures to be employed to restore the environment or mitigate any environmental impact caused; d) a description of the resources to be used in response to an incident; e) the training of staff that will be called upon to respond to incidents; f) procedures to investigate the cause of any incidents, including releases, and where necessary,

	<p>implement remedial actions to reduce the likelihood of recurrence of similar events;</p> <p>g) the provision and availability of documented procedures to staff attending any incident to enable them to effectively respond; and</p> <p>h) timely and accurate reporting of the circumstance and nature of incidents to the administering authority.</p>
A23	<p>Notification of emergencies, incidents and exceptions</p> <p>The holder of this environmental authority must notify the administering authority by written notification within twenty-four (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.</p>
A24	<p>The holder of this environmental authority must notify the administering authority by written notification within twenty-four (24) hours, after becoming aware of any emergency, incident or information about circumstances which results, or may result in, environmental harm not in accordance with the conditions of this environmental authority, or a contravention of the conditions of this environmental authority.</p>
A25	<p>The notification in conditions A23 and A24 must include, but not be limited to, the following:</p> <ul style="list-style-type: none"> a) the environmental authority number and name of the holder; b) the name and telephone number of the designated contact person; c) the location of the emergency or incident; d) the date and time of the emergency or incident; e) the time the holder of the environmental authority became aware of the emergency or incident; f) where known: <ul style="list-style-type: none"> I. the estimated quantity and type of substances involved in the emergency or incident; II. the actual or potential cause of the emergency or incident; III. a description of the nature and effects of the emergency or incident including environmental risks, and any risks to public health or livestock; IV. any sampling conducted or proposed, relevant to the emergency or incident; V. immediate actions taken to prevent or mitigate any further environmental harm caused by the emergency or incident; and VI. what notification of stakeholders who may be affected by the emergency or incident has occurred, or is being undertaken.
A26	<p>Within ten (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:</p> <ul style="list-style-type: none"> 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; and c) proposed actions to prevent a recurrence of the emergency or incident.
A27	<p>All reasonable actions are to be taken to minimise environmental harm, or potential environmental harm, resulting from any emergency, incident or circumstances not in accordance with the conditions of this environmental authority.</p>
A28	<p>An investigation must be undertaken, completed and recorded within 20 business days of receiving a complaint (or a longer period agreed to in writing by the administering authority) to determine:</p> <ul style="list-style-type: none"> a) the potential circumstances and actions on site that may have contributed to the basis of the complaint; and

	b) reasonable measures that will be implemented to address the complaint.
A29	Measures identified under condition A28(b) must be implemented within: <ul style="list-style-type: none"> a) 20 business days of completion of the investigation required by condition A28 being finalised; or b) a longer period agreed to in writing by the administering authority.
A30	The following details must be recorded for all complaints received: <ul style="list-style-type: none"> a) date and time the complaint was received; b) if authorised by the person making the complaint, their name and contact details; c) nature and details of the complaint; d) investigations carried out in response to the complaint as required by condition A28; e) the results of investigations; and f) measures taken under condition A29.
A31	Third Party Reporting The holder of this environmental authority must: <ul style="list-style-type: none"> a) within one (1) year of the commencement of this authority, obtain from an appropriately qualified and experienced third party, a report on compliance with the conditions of this environmental authority; b) obtain further such reports at regular intervals not exceeding three (3) years from the completion of the report referred to in condition A31(a); and c) provide each report to the administering authority within ninety (90) days of its completion.
A32	Financial assurance The activity must not be carried out until the holder of this environmental authority has given financial assurance ² to the administering authority. ² Financial assurance is defined in Chapter 5 of the <i>Environmental Protection Act 1994</i> .
A33	If the administering authority increases the amount of financial assurance, the holder of this environmental authority must give the additional financial assurance to the administering authority within 20 business days of receiving written notice of the increase.
A34	Community The holder of this Environmental Authority must establish, promote and maintain easily accessible lines of communication between residents, stakeholders and landowners reasonably expected to be affected by the activity to ensure that environmental impacts are identified and managed. This must begin at least two (2) months prior to the commencement of construction, and include but not be limited to the following: <ul style="list-style-type: none"> a) regular meetings with all relevant stakeholders at intervals of not more than six (6) months; and b) the establishment of a consultative committee with representation of all relevant stakeholders that meet at regular intervals as determined by the committee.

END OF CONDITIONS FOR SCHEDULE A

Schedule B – Air

B1	Unless authorised by this environmental authority, the release of contaminants to air must not cause environmental harm or an exceedance of the limits in Table B5 – Ambient air quality trigger levels and limits to be exceeded at a sensitive or commercial place.																																																																						
B2	<p>The release of contaminants to the atmosphere from point sources must only occur:</p> <p>a) from those release points identified in Table B1 and must be directed vertically upwards without any impedance or hindrance;</p> <p>b) at a height, efflux velocity and temperature not less than the corresponding values stated for that release point in Table B1;</p> <p>SCHEDULE B – Table B1 – Contaminant Source Release Points</p> <table><tr><th>Release/Monitoring point number</th><th>Source description</th><th colspan="2">Location (decimal degrees) GDA2020</th><th>Minimum release height (m)</th><th>Minimum Efflux Velocity (m/s)</th><th>Minimum release temperature (°K)</th></tr><tr><td>RP1</td><td>Stack serving Ore rotary dryer off-gas</td><td>146.8271947 E</td><td>-19.6149631 S</td><td>40</td><td>15</td><td>380</td></tr><tr><td>RP2</td><td>Stack serving Hematite agglomeration furnace</td><td>146.8239615 E</td><td>-19.6130827 S</td><td>25</td><td>15</td><td>423</td></tr><tr><td>RP3</td><td>Stack serving Boiler off-gas</td><td>146.8224205 E</td><td>-19.6166281 S</td><td>20</td><td>15</td><td>523</td></tr><tr><td>RP4</td><td>Stack serving Hematite agglomeration dedusting</td><td>146.8239331 E</td><td>-19.6136495 S</td><td>15</td><td>15</td><td>483</td></tr><tr><td>RP5</td><td>Stack serving Extraction plant process vent</td><td>146.8212829 E</td><td>-19.6146020 S</td><td>50</td><td>15</td><td>307</td></tr><tr><td>RP6</td><td>Stack serving Ammonium sulfate dryer off-gas</td><td>146.8210816 E</td><td>-19.6096790 S</td><td>25</td><td>15</td><td>344</td></tr><tr><td>RP7</td><td>Stack serving Nickel sulfate dryer off-gas</td><td>146.8208223 E</td><td>-19.6104502 S</td><td>30</td><td>15</td><td>323</td></tr><tr><td>RP8</td><td>Stack serving Cobalt sulfate dryer off-gas</td><td>146.8217149 E</td><td>-19.6095326 S</td><td>25</td><td>15</td><td>323</td></tr><tr><td>RP9</td><td>Stack serving Ball mill vent</td><td>146.8259472 E</td><td>-19.6154271 S</td><td>33</td><td>15</td><td>343</td></tr></table>	Release/Monitoring point number	Source description	Location (decimal degrees) GDA2020		Minimum release height (m)	Minimum Efflux Velocity (m/s)	Minimum release temperature (°K)	RP1	Stack serving Ore rotary dryer off-gas	146.8271947 E	-19.6149631 S	40	15	380	RP2	Stack serving Hematite agglomeration furnace	146.8239615 E	-19.6130827 S	25	15	423	RP3	Stack serving Boiler off-gas	146.8224205 E	-19.6166281 S	20	15	523	RP4	Stack serving Hematite agglomeration dedusting	146.8239331 E	-19.6136495 S	15	15	483	RP5	Stack serving Extraction plant process vent	146.8212829 E	-19.6146020 S	50	15	307	RP6	Stack serving Ammonium sulfate dryer off-gas	146.8210816 E	-19.6096790 S	25	15	344	RP7	Stack serving Nickel sulfate dryer off-gas	146.8208223 E	-19.6104502 S	30	15	323	RP8	Stack serving Cobalt sulfate dryer off-gas	146.8217149 E	-19.6095326 S	25	15	323	RP9	Stack serving Ball mill vent	146.8259472 E	-19.6154271 S	33	15	343
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	RP10	Stack serving Hematite agglomeration furnace	146.8240774 E	-19.6116780 S	10	18.6	423
B3	Contaminants must not be released to the atmosphere from the release points at the concentrations and mass emission rates, as measured at the monitoring point, in excess of that stated in Table B2 .						
SCHEDULE B - Table B2 – Monitoring and Release Points							
	Release/Monitoring point number	Contaminant release	Maximum concentration release limit		Maximum mass release limit		
RP1		Total Solid Particulates	50 mg/Nm ³ (dry)		1.0 g/sec		
		Oxides of Nitrogen	100 mg/Nm ³ (dry)		3.0 g/sec		
		Carbon monoxide	125 mg/Nm ³ (dry)		2.0 g/sec		
		Total volatile organic compounds (TVOC) as n-propane equivalent	10 mg/Nm ³ (dry)		0.2 g/sec		
		Cadmium (Cd) or Mercury (Hg) individually	0.2 mg/Nm ³ (dry)		0.003 g/sec		
		Total heavy metals (see Note 1)	1 mg/Nm ³ (dry)		0.015 g/sec		
RP2		Total Solid Particulates	50 mg/Nm ³ (dry)		0.5 g/sec		
		Oxides of Nitrogen	350 mg/Nm ³ (dry)		2.0 g/sec		
		Carbon monoxide	125 mg/Nm ³ (dry)		1.0 g/sec		
		Total volatile organic compounds (TVOC) as n-propane equivalent	20 mg/Nm ³ (dry)		0.1 g/sec		
		Cadmium (Cd) or Mercury (Hg) individually	0.2 mg/Nm ³ (dry)		0.001 g/sec		
		Total heavy metals (see Note)	1 mg/Nm ³ (dry)		0.005 g/sec		
RP3		Oxides of Nitrogen	350 mg/Nm ³ (dry) at 3% O ₂		25 g/sec		
		Carbon monoxide	135 mg/Nm ³ (dry) at 3% O ₂		15 g/sec		
RP4		Total Solid Particulates	50 mg/Nm ³ (dry)		0.35 g/sec		
		Cadmium (Cd) or Mercury (Hg) individually	0.2 mg/Nm ³ (dry)		0.001 g/sec		
		Total heavy metals (see Note)	1 mg/Nm ³ (dry)		0.005 g/sec		
RP5		Total Solid Particulates	50 mg/Nm ³ (dry)		0.5 g/sec		
		Oxides of Nitrogen	350 mg/Nm ³ (dry)		4.0 g/sec		
		Carbon monoxide	250 mg/Nm ³ (dry)		3.0 g/sec		

		Total volatile organic compounds (TVOC) as n-propane equivalent	20 mg/Nm ³ (dry)	0.2 g/sec
		Sulphur Dioxide	10 mg/Nm ³ (dry)	0.1 g/sec
		Ammonia	10 mg/Nm ³ (dry)	0.1 g/sec
		Cadmium (Cd) or Mercury (Hg) individually	0.2 mg/Nm ³ (dry)	0.001 g/sec
		Total heavy metals (see Note)	1 mg/Nm ³ (dry)	0.005 g/sec
	RP6	Total Solid Particulates	50 mg/Nm ³ (dry)	0.1 g/s
		Ammonia	10 mg/Nm ³ (dry)	0.1 g/sec
		Total volatile organic compounds (TVOC) as n-propane equivalent	20 mg/Nm ³ (dry)	0.2 g/sec
		Sulphur Dioxide	10 mg/Nm ³ (dry)	0.1 g/sec
	RP7	Total Solid Particulates	50 mg/Nm ³ (dry)	0.1 g/sec
		Ammonia	10 mg/Nm ³ (dry)	0.1 g/sec
		Total volatile organic compounds (TVOC) as n-propane equivalent	20 mg/Nm ³ (dry)	0.2 g/sec
		Sulphur Dioxide	10 mg/Nm ³ (dry)	0.1 g/sec
		Total heavy metals (see Note)	1 mg/Nm ³ (dry)	0.01 g/sec
	RP8	Total Solid Particulates	50 mg/Nm ³ (dry)	0.1 g/sec
		Ammonia	10 mg/Nm ³ (dry)	0.1 g/sec
		Total volatile organic compounds (TVOC) as n-propane equivalent	20 mg/Nm ³ (dry)	0.2 g/sec
		Sulphur Dioxide	10 mg/Nm ³ (dry)	0.1 g/sec
		Total heavy metals (see Note)	1 mg/Nm ³ (dry)	0.01 g/sec
	RP9	Total Solid Particulates	50 mg/Nm ³ (dry)	0.2 g/sec
		Oxides of Nitrogen	100 mg/Nm ³ (dry)	0.4 g/sec
		Carbon Monoxide	125 mg/Nm ³ (dry)	0.4 g/sec
		Total volatile organic compounds (TVOC) as n-propane equivalent	20 mg/Nm ³ (dry)	0.2 g/sec
		Cadmium (Cd) or Mercury (Hg) individually	0.2 mg/Nm ³ (dry)	0.002 g/sec
		Total heavy metals (see Note)	1 mg/Nm ³ (dry)	0.01 g/sec
	RP10	Total Solid Particulates	50 mg/Nm ³ (dry)	12 g/sec
		Oxides of Nitrogen	350 mg/Nm ³ (dry)	50 g/sec

	<table><tr><td>Carbon Monoxide</td><td>125 mg/Nm³ (dry)</td><td>30 g/sec</td></tr><tr><td>Total volatile organic compounds (TVOC) as n-propane equivalent</td><td>20 mg/Nm³ (dry)</td><td>2 g/sec</td></tr><tr><td>Sulphur Dioxide</td><td>10 mg/Nm³ (dry)</td><td>0.45 g/sec</td></tr><tr><td>Cadmium (Cd) or Mercury (Hg) individually</td><td>0.2 mg/Nm³ (dry)</td><td>0.002 g/sec</td></tr><tr><td>Total heavy metals (see Note)</td><td>1 mg/Nm³ (dry)</td><td>0.01 g/sec</td></tr></table> <p><i>Note: Total heavy metals means a cumulative total of Type 1 and Type 2 substances as described in NSW EPA POEO Regulation 2010.</i></p>	Carbon Monoxide	125 mg/Nm ³ (dry)	30 g/sec	Total volatile organic compounds (TVOC) as n-propane equivalent	20 mg/Nm ³ (dry)	2 g/sec	Sulphur Dioxide	10 mg/Nm ³ (dry)	0.45 g/sec	Cadmium (Cd) or Mercury (Hg) individually	0.2 mg/Nm ³ (dry)	0.002 g/sec	Total heavy metals (see Note)	1 mg/Nm ³ (dry)	0.01 g/sec
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B4	<p>Monitoring of Contaminant Releases to the Atmosphere</p> <p>The holder of this authority must conduct and keep records of a point source monitoring program of contaminant releases to the atmosphere at the release points, frequency, and for the parameter specified in Table B3 and which complies with the following:</p> <ul style="list-style-type: none">a) All determinations must be made by a person or body registered by the National Association of Testing Authorities (NATA) or by a person or body possessing appropriate experience and qualifications to perform the required determinations;b) Monitoring provision for the release points listed in Table B3 must comply with the Australian Standard AS 4323.1 - 1995 "Stationary source emissions Method 1: Selection of sampling provisions";c) All determinations of contaminant releases to the atmosphere must be made in accordance with methods prescribed in the most recent version of the Environmental Protection Agency's Air Quality Sampling Manual. If monitoring requirements for specific contaminants are not described in the Environmental Protection Agency's Air Quality Sampling Manual, monitoring protocols must be in accordance with a method as approved by New South Wales DEC/EPA, Victorian EPA or United States EPA;d) The following tests must be performed for each required determination specified in Table B3:<ul style="list-style-type: none">I. gas velocity and volume flow rate;II. temperature and oxygen content;III. water vapour concentration;e) where practicable samples taken must be representative of the contaminants discharged when emissions are expected to be at maximum rates; andf) during the sampling period the following additional information must be gathered:<ul style="list-style-type: none">I. plants throughput rate at the time of sampling; andII. any typical factors that may influence air emissions (e.g. combustion of non-condensable gases in the boiler. These gases are produced from the digestion of bauxite). <p>SCHEDULE B - Table B3 – Required Release and Monitoring Point Determinations</p> <table><tr><th>Release/Monitoring point number</th><th>Determination Required</th><th>Monitoring Frequency</th></tr></table>	Release/Monitoring point number	Determination Required	Monitoring Frequency												
Release/Monitoring point number	Determination Required	Monitoring Frequency														

	RP1	Total Solid Particulates, Oxides of Nitrogen, Carbon monoxide, Total volatile organic compounds, Cadmium and its compounds, Mercury and its compounds and Total heavy metals	All stacks must be monitored within 3 months of commissioning of the plant and annually thereafter.
	RP2	Total Solid Particulates, Oxides of Nitrogen, Carbon monoxide, Total volatile organic compounds, Cadmium and its compounds, Mercury and its compounds and Total heavy metals	
	RP3	Oxides of Nitrogen and Carbon monoxide	
	RP4	Total Solid Particulates, Cadmium and its compounds, Mercury and its compounds and Total heavy metals	
	RP5	Total Solid Particulates, Oxides of Nitrogen, Carbon monoxide, Total volatile organic compounds, Sulphur Dioxide, Ammonia, Cadmium and its compounds, Mercury and its compounds and Total heavy metals	
	RP6	Total Solid Particulates, Ammonia, Total volatile organic compounds, and Sulphur Dioxide	
	RP7	Total Solid Particulates, Ammonia, Total volatile organic compounds, Sulphur Dioxide and Total heavy metals	
	RP8	Total Solid Particulates, Ammonia, Total volatile organic compounds, Sulphur Dioxide and Total heavy metals	
	RP9	Total Solid Particulates, Oxides of Nitrogen, Carbon monoxide, Total volatile organic compounds, Cadmium and its compounds, Mercury and its compounds and Total heavy metals	
	RP10	Total Solid Particulates, Oxides of Nitrogen, Carbon monoxide, Total volatile organic compounds, Sulphur Dioxide, Cadmium and its compounds, Mercury and its compounds and Total heavy metals	
B5	Dust and particulate matter emissions must not exceed the following concentrations at any sensitive place or commercial place: a) dust deposition of 120 mg/m ² per day, averaged over one month, when monitored in accordance with Australian Standard AS 3580.10.1 (or more recent editions); b) a concentration of particulate matter with an aerodynamic diameter of less than 10 µm (PM ₁₀) suspended in the atmosphere of 50 µg/m ³ over a 24 hour averaging time, when monitored in accordance with Australian Standard AS 3580.9.6 (or more recent editions) or any other method approved by the administering authority; and c) a concentration of particulate matter with an aerodynamic diameter of less than 2.5 µm (PM _{2.5}) suspended in the atmosphere of 25 µg/m ³ 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 _{2.5} low volume sampler— Gravimetric method.		

B6	<p>At least 6 months prior to commencement of activities authorised under this environmental authority, the holder of this environmental authority must:</p> <p>a) develop an ambient air quality and dust deposition monitoring program that includes sufficient monitoring locations to monitor the potential impacts from authorised activities; and</p> <p>b) update Table B4 through an amendment application pursuant to the EP Act.</p>																																												
B7	<p>Prior to commencement of activities authorised under this environmental authority, the holder of this environmental authority must implement an ambient air quality and dust deposition monitoring program to monitor the potential impacts from authorised activities for at least the locations specified in Table B4.</p> <p>SCHEDULE B - Table B4 – Air Quality Monitoring Sites</p> <table><tr><th>Site</th><th colspan="2">Location (decimal degrees in GDA2020)</th><th>Monitoring Location</th></tr><tr><td colspan="4">Dust deposition</td></tr><tr><td>DDG1</td><td>146.8125434 E</td><td>-19.6073978 S</td><td>North-west boundary of the Project site</td></tr><tr><td>DDG2</td><td>146.8103894 E</td><td>-19.6163308 S</td><td>South-west boundary of the Project site</td></tr><tr><td>DDG3</td><td>146.8335884 E</td><td>-19.6184568 S</td><td>South-east boundary of the Project site</td></tr><tr><td>DDG4</td><td>146.8292624 E</td><td>-19.6086128 S</td><td>North-east boundary of the Project site</td></tr><tr><td colspan="4">Reference</td></tr><tr><td>REF1</td><td>146.8351234 E</td><td>-19.5980948 S</td><td>Woodstock State School</td></tr><tr><td>REF2</td><td>146.8389364 E</td><td>-19.6290488 S</td><td>Receptor south of project site</td></tr><tr><td colspan="4">Ambient air quality monitoring stations</td></tr><tr><td colspan="4">To be nominated through an amendment application pursuant to the EP Act prior to commencement of operations.</td></tr></table>	Site	Location (decimal degrees in GDA2020)		Monitoring Location	Dust deposition				DDG1	146.8125434 E	-19.6073978 S	North-west boundary of the Project site	DDG2	146.8103894 E	-19.6163308 S	South-west boundary of the Project site	DDG3	146.8335884 E	-19.6184568 S	South-east boundary of the Project site	DDG4	146.8292624 E	-19.6086128 S	North-east boundary of the Project site	Reference				REF1	146.8351234 E	-19.5980948 S	Woodstock State School	REF2	146.8389364 E	-19.6290488 S	Receptor south of project site	Ambient air quality monitoring stations				To be nominated through an amendment application pursuant to the EP Act prior to commencement of operations.			
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B8	<p>The holder of this environmental authority must conduct the activities in such a manner so as not to cause any exceedance of the ambient air quality limits specified in Table B5 at any sensitive receptors.</p> <p>SCHEDULE B - Table B5 – Ambient air quality trigger levels and limits</p> <table><tr><th>Air quality indicator</th><th>Averaging time</th><th>Limit (µg/m³)¹</th><th>Monitoring Frequency</th></tr><tr><td>Total suspended particulates</td><td>Annual</td><td>90</td><td rowspan="12">Continuous² Equipment and methodology to be nominated through an amendment application pursuant to the EP Act prior to commencement of operations.</td></tr><tr><td>PM₁₀</td><td>24-hour maximum</td><td>50</td></tr><tr><td>PM₁₀</td><td>Annual</td><td>25</td></tr><tr><td>PM_{2.5}</td><td>24-hour</td><td>25</td></tr><tr><td>PM_{2.5}</td><td>Annual</td><td>8</td></tr><tr><td>CO</td><td>8-hour</td><td>9 mg/m³</td></tr><tr><td>NO₂</td><td>1-hour</td><td>250</td></tr><tr><td>NO₂</td><td>Annual</td><td>62</td></tr><tr><td>SO₂</td><td>1-hour</td><td>570</td></tr><tr><td>SO₂</td><td>24-hour</td><td>229</td></tr><tr><td>SO₂</td><td>Annual</td><td>57</td></tr><tr><td>Benzene</td><td>Annual</td><td>5.4</td></tr></table>	Air quality indicator	Averaging time	Limit (µg/m³) ¹	Monitoring Frequency	Total suspended particulates	Annual	90	Continuous ² Equipment and methodology to be nominated through an amendment application pursuant to the EP Act prior to commencement of operations.	PM ₁₀	24-hour maximum	50	PM ₁₀	Annual	25	PM _{2.5}	24-hour	25	PM _{2.5}	Annual	8	CO	8-hour	9 mg/m³	NO ₂	1-hour	250	NO ₂	Annual	62	SO ₂	1-hour	570	SO ₂	24-hour	229	SO ₂	Annual	57	Benzene	Annual	5.4			
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	Formaldehyde	24-hour	54	
	Toulene	24-hour	4.1	
	Toulene	Annual	400	
	Annual PAH as BaP	Annual	0.3	
	Arsenic	Annual	6 ng/m ³	
	Cadmium	Annual	5 ng/m ³	
	Lead	Annual	0.5	
	Manganese	Annual	0.16	
	Nickel	Annual	22	
¹ Limits are based on the Environmental Protection Policy Air 2019				
² Continuous monitoring to be undertaken at all release points specified in Table B1 – Contaminant Source Release Points				
B9	Weather Station The holder of this Environmental Authority must establish and maintain a permanent meteorological station to continuously measure and record wind speed, wind direction, temperature and daily rainfall volume prior to the commencement of construction of the activity.			
B10	The permanent meteorological station must be installed in accordance with the latest edition of the Bureau of Meteorology guideline Observation specifications No.2013.1 Guidelines for the positioning and exposure of meteorological instruments and observing facilities.			

END OF CONDITIONS FOR SCHEDULE B

Schedule C — Land

C1	Other than as permitted by this environmental authority, contaminants must not be released to land.
C2	<p>All chemicals and flammable or combustible liquids must be stored and handled in accordance with the most recent version of an Australian Standard where such is applicable, including the following:</p> <ul style="list-style-type: none"> a) stored within a secondary containment system that is impervious to the materials stored within it; and b) managed to prevent the release of contaminants to waters and land.
C3	Treatment and management of acid sulfate soils must comply with the latest edition of the <i>Queensland Acid Sulfate Soil Technical Manual</i> .
C4	All dams and water holding structures must incorporate an engineered liner system that achieves a minimum permeability of 1×10^{-9} m/s sufficient to prevent the release of contaminants to land and waters from the structure.
C5	<p>Land that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that:</p> <ul style="list-style-type: none"> a) suitable species of vegetation for the location are established and sustained for earthen surfaces; b) potential for erosion is minimised; c) the quality of water, including seepage, released from the site does not cause environmental harm; d) potential for environmental nuisance caused by dust is minimised; e) the water quality of any residual water body does not have potential to cause environmental harm; f) the final landform is stable and protects public safety; and g) the contaminant concentrations within the final capping layer are appropriate for the final land use and in accordance with the 'National Environmental Protection (Assessment of Soil Contamination) Measure 1999.'
C6	A Rehabilitation Plan must be developed six months prior to the commencement of activities authorised under this environmental authority by an appropriately qualified person.
C7	<p>The Rehabilitation Plan required in Condition C5 must include:</p> <ul style="list-style-type: none"> a) rehabilitation objectives to achieve the rehabilitation goals for all disturbed areas; b) detailed rehabilitation methods for each disturbed area; c) rehabilitation indicators to measure the success of the rehabilitation against the rehabilitation objectives; d) final completion criteria that will achieve the rehabilitation goals and objectives; and e) details of appropriate monitoring and maintenance of rehabilitation.
C8	<p>Contaminated Land</p> <p>Before applying for a surrender, or partial surrender of the environmental authority, the holder must (if applicable) provide to the administering authority a site investigation report under the <i>Environmental Protection Act 1994</i>, in relation to any part of the facility 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>
C9	<p>Great Barrier Reef Offset requirements</p> <p>An environmental offset made in accordance with the <i>Environmental Protection Regulation 2019</i> and <i>Environmental Protection (Great Barrier Reef Protection Measures) and Other Legislation Amendment Act 2019</i>, must:</p> <ul style="list-style-type: none"> a) Be undertaken for 1.5x the amount of fine sediment (FS) and dissolved inorganic nitrogen (DIN) being discharged into the Great Barrier Reef catchment waters or other coastal waters (GBR catchment

	<p>waters). This results into an offset obligation of 14.5 tonnes (t) of FS per year for the project authorised under this environmental authority.</p> <p>b) Be only undertaken in area marked 'offset area' in Figure I6 and following listed coordinate bounds.</p> <p>c) Involve the implementation of erosion control activities, including:</p> <ul style="list-style-type: none"> I. Stream bank fencing to facilitate grazing exclusion and weed control; and II. Stream bank revegetation (planting).
C10	The environmental authority holder must develop a Monitoring Implementation Plan to be submitted to the administering authority prior to the commencement of activities authorised under this environmental authority.
C11	<p>The Monitoring Implementation Plan must include:</p> <ul style="list-style-type: none"> a) Photo points over time; b) Vegetation monitoring; c) Structural integrity and intactness of project works; and d) Condition of land adjacent to streambanks.
C12	<p>A report completed by an appropriately qualified person, that includes the following matters, must be provided annually to the administering authority:</p> <ul style="list-style-type: none"> a) Data, analysis, and results from the Monitoring Implementation Plan; and b) Implementations in the design and application of erosion control activities.

END OF CONDITIONS FOR SCHEDULE C

Schedule D — Water

D1	Contaminants must not be released to any waters unless otherwise permitted by a condition of this environmental authority.																										
D2	The following information must be recorded for all surface water, sediment, and biological monitoring: a) the date on which the sample or in-situ record was taken; b) the time at which the sample or in-situ record was taken; c) the location co-ordinates and description of the monitoring point at which the sample was taken; d) the flow rate in the receiving environment at the time of sampling; e) the results of all monitoring; and f) details of any exceedances of the conditions of this environmental authority.																										
D3	The following information must be recorded for all monitoring undertaken at the location of any release to waters: a) all information required by condition D2 ; b) the measured or estimated daily quantity of water released; and c) the release flow rate at the time of sampling.																										
D4	Notwithstanding any other reporting required under this Environmental Authority, water monitoring data required under this environmental authority must be provided to the administering authority in the specified electronic format via the Queensland Government’s Water Tracking and Electronic Reporting System (WaTERS).																										
D5	<p>Contaminants must only be released to waters:</p> <p>a) from the release points in Table D1: Authorised release points, sources and receiving waters as depicted in Figure I3: Proposed surface water quality locations; and</p> <p>b) in accordance with the release requirements specified in Table D1: Authorised release points, sources and receiving waters.</p> <p>SCHEDULE D - Table D1: Authorised release points, sources and receiving waters</p> <table><tr><th>Release point (RP)</th><th colspan="2">Location (decimal degrees, GDA2020)</th><th>Contaminant source and location</th><th>Monitoring point</th><th>Receiving waters</th><th>Minimum receiving water flow criteria for discharge (ML/day)</th><th>Maximum daily release volume (ML/day)</th><th>Monitoring Frequency</th></tr><tr><td>RP A</td><td>146.834 0209 E</td><td>- 19.614 6804 S</td><td>Ore stockpile area, residue storage area, extraction process area, sulfate refinery area</td><td>Gilligan Creek (end of pipe)</td><td>Gilligan Creek</td><td>288</td><td>28</td><td>At the commencement of release (the first sample must be taken within two hours of commencement of release), daily</td></tr></table>									Release point (RP)	Location (decimal degrees, GDA2020)		Contaminant source and location	Monitoring point	Receiving waters	Minimum receiving water flow criteria for discharge (ML/day)	Maximum daily release volume (ML/day)	Monitoring Frequency	RP A	146.834 0209 E	- 19.614 6804 S	Ore stockpile area, residue storage area, extraction process area, sulfate refinery area	Gilligan Creek (end of pipe)	Gilligan Creek	288	28	At the commencement of release (the first sample must be taken within two hours of commencement of release), daily
Release point (RP)	Location (decimal degrees, GDA2020)		Contaminant source and location	Monitoring point	Receiving waters	Minimum receiving water flow criteria for discharge (ML/day)	Maximum daily release volume (ML/day)	Monitoring Frequency																			
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									for the first seven days, and weekly following.																																	
	RP B	146.82885 50 E	- 19. 617 422 0 S	Internal roads, hardstand areas of sulfate refinery, extraction area west, extraction area east, admin, acid treatment area, ore grind area, cooling plant	Gilligan Creek (end of pipe)	Gilligan Creek	N/A	N/A	On a monthly basis at commencement of discharge (the first sample must be taken within two hours of commencement of release).																																	
D6	Where the minimum receiving water flow criteria for discharge as specified in Table D1 is exceeded, the maximum daily release can be increased proportionate to the flow in the receiving environment provided a dilution ratio of 10 times receiving flow to 1 part release water is maintained.																																									
D7	<p>At the release points specified in Table D1: Authorised release points, sources and receiving waters releases to waters must not exceed:</p> <p>a) the release limits specified for the relevant receiving waters in Table D2: Release limits; and</p> <p>b) the maximum daily release volume specified in Table D1: Authorised release points, sources and receiving waters or D6 where applicable.</p> <p>SCHEDULE D - Table D2: Release limits</p> <table><tr><th>Quality characteristic</th><th>Unit</th><th>Monitoring method</th><th>Release limit</th><th>Limit type</th></tr><tr><td>Electrical conductivity</td><td>µS/cm</td><td>Continuous, in situ³</td><td>500¹</td><td>Maximum</td></tr><tr><td>pH</td><td>pH units</td><td>Continuous, in situ³</td><td>6.5-9.0¹</td><td>Range</td></tr><tr><td>Turbidity</td><td>NTU</td><td>Continuous, in situ³</td><td>150¹</td><td rowspan="5">Maximum</td></tr><tr><td>Total Suspended Solids (TSS)</td><td>mg/L</td><td rowspan="4">Laboratory sample</td><td>50¹</td></tr><tr><td>Ammonia</td><td>µg of N/L</td><td>900²</td></tr><tr><td>Oxidised nitrogen (Nitrite, NO₂ + Nitrate, NO₃)</td><td>µg of N/L</td><td>180¹</td></tr><tr><td>Total nitrogen</td><td>µg of N/L</td><td>1,080⁶</td></tr></table>									Quality characteristic	Unit	Monitoring method	Release limit	Limit type	Electrical conductivity	µS/cm	Continuous, in situ ³	500 ¹	Maximum	pH	pH units	Continuous, in situ ³	6.5-9.0 ¹	Range	Turbidity	NTU	Continuous, in situ ³	150 ¹	Maximum	Total Suspended Solids (TSS)	mg/L	Laboratory sample	50 ¹	Ammonia	µg of N/L	900 ²	Oxidised nitrogen (Nitrite, NO ₂ + Nitrate, NO ₃)	µg of N/L	180 ¹	Total nitrogen	µg of N/L	1,080 ⁶
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	<table><tr><td>Total phosphorus</td><td>µg of P/L</td><td></td><td>100¹</td><td></td></tr><tr><td>Sulphate</td><td rowspan="8">µg/L</td><td></td><td>20⁴</td><td></td></tr><tr><td>Cadmium</td><td></td><td>2^{4,5}</td><td></td></tr><tr><td>Chromium</td><td></td><td>10^{4,5}</td><td></td></tr><tr><td>Copper</td><td></td><td>14^{4,5}</td><td></td></tr><tr><td>Lead</td><td></td><td>34^{4,5}</td><td></td></tr><tr><td>Manganese</td><td></td><td>19,000^{4,5}</td><td></td></tr><tr><td>Nickel</td><td></td><td>110^{4,5}</td><td></td></tr><tr><td>Zinc</td><td></td><td>80^{4,5}</td><td></td></tr></table>	Total phosphorus	µg of P/L		100 ¹		Sulphate	µg/L		20 ⁴		Cadmium		2 ^{4,5}		Chromium		10 ^{4,5}		Copper		14 ^{4,5}		Lead		34 ^{4,5}		Manganese		19,000 ^{4,5}		Nickel		110 ^{4,5}		Zinc		80 ^{4,5}	
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	<div><div>1. For aquatic ecosystem protection, based on slightly–moderately disturbed ecosystems provided in ANZECC/ARMCANZ (2000), with consideration of dilution modelling of the receiving environment,</div><div>2. 95% species level protection mentioned in the national guidelines (AWG, 2018) with consideration of dilution modelling of the receiving environment,</div><div>3. Continuous (minimum hourly mean)</div><div>4. For Don and Haughton River basins, Mackay-Whitsunday Estuaries, and Coastal/marine waters (2017).</div><div>5. For metals, both total and dissolved concentration must be measured, limits apply to dissolved concentrations.</div><div>6. Value obtained from the sum of the limits for Ammonia and Oxidised nitrogen.</div></div>																																						
D8	Release of contaminants to waters must be measured: <div><div>a) at the release points specified in Table D1: Authorised release points, sources and receiving waters;</div><div>b) at the monitoring frequency specified in Table D1: Authorised release points, sources and receiving waters; and</div><div>c) for each quality characteristic specified in Table D2: Release limits.</div></div>																																						
D9	The volume of water released from each release point must also be measured and recorded as mega litres per day (ML/day).																																						
D10	Receiving water flows must be measured at the gauging station location specified in Table D3: Gauging station																																						
D11	Receiving waters flows must be recorded at the frequency in Table D3: Gauging station <div>SCHEDULE D - Table D3: Gauging station<table><tr><th>Receiving waters</th><th>Release point(s) (RP)</th><th>Gauging station</th><th colspan="2">Gauging station location (decimal degrees, GDA2020)</th><th>Receiving water flow recording frequency</th></tr><tr><td>Gilligan Creek</td><td>RPA</td><td>Gauging Station 1</td><td>146.8284928 E</td><td>-19.6181147 S</td><td>Continuous (minimum daily mean).</td></tr></table></div>				Receiving waters	Release point(s) (RP)	Gauging station	Gauging station location (decimal degrees, GDA2020)		Receiving water flow recording frequency	Gilligan Creek	RPA	Gauging Station 1	146.8284928 E	-19.6181147 S	Continuous (minimum daily mean).																							
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Gilligan Creek	RPA	Gauging Station 1	146.8284928 E	-19.6181147 S	Continuous (minimum daily mean).																																		
D12	Gauging station in Table D3: Gauging station must be installed, operated, and maintained.																																						
D13	If an exceedance in accordance with Condition D6 is identified, the holder of the environmental authority must immediately cease discharge and notify the administering authority, in writing, within twenty-four (24) hours of receiving the result.																																						

D14	If the release limits in Table D2: Release limits or flow criteria in Table D1: Release during flow events are contravened during a release, the holder of the environmental authority must notify the administering authority via pollution hotline within 24 hours of receiving the results.
D15	<p>The following information must be recorded in relation to all authorised release monitoring required under the conditions of this environmental authority and submitted to the administering authority on request:</p> <ul style="list-style-type: none"> a) the results of the monitoring; b) the date on which the sample or monitoring was undertaken; c) the time at which the sample or monitoring was undertaken; d) the monitoring point, including spatial coordinates, at which the sample or monitoring was undertaken; e) the measured or estimated daily quantity of contaminants released from all release points; f) the release flow rate at the time of sampling for each release point; g) receiving water flow at the time of release; h) the details of the laboratory organisation which analysed the sample; i) the details of any exceedances of the conditions of this environmental authority; and j) if the release is to waters in a Great Barrier Reef basin, the total annual load of key pollutants Total Suspended Sediment and Total Nitrogen in tonnes per year.
D16	<p>The controlled release of treated/settled stormwater must be conducted in a way and at a rate that does not cause:</p> <ul style="list-style-type: none"> a) re-suspension of particles; or b) erosion of bed or banks of receiving waters; or c) landscape damage; or d) ponding of the water; or e) vegetation damage.
D17	<p>The environmental authority holder must, within twenty-eight (28) days of a release that is not compliant with the conditions of this environmental authority, provide a report to the administering authority detailing:</p> <ul style="list-style-type: none"> a) the reason for the release; b) the location of the release; c) the total volume of the release and which (if any) part of this volume was noncompliant; d) the total duration of the release and which (if any) part of this period was noncompliant; e) all water quality monitoring results (including all laboratory analysis); f) identification of any environmental harm as a result of the non-compliance; g) all calculations; and h) any other matters pertinent to the water release event.
D18	<p>Receiving environment monitoring and contaminant trigger levels</p> <p>The quality of the receiving waters must be monitored at the locations specified in Table D5 for each quality characteristic and at the monitoring frequency stated in Table D4</p> <p>SCHEDULE D - Table D4: Receiving waters contaminant trigger limits</p>

	Quality characteristic	Unit	Monitoring method	Monitoring frequency	Trigger limit	Limit type
	Electrical conductivity	µS/cm	In situ	Commencement of release, and weekly following	237 ²	Maximum
	pH	pH units	In situ		6.5-8.0 ²	Range
	Turbidity	NTU	In situ		18 ²	Maximum
	Total Suspended Solids (TSS)	mg/L	Laboratory sample		16.1 ²	
	Ammonia	µg of N/L			8 ²	
	Oxidised nitrogen (Nitrite, NO ₂ + Nitrate, NO ₃)	µg of N/L			18 ²	
	Total nitrogen	µg of N/L			303 ²	
	Total phosphorus	µg of P/L			34 ²	
	Sulphate	µg/L			2 ^{2,3}	
	Cadmium				0.2 ^{2,3}	
	Chromium				1 ^{2,3}	
	Copper				1.4 ^{2,3}	
	Lead				3.4 ^{2,3}	
	Manganese				1,900 ^{2,3}	
	Nickel				11 ^{2,3}	
	Zinc				8 ^{2,3}	
	<div>1. For aquatic ecosystem protection, based on slightly–moderately disturbed ecosystems provided in ANZECC/ARMCANZ (2000).</div> <div>2. For Don and Haughton River basins, Mackay-Whitsunday Estuaries, and Coastal/marine waters (2017).</div> <div>3. For metals, both total and dissolved concentration must be measured, limits apply to dissolved concentrations.</div>					
D19	If a water quality characteristic measured at a compliance site specified in Table D5 exceeds any trigger limit specified in Table D4 , the environmental authority holder must compare the result to the applicable reference monitoring point specified in Table D5 and: <div>a) if the level of contaminants at the impacted site does not exceed the reference monitoring site data, then no action is to be taken; or</div> <div>b) where the downstream results exceed the limit specified Table D4, potential contaminants for any quality characteristic, compare the results of the downstream site to the data from background monitoring sites and<div>I. if the result is less than the background monitoring site data, then no action is to be taken, or</div><div>II. if the result is greater than the background monitoring site data, complete an investigation into the potential for environmental harm and provide a written report to the administering authority within 90 days of receiving the result, outlining:<div>1. details of the investigations carried out; and</div><div>2. actions taken to prevent environmental harm.</div></div></div>					

SCHEDULE D - Table D5: Receiving water upstream background sites and downstream monitoring points						
Monitoring point		Purpose	ID	Receiving waters location description	Monitoring Point Location (decimal degrees, GDA2020)	
Upstream background monitoring point		Reference	US1	Gilligan Creek at Ghost Gum Road	146.8298285 E	-19.6181189 S
Downstream monitoring point – at site boundary		Compliance	DS1	Gilligan Creek at eastern site boundary	146.8348950 E	-19.6145096 S
Downstream monitoring point		Compliance	DS2	Confluence of Gilligan Creek and Serpentine Lagoon, at Woodstock Giru Road	146.8921724 E	-19.6015388 S
D20	<p>Receiving Environment Monitoring Program (REMP)</p> <p>By 1 March 2023 a Receiving Environment Monitoring Program Design Document must be prepared in accordance with the latest version of the administering authority's guideline <i>Receiving environment monitoring program (ESR/2016/2399)</i>.</p> <p>For the purposes of the REMP, the receiving environment is the waters of Gilligan Creek, which flows downstream into Serpentine Lagoon and Majors Creek. The REMP must encompass any sensitive receiving waters or environmental values within the area of the site that will potentially be affected by releases of sediment water.</p>					
D21	By 1 March 2023 the Receiving Environment Monitoring Program Design Document must be submitted to the administering authority and due consideration must be given to any comments made by the administering authority on the Receiving Environment Monitoring Program Design Document.					
D22	The Receiving Environment Monitoring Program Design Document must be reviewed and re-submitted to the administering authority by an appropriately qualified person every three (3) years after the date in condition D20 to ensure that any potential environmental impacts due to changes in the carrying out of the activity are monitored.					
D23	The Receiving Environment Monitoring Program detailed in the Receiving Environment Monitoring Program Design Document must be implemented prior to commencement of activities under this Environmental Authority.					
D24	<p>The Receiving Environment Monitoring Program must at a minimum:</p> <ul style="list-style-type: none"> a) monitor, identify and describe any adverse impacts to surface water environmental values, quality, and flows; b) assess the long-term condition or state of surface waters; c) include the locations listed in Table D5: Receiving water upstream background sites and downstream monitoring points; d) identify and describe all environmental values of the receiving environment. e) assess the receiving environment monitoring against surface water quality objectives and other indicators specified in Table D4 as a minimum; f) include an assessment of the potential impacts of the activity and propose appropriate mitigation measures; g) apply procedures and/or guidelines from ANZG 2018 and other relevant standards and guideline documents, including developing site-specific water quality objectives where appropriate; 					

	<ul style="list-style-type: none"> h) describe sampling and analysis methods and quality assurance and control; and i) incorporate stream flow and hydrological information in the interpretations of water quality and biological data.
D25	A Receiving Environment Monitoring Program report, including all monitoring results and any interpretations or assumptions relied upon, must be prepared, on 1 November each year and made available to the administering authority on request.
D26	<p>The Receiving Environment Monitoring Program report required by condition D20 must:</p> <ul style="list-style-type: none"> a) Be prepared by an appropriately qualified person; and b) Outline the findings of the REMP, including but not limited to: <ul style="list-style-type: none"> I. An assessment of long-term background water quality; II. An assessment of the long-term condition or state of surface waters; III. Suitability of current release limits to protect downstream environmental values; IV. Recommendations for further investigation; V. Recommendations for changes or improvements to the monitoring program; and VI. Potential changes to management and conditioning of the authorised activity to minimise impacts.
D27	Prior to the commencement of construction, an Erosion and Sediment Control Plan must be developed by an appropriately qualified person and implemented for all stages of the activities on the site.
D28	<p>The Erosion and Sediment Control Plan must:</p> <ul style="list-style-type: none"> a) demonstrate how erosion and sediment control measures detailed in the plan adequately minimise the release of sediment to receiving waters and must include at least the following: <ul style="list-style-type: none"> I. an assessment of the size and relevant characteristics of all catchment areas; II. an assessment of relevant properties of soils and waste materials; III. identification of receiving waters environmental values, water quality objectives and management intent; and IV. specification of minimum design criteria for erosion and sediment control structures to meet the management intent of receiving waters. b) Detail the locations and descriptions of all erosion and sediment control measures; and c) Provide an audit schedule to ensure erosion and sediment control measures are maintained.
D29	<p>The Erosion and Sediment Control Plan must be reviewed by 1 November each year by an appropriately qualified person. The review must be documented and must:</p> <ul style="list-style-type: none"> a) include a statement that the Erosion and Sediment Control Plan has been reviewed by an appropriately qualified person. b) assess the plan against the requirements of condition D28. c) include recommended actions to ensure actual and potential environmental impacts are effectively managed. d) provide details and timelines of the actions to be taken. e) identify any amendments made to the Erosion and Sediment Control Plan.

D30	A copy of the Erosion and Sediment Control Plan and the annual reviews must be provided to the administering authority on request.
D31	The maintenance and cleaning of any vehicles, plant or equipment must not be carried out in areas from which contaminants can be released into any receiving waters.
D32	Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable to minimise the release of wastes, contaminants or materials to any stormwater drainage system or receiving waters.
D33	Prior to commencement of activities under this Environmental Authority, a Water Management Plan must be developed by an appropriately qualified person and implemented for all stages of the activity.
D34	<p>The Water Management Plan must:</p> <ul style="list-style-type: none"> a) provide for effective water management of actual and potential environmental impacts resulting from the activity; and b) Include: <ul style="list-style-type: none"> I. a study of the source of contaminants; II. a water balance model for the site; III. a water management system for the site; IV. measures to manage and prevent contaminant generation and run off; V. contingency procedures for incidents and emergencies; and VI. a program for monitoring and review of the effectiveness of the water management plan.
D35	<p>The Water Management Plan must be reviewed by 1 November. The review must be documented and:</p> <ul style="list-style-type: none"> a) include a statement that the Water Management Plan has been reviewed by an appropriately qualified person; b) assess the plan against the requirements under condition D33; c) include recommended actions to ensure actual and potential environmental impacts are effectively managed; d) provide details and timelines of the actions to be taken; and e) identify any amendments made to the Water Management Plan and update the document accordingly.
D36	A copy of the Water Management Plan and the annual reviews must be provided to the administering authority on request.
D37	<p>The construction, maintenance, operation and decommissioning of each groundwater monitoring bore must be undertaken in a manner that:</p> <ul style="list-style-type: none"> a) prevents contaminants entering the groundwater; b) ensures representative groundwater samples from the target hydrogeological unit; and c) maintains the hydrogeological environment within the hydrogeological unit.
D38	<p>A bore report must be kept for each monitoring bore which includes:</p> <ul style="list-style-type: none"> a) identification reference number and geographic coordinate location;

	<ul style="list-style-type: none"> b) construction information including but not limited to depth of bore, depth and length of casing, depth and length of screening and bore sealing details; c) stratigraphy and target hydrogeological unit of the bore; and d) depth at which groundwater intercepted and final standing water level after bore development.
D39	<p>Groundwater Monitoring and Management Program</p> <p>By 1 March 2023, a Groundwater Monitoring and Management Program Design Document must be developed that:</p> <ul style="list-style-type: none"> a) Meets the requirements of D40; and b) Identifies additional groundwater monitoring bore locations as required under Table D6; and c) Nominates values for any TBDs in Table D7.
D40	By 1 March 2023 the Groundwater Monitoring and Management Program Design Document must be submitted to the administering authority and due consideration must be given to any comments made by the administering authority on the Groundwater Monitoring and Management Program Design Document.
D41	<p>Within one month of receipt of comments from the administering authority under D40, the EA holder must lodge an amendment application pursuant to the EP Act that:</p> <ul style="list-style-type: none"> a) Identifies additional groundwater monitoring bore locations as required under Table D6; and b) Nominates values for any TBDs in Table D7; and c) Addresses any other changes required to the environmental authority as a result of the finalisation of the Groundwater Monitoring and Management Program Design Document.
D42	<p>Groundwater Monitoring and Management Program</p> <p>Three (3) months prior to commencement of activities authorised under this environmental authority, a Groundwater Monitoring and Management Program (GMMP) must be developed, implemented and maintained.</p>
D43	<p>The GMMP required by Condition D39 must:</p> <ul style="list-style-type: none"> a) provide a hydrogeological conceptual groundwater model; b) identify all potential sources of contamination to groundwater from the activities authorised under this environmental authority; c) identify all environmental values that may be impacted; d) detail groundwater levels in all identified hydrogeological units present across and adjacent to the site to confirm existing groundwater flow paths; e) ensure all potential groundwater impacts due to activities and rehabilitation activities are identified, monitored and mitigated; f) ensure adequate groundwater monitoring and data analysis is undertaken to achieve the following objectives: <ul style="list-style-type: none"> I. detect any impacts to groundwater quality due to the activities and rehabilitation activities; II. detect any changes to groundwater level due to the activities and rehabilitation activities; III. determine compliance with condition D47; and IV. determine trends in groundwater quality;

	<p>V. determine any interaction or impact from groundwater on surface water (groundwater monitoring locations should align with receiving environment surface water quality monitoring locations, if appropriate);</p> <p>g) document groundwater management and monitoring methodologies undertaken for the duration of all activities and rehabilitation activities;</p> <p>h) provide an appropriate quality assurance and quality control program; and</p> <p>i) include a review process to identify improvements to the program that includes addressing any comments provided by the administering authority.</p>												
D44	The GMMP must be reviewed on an annual basis by an appropriately qualified person to determine if it continues to meet the requirements stated in condition D40 .												
D45	From 1 November 2023, an Annual Groundwater Monitoring Report (AGMR) must be completed each year. The AGMR must be submitted to the administering authority upon request.												
D46	<p>The AGMR required by condition D42 must include:</p> <p>a) a review of all the groundwater quality and standing water level data of all groundwater bores listed within Table D6: Groundwater monitoring locations and frequency;</p> <p>b) an assessment of groundwater quality and standing water level trends for all data from all groundwater bores listed in Table D6: Groundwater monitoring locations and frequency;</p> <p>c) details of any review undertaken of the groundwater conceptual model;</p> <p>d) an assessment of any impacts on groundwater level due to the activities; and</p> <p>e) comparison with receiving environment surface water quality monitoring results to determine any interaction or impact from groundwater on surface water.</p>												
D47	Within three (3) months of completion of reports required by condition D40 or D43 that identify a change to any of the requirements specified under this environmental authority, the EA holder must lodge an amendment application pursuant to the EP Act that addresses the relevant changes.												
D48	<p>The following information must be recorded in relation to all groundwater monitoring:</p> <p>a) the date on which the sample was taken;</p> <p>b) the time at which the sample was taken;</p> <p>c) the monitoring bore at which the sample was taken; and</p> <p>d) the results of all monitoring.</p>												
D49	<p>Groundwater quality and levels must be monitored at the locations and frequencies defined in Table D6: Groundwater monitoring locations and frequency and Figure I4: Proposed groundwater quality locations, for quality characteristics identified in Table D7: Groundwater Quality Triggers and Limits. Results and analysis of groundwater monitoring must be submitted to the administering authority via WaTERS with each annual return.</p> <p>SCHEDULE D – TABLE D6: Groundwater monitoring locations and frequency</p> <table><tr><th>Monitoring Point</th><th>Hydrogeological Unit</th><th>Monitoring Points (decimal degrees, GDA2020)</th><th></th><th></th><th>Monitoring frequency</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Monitoring Point	Hydrogeological Unit	Monitoring Points (decimal degrees, GDA2020)			Monitoring frequency						
Monitoring Point	Hydrogeological Unit	Monitoring Points (decimal degrees, GDA2020)			Monitoring frequency								

				Total depth(mb GL ¹)	Screened interval(mb GL ¹)	Water level monitor ing ²	Water quality monitoring
Interpretations Bores							
Replacem ent MW01	TBD	TBD	TBD	TBD	TBD	TBD	Quarterl y
MW02D	Granite	- 19.616606 1 E	146.815823 S	30	27 to 30	Quarterly	Quarterl y
MW02S	Alluvium	- 19.616606 1 E	146.815823 S	15	12 to 15	Quarterly	Quarterl y
MW03	Composite alluvium/Granit e	- 19.614493 E	146.819536 S	21	18 to 21	Quarterly	Quarterl y
MW04	Granite	- 19.616973 E	146.819804 S	30	27 to 30	Quarterly	Quarterl y
MW08	Granite	- 19.611148 E	146.825778 S	35	32 to 35	Quarterly	Quarterl y
MW12	Granite	- 19.609425 E	146.8304900 S	25.4	12.4 to 25.4	Quarterly	Quarterl y
MW16D	Granite	- 19.616543 E	146.830265 S	30	27 to 30	Quarterly	Quarterl y
MW16S	Alluvium	- 19.616543 E	146.830265 S	15	12 to 15	Continuou s level logger	Quarterl y
MW18D	Granite	- 19.619051 7 E	146.822788 S	30	27 to 30	Quarterly	Quarterl y
MW18S	Alluvium	- 19.619051 7 E	146.822788 S	15	12 to 15	Continuou s level logger	Quarterl y
RN102910	Granite	- 19.606360 E	146.827929 S	30.5	18.3 to 30.5	Quarterly	Quarterl y
RN1534 86	Alluvium	- 19.625169 8 E	146.801489 S	25	13 to 25	Quarterly	Quarterl y

RN1863 59	Granite	- 19.623545 E	146.814869 S	32	16 to 29	Quarterly	Quarterl y
RN1866 81	Granite	- 19.608339 E	146.820277 S	30.5	23.5 to 29.5	Quarterly	Quarterl y
Tank Bore	Granite	- 19.615997 E	146.810636 S	NA	NA	Quarterly	Quarterl y
Compliance Bores							
MW05	Granite	- 19.614612 7 E	146.822906 S	30	27 to 30	Quarterly	Quarterl y
MW06	Granite	- 19.611383 6 E	146.8215141 S	35	32 to 35	Quarterly	Quarterl y
MW09	Granite	- 19.608886 E	146.823586 S	30	27 to 30	Quarterly	Quarterl y
MW10D	Granite	- 19.608364 7 E	146.827133 S	35	32 to 35	Quarterly	Quarterl y
MW10S	Alluvium	- 19.608364 7 E	146.827133 S	20	17 to 20	Quarterly	Quarterl y
MW11	Granite	- 19.612214 E	146.827645 S	35	32 to 35	Quarterly	Quarterl y
MW13D	Granite	- 19.609133 7 E	146.834644 S	30	27 to 30	Quarterly	Quarterl y
MW13S	Alluvium	- 19.609133 7 E	146.834644 S	20	17 to 20	Quarterly	Quarterl y
MW14	Granite	- 19.612612 E	146.834650 S	30	27 to 30	Quarterly	Quarterl y
MW15D	Granite	- 19.614905 E	146.832204 S	30	27 to 30	Continuou s level logger	Quarterl y
MW15S	Alluvium	- 19.614905 E	146.832204 S	15	12 to 15	Continuou s level logger	Quarterl y
MW17	Granite	- 19.615066 E	146.8275019 S	30	27 to 30	Quarterly	Quarterl y

MW19	Granite	- 19.602856 E	146.835533 S	30	27 to 30	Quarterly	Quarterly
RN1408 20	Granite	- 19.617034 E	146.826883 S	37	19 to 37	Continuous level logger	Quarterly
RN1530 44	Alluvium	- 19.614500 E	146.837551 S	31	19 to 31	Quarterly	Quarterly
RN1866 79	Granite	- 19.616115 9 E	146.834717 S	31	24 to 30	Quarterly	Quarterly

Table notes:

1 - Metres below ground level (mbGL)

2 - Reference level must be measured to the nearest 5 cm from the top of casing. Continuous level loggers are to be downloaded on a quarterly basis.

D50

Groundwater Quality

Groundwater measured from any compliance bore specified in **Table D6: Groundwater Monitoring Locations and Frequency**, must not exceed the corresponding Limit specified in **Table D7: Groundwater Quality Limits** on any three consecutive sampling occasions.

SCHEDULE D – TABLE D7: Groundwater Quality Limits

Parameter group	Parameter	Units	Monitoring Bores	Limit	Limit type
Physicochemical Parameters	pH (Field and laboratory)	pH unit	All bores	6.5-8.0 ¹	Range
	Electrical conductivity (Field and laboratory)	μS/cm		TBD	Maximum
	Total Dissolved Solids (Field and laboratory)	mg/L		TBD	Maximum
	Temperature (Field)	°C		No limit	For interpretation purposes only
	Dissolved oxygen (Field)	mg/L			
	Oxidation Reduction Potential (Field)	mV			
	Major ions	Major ions		mg/L	

	Hardness	Total Hardness as CaCO ₃	mg/L				
	Alkalinity	Bicarbonate, carbonate, hydroxide and total Alkalinity	mg/L				
	Metals and Metalloids ⁶	Aluminium	µg/L		55 ³	Maximum	
		Arsenic (AsV)			24 ³		
		Beryllium			0.13 ³		
		Boron			370 ³		
		Cadmium			0.2 ³		
		Chromium			1 ³		
		Cobalt			1.4 ³		
		Copper			1.4 ³		
		Iron			No limit ⁴		
		Lead			3.4 ³		
		Manganese			1900 ³		
		Mercury			0.6 ³		
		Nickel			11 ³		
		Selenium			11 ³		
		Vanadium			6 ³		
		Zinc			8 ³		
	Fluoride	Fluoride			2000 ²		
	Nutrients	Ammonia as N			900 ³		
		Nitrite as N			No limit ⁴		
		Nitrate as N			700 ³		
		Total Nitrogen as N			No Limit ⁴		
		Total Phosphorus as P			No Limit ⁴		
	Total Recoverable Hydrocarbons	(C ₆ -C ₁₀)			20		
		(C ₁₀ -C ₄₀)			100		
	Groundwater levels	Groundwater levels	mAHD		For interpretation purposes only	For interpretation purposes only	
<p><i>Table notes:</i></p> <ol style="list-style-type: none"> 1. Don and Haughton River Water Quality Objectives (Table 3) for lowland freshwater aquatic ecosystem, moderately disturbed. 2. Limit based on ANZG 2018 livestock drinking water guideline values. 3. Limits based on ANZG 2018 freshwater default guideline trigger levels for slightly–moderately disturbed systems or low reliability trigger levels. 							

	<p>4. No applicable published guideline value.</p> <p>5. 'Detect above LOR' – no guideline values available, no results above LORs reported based on the limited baseline sampling completed.</p> <p>6. For metals and metalloids, both total and dissolved concentration must be measured, limits apply to dissolved concentrations.</p>
D51	<p>If groundwater from compliance bores identified in Table D6: Groundwater monitoring locations and frequency exceed the corresponding limit/s specified in Table D7: Groundwater Quality Limits on any one sampling occasion the environmental authority holder must resample the groundwater within the compliance bore for all exceeding quality characteristics within ten business days of receipt of results.</p> <p><i>Note: The resampling event is not considered a sampling occasion and therefore not a consecutive exceedance of the Limit B for the quality characteristic/s for the purposes of condition D50.</i></p>
D52	<p>The construction, maintenance and management of groundwater bores (including groundwater monitoring bores) must be undertaken in a manner that prevents or minimises impacts to the environment and ensures the integrity of the bores to obtain accurate monitoring.</p>

END OF CONDITIONS FOR SCHEDULE D

Schedule E — Noise and Vibration

E1	Other than as permitted within this environmental authority, noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.																																		
E2	<p>Noise from the activity must not include substantial low frequency noise components and must not exceed the levels identified in Table E1 – Noise limits and the associated requirements at any nuisance sensitive place or commercial place.</p> <p>SCHEDULE E – TABLE E1 – Noise Limits</p> <table><tr><th rowspan="3">Noise level dB(A) measured as:</th><th colspan="2">Day</th><th colspan="2">Evening</th><th>Night</th></tr><tr><th colspan="2">7am – 6pm</th><th colspan="2">6pm – 10pm</th><th>10pm – 7am</th></tr><tr><th>Week Days</th><th>Weekends and Public Holidays</th><th>Week Days</th><th>Weekends and Public Holidays</th><th>Any day</th></tr><tr><td>LAeq, adj, 1 hour</td><td>44¹</td><td>42</td><td>42</td><td>38</td><td>38</td></tr><tr><td>LA1, adj, 1 hour²</td><td>52</td><td>50</td><td>47</td><td>43</td><td>43</td></tr><tr><td>LAMax</td><td></td><td>49</td><td></td><td>49</td><td>49</td></tr></table> <p><i>Note:</i></p> <p>1. Noise objective based on the acoustic quality objective minus 5dB to permit contribution from other industrial or commercial noise sources.</p> <p>2. The L1 noise objective does not require adjustment for additional noise sources by virtue of the fact that it approximates more loud instantaneous noise levels which are unlikely to occur from multiple developments simultaneously</p>	Noise level dB(A) measured as:	Day		Evening		Night	7am – 6pm		6pm – 10pm		10pm – 7am	Week Days	Weekends and Public Holidays	Week Days	Weekends and Public Holidays	Any day	LAeq, adj, 1 hour	44 ¹	42	42	38	38	LA1, adj, 1 hour ²	52	50	47	43	43	LAMax		49		49	49
Noise level dB(A) measured as:	Day		Evening		Night																														
	7am – 6pm		6pm – 10pm		10pm – 7am																														
	Week Days	Weekends and Public Holidays	Week Days	Weekends and Public Holidays	Any day																														
LAeq, adj, 1 hour	44 ¹	42	42	38	38																														
LA1, adj, 1 hour ²	52	50	47	43	43																														
LAMax		49		49	49																														
E3	When requested by the administering authority, or as a result of a complaint, noise monitoring must be undertaken and the results must be notified within fourteen (14) days to the administering authority following completion of monitoring.																																		
E4	<p>All noise monitoring which is conducted as per Condition E3 must be completed in accordance with the following noise monitoring requirements:</p> <ul style="list-style-type: none">a) All noise monitoring must be conducted in accordance with the administering authority's most recent version of the Noise Measurement Manual;b) Source noise levels must be expressed as component noise levels for the purposes of comparison with noise limits;c) All noise monitoring devices must be calibrated in accordance with the most recent version of the Australian Standard.d) Monitoring must be carried out at a place or places relevant to the potentially affected sensitive or commercial place, as agreed upon with the administering authority; ande) Monitoring location(s) must be relevant to the matter(s) under investigation.																																		

END OF CONDITIONS FOR SCHEDULE E

Schedule F – Waste Management

F1	All waste generated in carrying out the activity must be lawfully reused, recycled or lawfully transported to a facility that can lawfully accept the waste.
F2	Incompatible wastes must not be mixed in the same container or waste storage area.
F3	<p>Prior to commencement of activities, a Waste Management Plan must be implemented and regularly reviewed and updated at intervals of no longer than five (5) years. The plan must include:</p> <ul style="list-style-type: none"> a) a description of the activity that may generate waste; b) waste management control strategies including: <ul style="list-style-type: none"> I. recording of the types and amounts of wastes generated by the activity; II. segregation of the wastes; III. storage of the wastes; IV. transport of the wastes; and V. monitoring and reporting matters concerning the waste; c) the hazard characteristics of the wastes generated including disposal procedures for regulated wastes; d) a program for reusing, recycling or disposing of all wastes; e) how the waste will be dealt with in accordance with the waste and resource management hierarchy, including a description of the types and amounts of waste that will be dealt with under each of the waste management practices in the waste management hierarchy (i.e. avoidance, reuse, recycling, energy recovery, disposal); f) how the waste will be stored, handled and transferred in a proper and effective manner; g) procedures for identifying and implementing opportunities to minimise the amount of waste generated, promote efficiency in the use of resources and improve the waste management practices employed; h) procedures for dealing with accidents, spills, and other incidents that may impact on waste management; i) details of any accredited management system employed, or planned to be employed, to deal with the waste; j) how often the performance of the waste management practices will be assessed; k) the indicators or other criteria on which the performance of the waste management practices will be assessed; and l) staff training and induction to the waste management program.
F4	<p>Residue Storage Area</p> <p>Residue must only be stored in the Residue Storage Area as identified in Figure I5: Proposed site layout.</p>
F5	<p>Residue Storage Area</p> <p>Residue must be managed in accordance with the Residue Management Plan (RMP). The RMP must:</p> <ul style="list-style-type: none"> a) be developed and implemented at least six (6) months prior to the commencement of activities authorised under this environmental authority; and b) include provisions for: <ul style="list-style-type: none"> I. daily recording of total residue storage volumes; II. containment of residue in accordance with the approved design plan(s) for the Residue Storage Area and condition C4; III. the management of leachates and surface water runoff; IV. the control of fugitive emissions and dust to air;

	<p>V. program of progressive sampling and characterisation;</p> <p>VI. an offsite disposal strategy which meets the rehabilitation objectives specified in condition C7; and</p> <p>VII. management of residue in order to minimise the potential for environmental harm.</p>
F6	Notwithstanding any other condition of this authority, where a lawful disposal authorisation has not been secured or maintained, no more than 240,000t of residue can be stored at the residue storage area at any time.
F7	Notwithstanding any other condition of this authority, where a lawful disposal authorisation has been secured and maintained, no more than 1.44 million tonnes of residue can be stored at the residue storage area at any time.

END OF CONDITIONS FOR SCHEDULE F

Schedule G – Sewage Treatment

G1	All reasonable steps must be taken to ensure the activity of sewage treatment complies with the eligibility criteria and standard conditions contained within the most recent version of the 'Eligibility criteria and standard conditions for sewage treatment works (ERA 63) – Version 2 (ESR/2015/1710)' or its successor.
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END OF CONDITIONS FOR SCHEDULE G

Schedule H – Regulated Structures

H1	<p>Assessment of consequence category</p> <p>The consequence category of any structure must be assessed by an appropriately qualified and experienced person in accordance with the ‘Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)’ or its successor at the following times:</p> <ul style="list-style-type: none"> a) prior to the design and construction of the structure, including any modification of the structure; or b) prior to any change in its purpose or the nature of its stored contents.
H2	<p>Where a structure is reassessed and determined to be a regulated structure, or where any other change is identified to an existing regulated structure, an amendment application pursuant to the Environmental Protection Act 1994 must be submitted to update the details in condition H12.</p>
H3	<p>A consequence assessment report and certification must be prepared for any structure assessed and the report may include a consequence assessment for more than one structure.</p>
H4	<p>Certification must be provided by the appropriately qualified and experienced person who undertook the assessment, in the form set out in the most recent version of the ‘Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)’ or its successor.</p>
H5	<p>Construction of a regulated structure is prohibited unless:</p> <ul style="list-style-type: none"> a) the holder has submitted a consequence category assessment report and certification to the administering authority; and b) certification for the design, design plan and the associated operating procedures has been certified by an appropriately qualified and experienced person in compliance with the relevant condition of this authority.
H6	<p>Regulated structures must be designed and constructed in accordance with and conform to the requirements of the most recent version of the ‘Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)’ or its successor.</p>
H7	<p>Operation of a Regulated Structure</p> <p>Operation of a regulated structure is prohibited unless:</p> <ul style="list-style-type: none"> a) the holder has submitted to the administering authority: <ul style="list-style-type: none"> I. one electronic copy of the design plan and certification of the ‘design plan’ II. a set of ‘as constructed’ drawings and specifications, and III. certification of those ‘as constructed drawings and specifications’, and IV. where the regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the design storage allowance (DSA) volume across the system, a copy of the certified system design plan. V. the requirements of this authority relating to the construction of the regulated structure have been met; VI. the holder has included details of the structure in this authority; and VII. there is a current operational plan for the regulated structures.
H8	<p>Annual inspection report</p> <p>Each regulated structure must be inspected each calendar year by an appropriately qualified and experienced person.</p>
H9	<p>At each annual inspection, the condition and adequacy of all components of the regulated structure must be assessed and an appropriately qualified and experienced person must prepare an annual inspection report</p>

	containing details of the assessment and include recommended actions to ensure the integrity of the regulated structure.										
H10	The appropriately qualified and experienced person who prepared the annual inspection report must certify the report in accordance with the Manual for Assessing Consequence Categories and Hydraulic Performance of Structures.										
H11	<p>The environmental authority holder must:</p> <p>a) within twenty (20) business days of receipt of the annual inspection report, provide to the administering authority:</p> <p>I. the recommendations section of the annual inspection report;</p> <p>II. if applicable, any actions being taken in response to those recommendations; and</p> <p>b) if, following receipt of the recommendations and (if applicable) actions, the administering authority requests a full copy of the annual inspection report from the environmental authority holder, provide this to the administering authority within ten (10) business days of receipt of the request.</p>										
H12	<p>Hydraulic Performance of Regulated Structures</p> <p>The holder of this environmental authority must comply with the hydraulic performance criteria specified in Table H1: Hydraulic Performance Criteria.</p> <p>SCHEDULE H – TABLE H1 – Hydraulic Performance Criteria</p> <table><tr><th rowspan="2">Name of Regulated Structure</th><th rowspan="2">Consequence Category for FTC - Overtopping</th><th colspan="2">Hydraulic performance criteria</th></tr><tr><th>Wet Season Containment (DSA)¹</th><th>Storm Event Containment (ESS)</th></tr><tr><td>RSA Sediment Basin</td><td>Significant</td><td>1:20 AEP</td><td>1:10 AEP 72-hour duration</td></tr></table> <p>¹Must be achieved on 1 November of each year.</p>	Name of Regulated Structure	Consequence Category for FTC - Overtopping	Hydraulic performance criteria		Wet Season Containment (DSA) ¹	Storm Event Containment (ESS)	RSA Sediment Basin	Significant	1:20 AEP	1:10 AEP 72-hour duration
Name of Regulated Structure	Consequence Category for FTC - Overtopping			Hydraulic performance criteria							
		Wet Season Containment (DSA) ¹	Storm Event Containment (ESS)								
RSA Sediment Basin	Significant	1:20 AEP	1:10 AEP 72-hour duration								
H13	The hydraulic performance criteria specified in this environmental authority are the minimum mandatory performance requirements, regulated structures must be managed in a manner that ensures compliance with all conditions of this environmental authority.										

END OF CONDITIONS FOR SCHEDULE H

Schedule I – Maps and Plans

Figure I1. Areas of disturbance

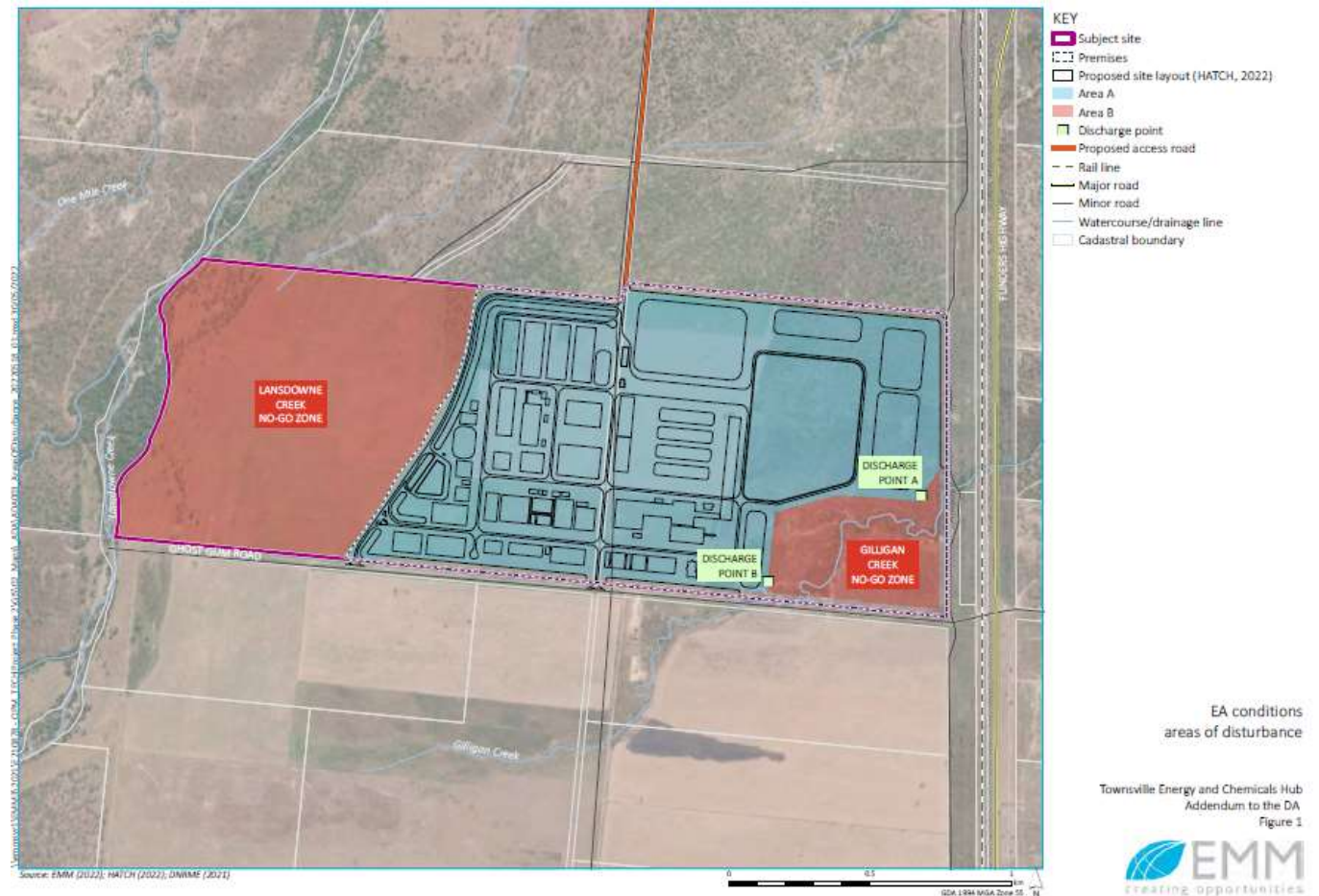


Figure I2. Proposed air quality monitoring locations



Figure I3. Proposed surface water quality locations

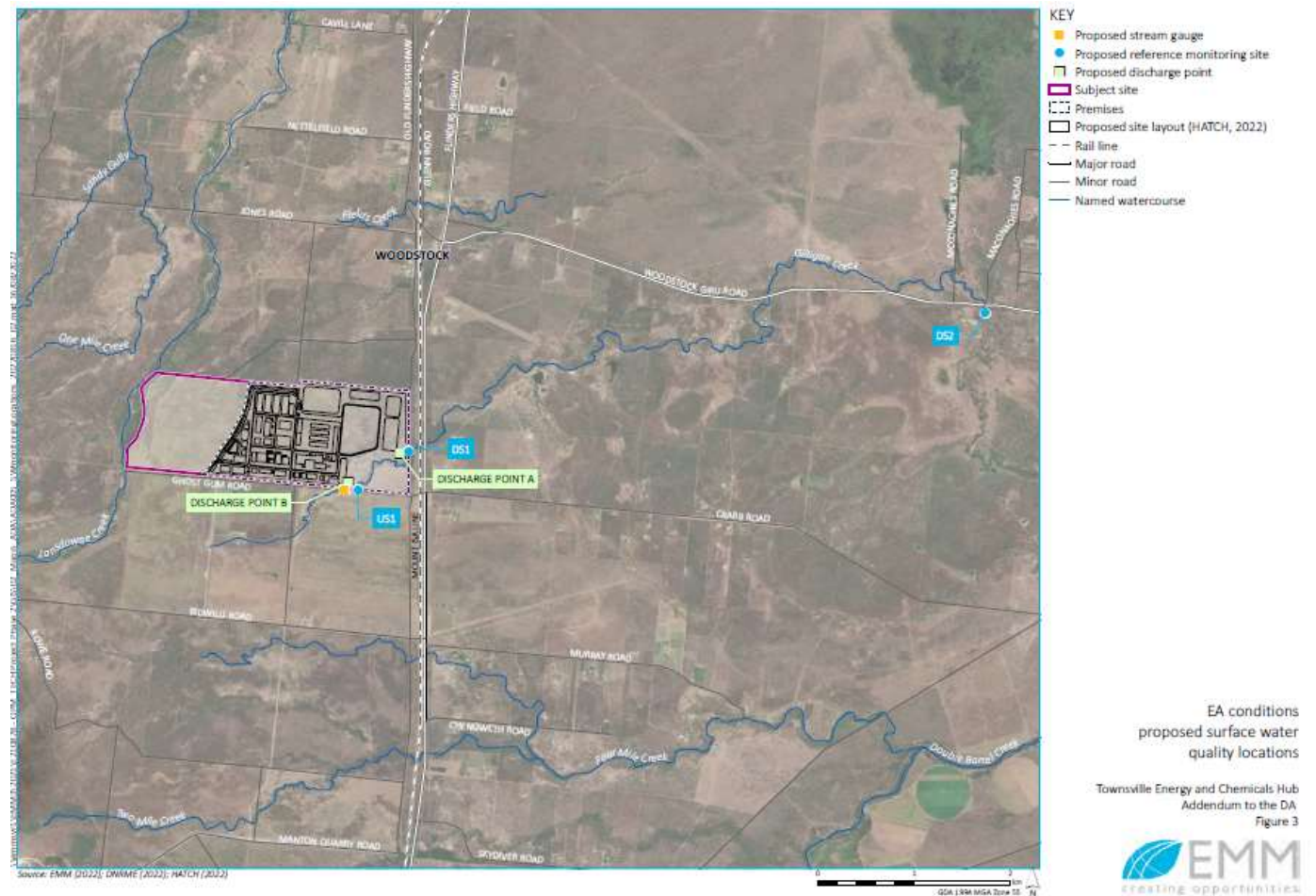


Figure I4. Proposed groundwater quality locations

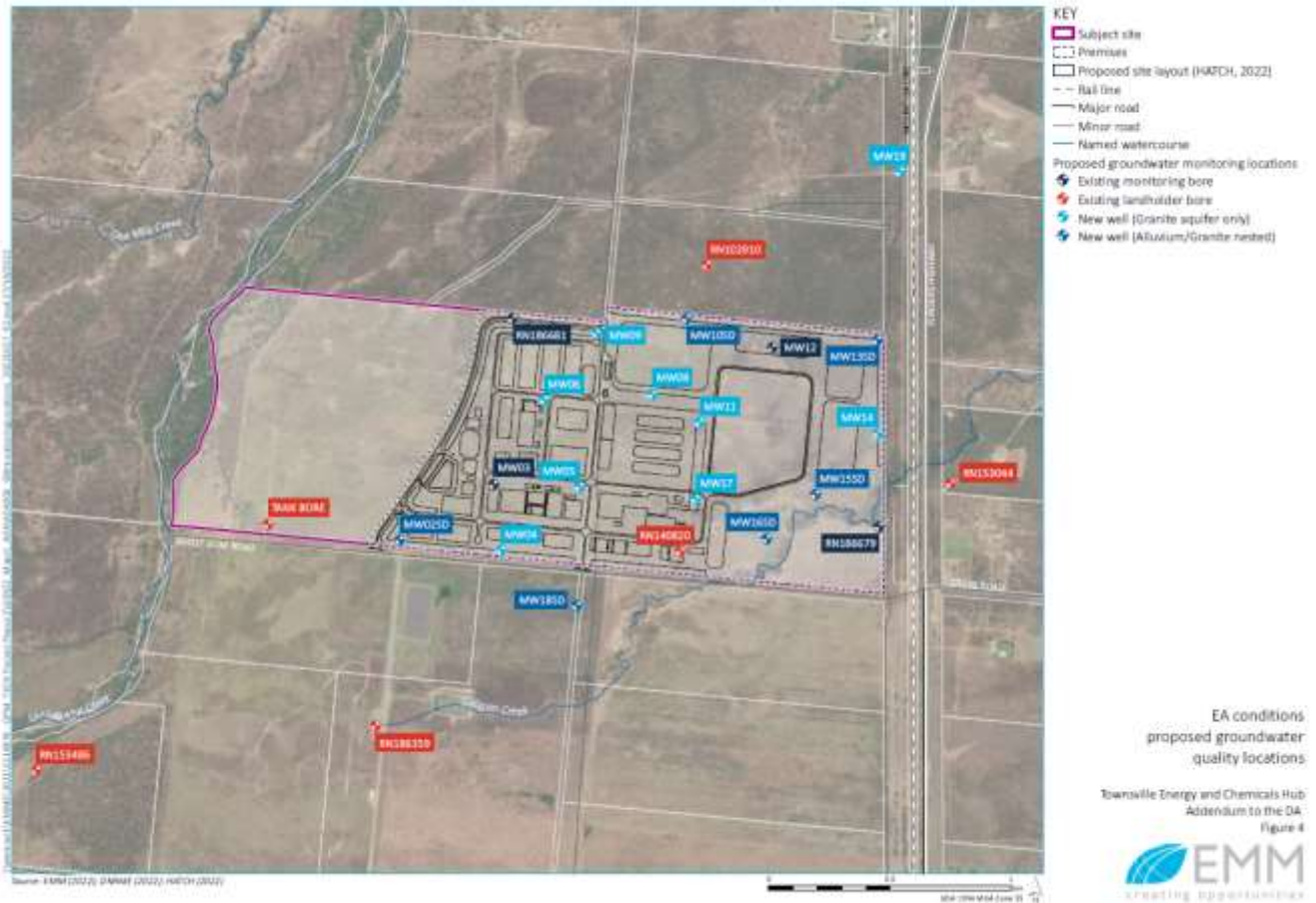


Figure I5. Proposed site layout

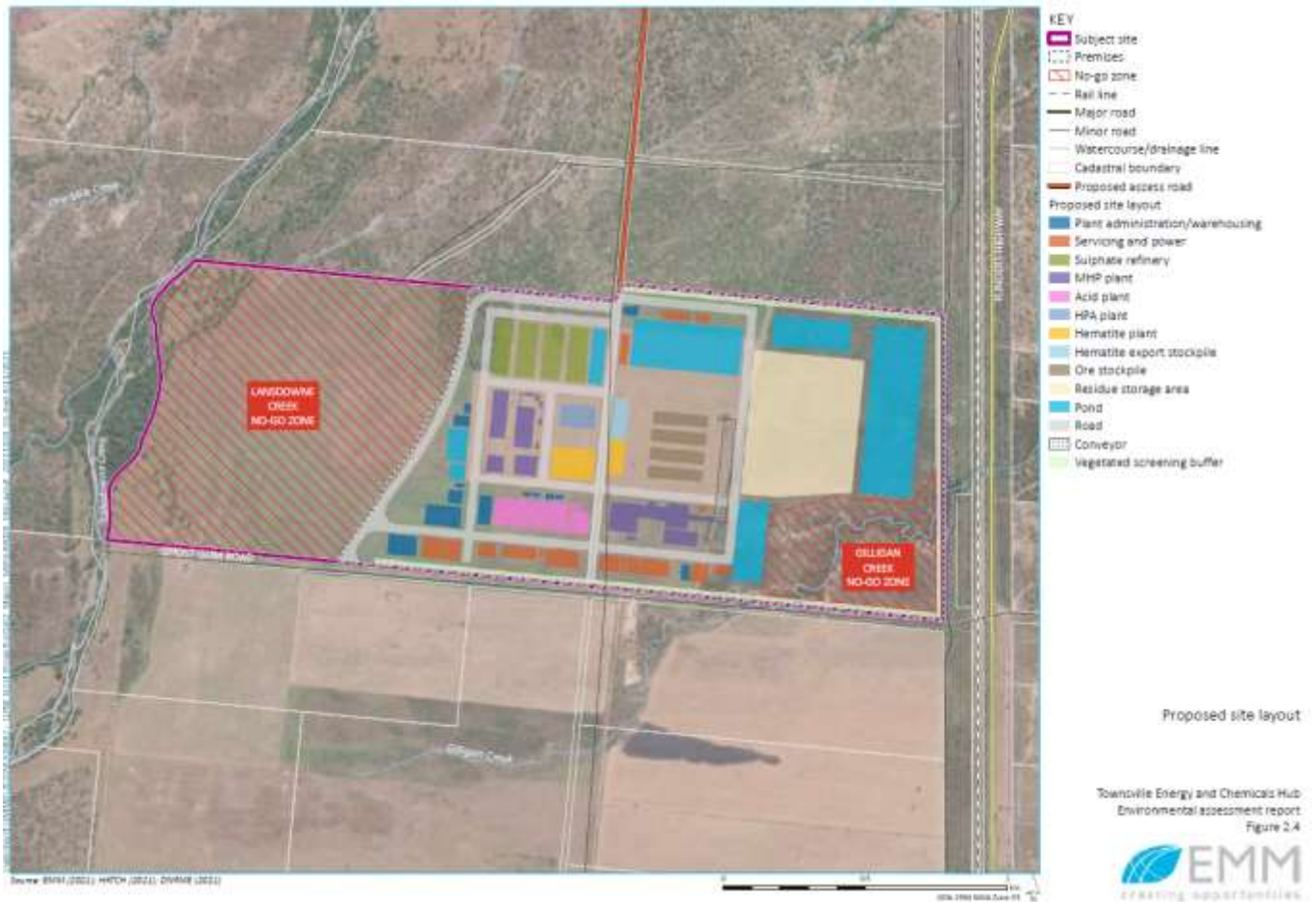


Figure I6. Proposed Great Barrier Reef offset area and coordinates



Area name	Area ID number	Decimal degree (GDA2020)	
Gilligan Creek No-go zone	GC0	146.834647 E	-19.613860 S
Gilligan Creek No-go zone	GC1	146.834648 E	-19.618337 S
Gilligan Creek No-go zone	GC2	146.834643 E	-19.618341 S
Gilligan Creek No-go zone	GC3	146.828810 E	-19.617803 S
Gilligan Creek No-go zone	GC4	146.829074 E	-19.615218 S
Gilligan Creek No-go zone	GC5	146.831233 E	-19.614671 S
Gilligan Creek No-go zone	GC6	146.833861 E	-19.614879 S
Lansdowne Creek No-go zone	LC0	146.814544 E	-19.616723 S
Lansdowne Creek No-go zone	LC1	146.814544 E	-19.616724 S
Lansdowne Creek No-go zone	LC2	146.811600 E	-19.616453 S
Lansdowne Creek No-go zone	LC3	146.806829 E	-19.616014 S
Lansdowne Creek No-go zone	LC4	146.806871 E	-19.615903 S
Lansdowne Creek No-go zone	LC5	146.806941 E	-19.615457 S
Lansdowne Creek No-go zone	LC6	146.806924 E	-19.614853 S
Lansdowne Creek No-go zone	LC7	146.806899 E	-19.614530 S
Lansdowne Creek No-go zone	LC8	146.806908 E	-19.614357 S

Lansdowne Creek No-go zone	LC9	146.807091 E	-19.614043 S
Lansdowne Creek No-go zone	LC10	146.807231 E	-19.613885 S
Lansdowne Creek No-go zone	LC11	146.807572 E	-19.613605 S
Lansdowne Creek No-go zone	LC12	146.807825 E	-19.613332 S
Lansdowne Creek No-go zone	LC13	146.807957 E	-19.613109 S
Lansdowne Creek No-go zone	LC14	146.808000 E	-19.612886 S
Lansdowne Creek No-go zone	LC15	146.808149 E	-19.612580 S
Lansdowne Creek No-go zone	LC16	146.808332 E	-19.612191 S
Lansdowne Creek No-go zone	LC17	146.808482 E	-19.611754 S
Lansdowne Creek No-go zone	LC18	146.808596 E	-19.611291 S
Lansdowne Creek No-go zone	LC19	146.808657 E	-19.610869 S
Lansdowne Creek No-go zone	LC20	146.808623 E	-19.610406 S
Lansdowne Creek No-go zone	LC21	146.808545 E	-19.610067 S
Lansdowne Creek No-go zone	LC22	146.808527 E	-19.609736 S
Lansdowne Creek No-go zone	LC23	146.808485 E	-19.609422 S
Lansdowne Creek No-go zone	LC24	146.808476 E	-19.609174 S
Lansdowne Creek No-go zone	LC25	146.808397 E	-19.608992 S
Lansdowne Creek No-go zone	LC26	146.808337 E	-19.608810 S
Lansdowne Creek No-go zone	LC27	146.808363 E	-19.608578 S
Lansdowne Creek No-go zone	LC28	146.808494 E	-19.608331 S
Lansdowne Creek No-go zone	LC29	146.808722 E	-19.608116 S
Lansdowne Creek No-go zone	LC30	146.808992 E	-19.607818 S
Lansdowne Creek No-go zone	LC31	146.809289 E	-19.607595 S
Lansdowne Creek No-go zone	LC32	146.809456 E	-19.607466 S
Lansdowne Creek No-go zone	LC33	146.809657 E	-19.607280 S
Lansdowne Creek No-go zone	LC34	146.809775 E	-19.607144 S
Lansdowne Creek No-go zone	LC35	146.816771 E	-19.607790 S
Lansdowne Creek No-go zone	LC36	146.817061 E	-19.607817 S
Lansdowne Creek No-go zone	LC37	146.819047 E	-19.608000 S
Lansdowne Creek No-go zone	LC38	146.818986 E	-19.608375 S
Lansdowne Creek No-go zone	LC39	146.818652 E	-19.610069 S
Lansdowne Creek No-go zone	LC40	146.818233 E	-19.611253 S
Lansdowne Creek No-go zone	LC41	146.817692 E	-19.611961 S
Lansdowne Creek No-go zone	LC42	146.817150 E	-19.613104 S
Lansdowne Creek No-go zone	LC43	146.816316 E	-19.614090 S
Lansdowne Creek No-go zone	LC44	146.815815 E	-19.614998 S
Lansdowne Creek No-go zone	LC45	146.815066 E	-19.615983 S
Southern offset area	SO0	146.834890 E	-19.627524 S
Southern offset area	SO1	146.834893 E	-19.631866 S
Southern offset area	SO2	146.821788 E	-19.630659 S
Southern offset area	SO3	146.822239 E	-19.626364 S
Southern offset area	SO4	146.822696 E	-19.621913 S
Southern offset area	SO5	146.823099 E	-19.617874 S
Southern offset area	SO6	146.834887 E	-19.618956 S
Southern offset area	SO7	146.834888 E	-19.623029 S

END OF CONDITIONS FOR SCHEDULE I

Schedule J – Definitions

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

"administering authority" means the chief executive of the agency administering the Environmental Protection Act 1994.

"Annual Exceedance Probability" or "AEP" the probability that at least one event in excess of a particular magnitude will occur in any given year.

"ANZECC 2000" means Australian and New Zealand Environment Conservation Council Marine and Freshwater Quality Guidelines.

"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 relative to the subject matter using the relevant protocols, standards, methods or literature.

"assessed" and "assessment" by a suitably qualified and experienced person in relation to a hazard assessment of a dam/structure, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit of the assessment:

- a) exactly what has been assessed and the precise nature of that determination;
- b) the relevant legislative, regulatory and technical criteria on which the assessment has been based;
- c) the relevant data and facts on which the assessment has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
- d) the reasoning on which the assessment has been based using the relevant data and facts, and the relevant criteria.

"certification", "certifying" or "certified" by a suitably qualified and experienced person in relation to a design plan or an annual report regarding dams/structures, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit at any time:

- a) exactly what is being certified and the precise nature of that certification;
- b) the relevant legislative, regulatory and technical criteria on which the certification has been based;
- c) the relevant data and facts on which the certification has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
- d) the reasoning on which the certification has been based using the relevant data and facts, and the relevant criteria.

"chemical" means:

- a) an agricultural chemical product or veterinary chemical product within the meaning of the Agricultural and Veterinary Chemicals Code Act 1994 (Commonwealth); or
- b) a dangerous good under the Australian Code for the Transport of Dangerous Goods by Road and Rail approved by the Australian Transport Council; or
- c) a lead hazardous substance within the meaning of the Workplace Health and Safety Regulation 1997;'
- d) a drug or poison in the Standard for the Uniform Scheduling of Drugs and Poisons prepared by the Australian Health Ministers' Advisory Council and published by the Commonwealth; or
- e) any substance used as, or intended for use as:
 - I. a pesticide, insecticide, fungicide, herbicide, rodenticide, nematocide, miticide, fumigant or related product; or
 - II. a surface active agent, including, for example, soap or related detergent; or
 - III. a paint solvent, pigment, dye, printing ink, industrial polish, adhesive, sealant, food additive, bleach, sanitiser, disinfectant, or biocide; or

- IV. a fertiliser for agricultural, horticultural or garden use; or
- V. a substance used for, or intended for use for processing or treatment of metal, pulp and paper, textile, timber, water or wastewater; or
- VI. manufacture of plastic or synthetic rubber.

"commercial place" means a workplace used as an office or for business or commercial purposes, which is not part of the activity and does not include employees accommodation or public roads. "construction" or "constructed" in relation to a dam/structure includes building a new dam/structure and modifying or lifting an existing dam/structure, but does not include investigations and testing necessary for the purpose of preparing a design plan.

"contaminant" A contaminant can be a gas, liquid or solid; or an odour; or an organism (whether alive or dead), including a virus; or energy, including noise, heat, radioactivity and electromagnetic radiation; or a combination of contaminants

"contaminated" means the substance has come into contact with a contaminant.

"dam" means a land-based structure or a void that contains, diverts or controls flowable substances, and includes any substances that are thereby contained, diverted or controlled by that land-based structure or void and associated works. A dam does not mean a fabricated or manufactured tank or container, designed and constructed to an Australian Standard that deals with strength and structural integrity of that tank or container.

"design plan" is the documentation required to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, and the criteria to be used for operating the dam. The documents must include all investigation and design reports, plans and specifications sufficient to hand to a contractor for construction, and planned decommissioning and rehabilitation outcomes; so as to address all hazard scenarios that would be identified by a properly conducted hazard assessment for the structure.

Documentation must be such that a 'suitable qualified and experienced person' could conduct an independent review without seeking further information from the designer.

"Design Storage Allowance" or "DSA" means an available volume, estimated in accordance with the Manual for Assessing Hazard Categories and Hydraulic Performance of Dams, that must be provided in a dam structure as at 1 November each year in order to prevent a discharge from that dam/structure to an annual exceedance probability (AEP) specified in that Manual.

"dissolved inorganic nitrogen" is a combination of ammonia (NH₃) nitrogen plus oxidised nitrogen (NO_x). Oxidised nitrogen is a combination of nitrite (NO₂⁻) nitrogen and nitrate (NO₃⁻) nitrogen.

"EC" means electrical conductivity.

"effluent" treated waste water released from sewage treatment plants.

"environmental authority" means environmental authority under the *Environmental Protection Act 1994*.

"environmentally relevant activity (ERA)" means an environmentally relevant activity as defined under Section 18 of the *Environmental Protection Act 1994* and listed under Schedule 2 of the *Environmental Protection Regulation 2008*.

"fine sediment" has the meaning in section 41AA of the *Environmental Protection Regulation 2008*, where the presence of fine sediment must be detected by measuring total suspended solids.

"flowable substance" means matter or a mixture of materials which can flow under any conditions potentially affecting that substance. Constituents of a flowable substance can include water, other liquids fluids or solids, or a mixture that includes water and any other liquids fluids or solids either in solution or suspension.

"flow event" means a surface water flow in a drainage feature or watercourse that occurs as a result of rainfall.

"Great Barrier Reef catchment waters" has the meaning in section 112 of the EP Act and means water in a river in the GBR catchment or a tributary of a river in the GBR catchment.

"hazard" in relation to a dam/structure as defined, means the potential for environmental harm resulting from the collapse or failure of the dam/structure to perform its primary purpose of containing, diverting or controlling flowable substances.

"hazard category" means a category, either low, significant or high, into which a dam/structure is assessed as a result of the application of tables and other criteria in the Manual for Assessing Hazard Categories and Hydraulic Performance of Dams.

"hazardous waste" means a substance, whether liquid, solid or gaseous that, if improperly treated, stored, disposed of or otherwise managed, is likely to cause environmental harm.

"holder of this environmental authority" means any person who is the holder of, or is acting under, that environmental authority.

"hydraulic performance" means the capacity of a regulated dam/structure to contain or safely pass flowable substances based on a probability (AEP) of performance failure specified for the relevant hazard category in the Manual for Assessing Hazard Categories and Hydraulic Performance of Dams.

"infrastructure" means water storage dam/structures, roads and tracks, buildings and other structures built for the purpose of the activity but does not include facilities required for the long-term management of impacts or the protection of potential resources. Such facilities include dam structures containing hazardous waste, waste rock dumps, voids, or ore stockpiles and buildings or other structures whose ownership can be transferred and which have a residual beneficial use for the next owner of the operational land or the background land owner.

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

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

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

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

"m" means metres.

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

"µg/L" means micrograms per litre.

"mg/L" means milligrams per litre.

"ML" means Megalitres.

"mL" means millilitres.

"modification" or "modifying"(see definition of construction)" "NATA" means National Association of Testing Authorities, Australia.

"non polluting" means having no adverse impacts upon the receiving environment.

"noxious" means harmful or injurious to health or physical well being.

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

"offset measure" has the meaning in section 41AA of the Environmental Protection Regulation 2019, and means, for a relevant activity, are activities carried out to reduce the load of fine sediment, or dissolved inorganic nitrogen, in Great Barrier Reef catchment waters.

"process water" means water used or produced during the development activities.

"protected area" means —

- a) a protected area under the Nature Conservation Act 1992; or

- b) a marine park under the Marine Parks Act 1992; or
- c) a World Heritage Area.

"receiving environment" means all groundwater, surface water, land, and sediments that are not disturbed areas authorised by this environmental authority.

"receiving waters" means all groundwater and surface water that are not disturbed areas authorised by this environmental authority.

"reference site" (or analogue site) may reflect the original location, adjacent area or another area where rehabilitation success has been completed for a similar biodiversity. Details of the reference site may be as photographs, computer generated images and vegetation models etc.

"regulated structure" means any regulated dam or levee.

"regulated waste" means non-domestic waste mentioned in schedule 7 of the Environmental Protection Regulation 1998 (whether or not it has been treated or immobilised), and includes:

- a) for an element —any chemical compound containing the element; and
- b) anything that has contained the waste.

"rehabilitation" 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.

"release event" means a surface water discharge from water storages or contaminated areas on the licensed place.

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

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

"sensitive place" means;

- a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- b) a motel, hotel or hostel; or
- c) an educational institution; or
- d) a medical centre or hospital; or
- e) a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
- f) a public park or gardens.

"significant disturbance" - includes land;

- a) if it is contaminated land; or
- b) it has been disturbed and human intervention is needed to rehabilitate it;
- c) to a state required under the relevant environmental authority; or
- d) if the environmental authority does not require the land to be rehabilitated to a particular state — to its state immediately before the disturbance.

Some examples of disturbed land include:

- a) areas where soil has been compacted, removed, covered, exposed or stockpiled;
- b) areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation and topsoil)
- c) areas where land use suitability or capability has been diminished;
- d) areas within a watercourse, waterway, wetland or lake where the activity occur;
- e) areas submerged by tailings or hazardous contaminant storage and dam/structure walls in all cases;
- f) areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges,

culverts, dam/structures, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after the activity have ceased; or

- g) areas where land has been contaminated and a suitability statement has not been issued.

However, the following areas are not included:

- a) areas previously significantly disturbed which have achieved the rehabilitation outcomes;
- b) by agreement with the administering authority, areas previously significantly disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the EA holder (such as climatic conditions);
- c) areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dam/structures, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be left by agreement with the landowner. The agreement to leave permanent infrastructure must be recorded in the Landowner Agreement and lodged with the administering authority;
- d) disturbances that pre-existed the grant of the tenure unless those areas are disturbed during the term of the tenure.

"structure" means dam or levee.

"Suitably qualified and experienced person" in relation to regulated structures means a person who is a Registered Professional Engineer of Queensland (RPEQ) under the provisions of the Professional Engineers Act 2002, and has demonstrated competency and relevant experience:

- a) for regulated dam/structures, an RPEQ who is a civil engineer with the required qualifications in dam/structure safety and dam/structure design.
- b) for regulated levees, an RPEQ who is a civil engineer with the required qualifications in the design of flood protection embankments.

Note: It is permissible that a suitably qualified and experienced person obtain subsidiary certification from an RPEQ who has demonstrated competence and relevant experience in either geomechanics, hydraulic design or engineering hydrology.

"system design plan" means a plan that manages an integrated containment system that shares the required DSA volume across the integrated containment system.

"trivial harm" means environmental harm which is not material or serious environmental harm and will not cause actual or potential loss or damage to property of an amount of, or amounts totalling more than \$5,000. " $\mu\text{S}/\text{cm}$ " means micro siemens per centimetre.

"waste water" means used water from the activity, process water or contaminated storm water.

"watercourse" means a river, creek or stream in which water flows permanently or intermittently in a visibly defined channel (natural, artificial or artificially improved) with:

- a) continuous bed and banks;
- b) an extended period of flow for some months after rain ceases, and
- c) an adequacy of flow that sustains basic ecological processes and maintains biodiversity.

"water quality" means the chemical, physical and biological condition of water.

"water quality offset policy" has the meaning in section 41AA of the Environmental Protection Regulation 2019 and means the document called 'Point source water quality offsets policy 2019' made in November 2019 and published on the department's website.

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

"wet season" means the time of year, covering one or more months, when most of the average annual rainfall in a region occurs. For the purposes of DSA determination this time of year is deemed to extend from 1 November in one year to 31 May in the following year inclusive.

END OF DEFINITIONS FOR SCHEDULE J

END OF ENVIRONMENTAL AUTHORITY