

# Permit

**Environmental Protection Act 1994**

**Environmental authority EA0002016**

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

**Environmental authority number: EA0002016**

**Environmental authority takes effect on 16-11-2020**

**Environmental authority holder(s)**

| Name(s)                 | Registered address                             |
|-------------------------|------------------------------------------------|
| RAVENSWOOD GOLD PTY LTD | Level 2, 150 Collins Street MELBOURNE VIC 3000 |

## Environmentally relevant activity and location details

| Environmentally relevant activity/activities                                                                                                                               | Location(s)        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t | LOT 18 on SP310550 |
| ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t                          | LOT 382 on OL77    |
| ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t | LOT 400 on OL88    |
| ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t                          | LOT 1 on MPH26009  |
| ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t | LOT 382 on OL77    |

## Environmental authority

| Environmentally relevant activity/activities                                                                                                                               | Location(s)        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t                          | LOT 19 on SP266614 |
| ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t | LOT 1 on MPH26009  |
| ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t | LOT 19 on SP266614 |
| ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t                          | LOT 17 on SP266614 |
| ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t                          | LOT 18 on SP310550 |
| ERA 16 - Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t | LOT 17 on SP266614 |
| ERA 16 - Extraction and Screening 3: Screening, in a year, the following quantity of material (b) more than 100,000t but not more than 1,000,000t                          | LOT 400 on OL88    |

**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](http://www.qld.gov.au), using the search term 'duty to notify'.

#### Take effect

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

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

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

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

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

## Environmental authority

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

**Date issued: 16 November 2020**

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

Phone: 1300 130 372  
Email: [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

## Environmental authority

**Obligations under the *Environmental Protection Act 1994***

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

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

**Conditions of environmental authority**

| Agency interest: General |                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Condition number         | Condition                                                                                                                                                                                                                                                                                                                                                                                                          |
| G1                       | <p><b>Activities</b> under this environmental authority must be conducted in accordance with the following limitations:</p> <ol style="list-style-type: none"> <li>1. Extraction must only occur within the existing stockpile locations identified in Appendix 1.</li> <li>2. Only <b>low risk waste rock</b> may be extracted as part of the activity.</li> </ol>                                                |
| G2                       | All reasonable and practicable <b>measures</b> must be taken to prevent or minimise environmental harm caused by the <b>activities</b> .                                                                                                                                                                                                                                                                           |
| G3                       | Any breach of a condition of this environmental authority must be reported to the <b>administering authority</b> as soon as practicable within 24 hours of becoming aware of the breach. <b>Records</b> must be kept including full details of the breach and any subsequent actions taken.                                                                                                                        |
| G4                       | Other than as permitted by this environmental authority, the <b>release of a contaminant into the environment</b> must not occur.                                                                                                                                                                                                                                                                                  |
| G5                       | Environmental monitoring results must be kept until surrender of this environmental authority. All other information and <b>records</b> that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. All information and <b>records</b> required by the conditions of this environmental authority must be provided to the <b>administering authority, or</b> |

## Environmental authority

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|                               | <b>nominated delegate</b> upon request, within the required timeframe and in the specified format.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| G6                            | An <b>appropriately qualified person(s)</b> must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| G7                            | All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities ( <b>NATA</b> ) certification, or an equivalent certification, for such analyses. The only exception to this condition is the in situ monitoring of turbidity, pH, and electrical conductivity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| G8                            | When required by the <b>administering authority</b> , monitoring must be undertaken in the manner prescribed by the <b>administering authority</b> , to investigate a complaint of <b>environmental nuisance</b> arising from the <b>activity</b> . The monitoring results must be provided within 10 business days to the <b>administering authority</b> upon its request.                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| G9                            | The <b>activity</b> must be undertaken in accordance with written procedures that: <ol style="list-style-type: none"> <li>1. identify potential risks to the environment from the <b>activity</b> during routine operations, closure and an emergency</li> <li>2. establish and maintain control <b>measures</b> that minimise the potential for environmental harm</li> <li>3. ensure plant, equipment and <b>measures</b> are maintained in a proper and effective condition</li> <li>4. ensure plant, equipment and <b>measures</b> are operated in a proper and effective manner</li> <li>5. ensure that staff are trained and aware of their obligations under the <i>Environmental Protection Act 1994</i></li> <li>6. ensure that reviews of environmental performance are undertaken at least annually.</li> </ol> |
| G10                           | Chemicals and fuels in containers of greater than 15 litres must be stored within a <b>secondary containment system</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Agency interest: Waste</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Condition number</b>       | <b>Condition</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| W1                            | All waste generated in carrying out the <b>activity</b> must be reused, recycled or removed to a facility that can lawfully accept the waste.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Agency interest: Air</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Condition</b>              | <b>Condition</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## Environmental authority

| number |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| A1     | Other than as permitted within this environmental authority, odours or airborne contaminants must not cause <b>environmental nuisance</b> to any <b>sensitive place</b> or <b>commercial place</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| A2     | <p>Dust and particulate matter emissions must not exceed the following concentrations at any <b>sensitive place</b> or <b>commercial place</b>:</p> <ul style="list-style-type: none"> <li>a) Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with the most recent version of Australian Standard AS3580.10.1 Methods for sampling and analysis of ambient air—Determination of particulate matter—Deposited matter – Gravimetric method.</li> <li>b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometres (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24-hour averaging time, for no more than five exceedances recorded each year, when monitored in accordance with the most recent version of either: <ul style="list-style-type: none"> <li>a. Australian Standard AS3580.9.6 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM10 high volume sampler with size-selective inlet — Gravimetric method, or</li> <li>b. Australian Standard AS3580.9.9 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM10 low volume sampler—Gravimetric method.</li> <li>c. Standards Australia AS3580.9.8 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter — PM10 continuous direct mass method using a tapered element oscillating microbalance analyser, or</li> <li>d. Standards Australia AS3580.9.11 Methods for sampling and analysis of ambient air—Determination of suspended matter PM10 beta attenuation monitors.</li> </ul> </li> <li>c) A concentration of particulate matter with an aerodynamic diameter of less than 2.5 micrometres (PM2.5) suspended in the atmosphere of 25 micrograms per cubic metre over a 24-hour averaging time, when monitored in accordance with the most recent version of AS/NZS3580.9.10 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM2.5 low volume sampler—Gravimetric method.</li> <li>d) A concentration of particulate matter suspended in the atmosphere of 90 micrograms per cubic metre over a 1 year averaging time, when monitored in accordance with the most recent version of AS/NZS3580.9.3:2003 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—Total suspended particulate matter (TSP)—High volume sampler gravimetric method.</li> </ul> |
| A3     | The environmental authority holder must implement and maintain a Dust Management Plan which includes details of dust abatement measures to ensure compliance with condition A1 and condition A2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## Environmental authority

| Agency interest: Land     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| Condition number          | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| L1                        | Other than as permitted within this environmental authority, contaminants must not be released to land.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| L2                        | Treatment and management of acid sulfate soils must comply with the guidance provided in the current edition of the Queensland Acid Sulfate Soil Technical Manual.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| L3                        | <p>All waste rock and tailings must be:</p> <ul style="list-style-type: none"> <li>• Geochemically characterised and disposed of in a manner that minimises the potential generation and/or release of contaminants to the receiving environment; and</li> <li>• Sampled and monitored in accordance with the most current version of the Global Acid Rock Drainage (GARD) Guide.</li> </ul> <p>Where the geochemical characteristics of waste rock is uncertain, this material must be treated as potentially acid forming until demonstrated otherwise.</p> <p>Details pertaining to meeting the requirements of this condition must be recorded and retained until this environmental authority is surrendered.</p>                                     |
| L4                        | The environmental authority holder must implement and maintain a Waste Rock and Tailings Disposal Plan which includes details of waste rock and tailings management to ensure compliance with condition L3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| L5                        | <p><b>Land</b> that has been disturbed for <b>activities</b> conducted under this environmental authority must be rehabilitated in a manner such that:</p> <ol style="list-style-type: none"> <li>1. suitable native species of vegetation for the location are established and sustained for earthen surfaces;</li> <li>2. potential for erosion is minimised;</li> <li>3. the quality of water released from the site, including seepage, does not cause environmental harm;</li> <li>4. potential for environmental nuisance caused by dust is minimised;</li> <li>5. the water quality of any residual water body does not have potential to cause environmental harm;</li> <li>6. the final landform is stable and protects public safety.</li> </ol> |
| L6                        | Rehabilitation of <b>disturbed areas</b> required under condition L3 must take place progressively as works are staged and new extraction areas are commenced.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Agency interest: Acoustic |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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| Condition number                  | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                  |                                              |                                               |  |  |                                      |  |                          |  |                                              |                                                  |                                              |                                               |                   |                 |                 |                 |                 |                   |   |   |                 |   |              |                 |                 |                 |                 |             |                 |                 |                 |                 |
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| N1                                | Other than as permitted within this environmental authority, noise generated by the activity must not cause <b>environmental nuisance</b> to any <b>sensitive place</b> or <b>commercial place</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                  |                                              |                                               |  |  |                                      |  |                          |  |                                              |                                                  |                                              |                                               |                   |                 |                 |                 |                 |                   |   |   |                 |   |              |                 |                 |                 |                 |             |                 |                 |                 |                 |
| N2                                | <p>Noise from the <b>activity</b> must not exceed the levels identified in <i>Table 1 - Noise limits</i> when measured in accordance with the associated monitoring requirements.</p> <p><b>Table 1 - Noise limits</b></p> <table><tr><th rowspan="3">Noise level dB(A)<br/>measured as:</th><th colspan="4">Noise level criteria</th></tr><tr><th colspan="2">Daytime and evening<br/>(7am to 10pm)</th><th colspan="2">Night time (10pm to 7am)</th></tr><tr><th>Sensitive or<br/>commercial<br/>place (indoor)</th><th>Sensitive or<br/>commercial<br/>place<br/>(outdoor)</th><th>Sensitive or<br/>commercial<br/>place (indoor)</th><th>Sensitive or<br/>commercial<br/>place (outdoor)</th></tr><tr><td>LAeq, adj, 1 hour</td><td>35<sup>1</sup></td><td>44<sup>2</sup></td><td>30<sup>1</sup></td><td>39<sup>2</sup></td></tr><tr><td>LAm<sub>ax</sub></td><td>-</td><td>-</td><td>42<sup>2</sup></td><td>-</td></tr><tr><td>LA10,adj,1hr</td><td>40<sup>1</sup></td><td>49<sup>2</sup></td><td>35<sup>1</sup></td><td>44<sup>2</sup></td></tr><tr><td>LA1,adj,1hr</td><td>45<sup>1</sup></td><td>54<sup>2</sup></td><td>40<sup>1</sup></td><td>49<sup>2</sup></td></tr></table> <p><b>Notes:</b></p> <ol style="list-style-type: none"><li>Based on Schedule 1 of the <i>Environmental Protection (Noise) Policy 2019</i>.</li><li>Site specific number proposed by the environmental authority holder.</li></ol> <p><b>Associated monitoring requirements</b></p> <ol style="list-style-type: none"><li>All monitoring devices must be calibrated and maintained according to the manufacturer's instruction manual.</li><li>Any monitoring must be in accordance with the most recent version of the <b>administering authority's Noise Measurement Manual</b>.</li><li>Any monitoring of noise emissions from the <b>activity</b> must be undertaken when the <b>activity</b> is in operation.</li></ol> | Noise level dB(A)<br>measured as:                | Noise level criteria                         |                                               |  |  | Daytime and evening<br>(7am to 10pm) |  | Night time (10pm to 7am) |  | Sensitive or<br>commercial<br>place (indoor) | Sensitive or<br>commercial<br>place<br>(outdoor) | Sensitive or<br>commercial<br>place (indoor) | Sensitive or<br>commercial<br>place (outdoor) | LAeq, adj, 1 hour | 35 <sup>1</sup> | 44 <sup>2</sup> | 30 <sup>1</sup> | 39 <sup>2</sup> | LAm <sub>ax</sub> | - | - | 42 <sup>2</sup> | - | LA10,adj,1hr | 40 <sup>1</sup> | 49 <sup>2</sup> | 35 <sup>1</sup> | 44 <sup>2</sup> | LA1,adj,1hr | 45 <sup>1</sup> | 54 <sup>2</sup> | 40 <sup>1</sup> | 49 <sup>2</sup> |
| Noise level dB(A)<br>measured as: | Noise level criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                  |                                              |                                               |  |  |                                      |  |                          |  |                                              |                                                  |                                              |                                               |                   |                 |                 |                 |                 |                   |   |   |                 |   |              |                 |                 |                 |                 |             |                 |                 |                 |                 |
|                                   | Daytime and evening<br>(7am to 10pm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                  | Night time (10pm to 7am)                     |                                               |  |  |                                      |  |                          |  |                                              |                                                  |                                              |                                               |                   |                 |                 |                 |                 |                   |   |   |                 |   |              |                 |                 |                 |                 |             |                 |                 |                 |                 |
|                                   | Sensitive or<br>commercial<br>place (indoor)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Sensitive or<br>commercial<br>place<br>(outdoor) | Sensitive or<br>commercial<br>place (indoor) | Sensitive or<br>commercial<br>place (outdoor) |  |  |                                      |  |                          |  |                                              |                                                  |                                              |                                               |                   |                 |                 |                 |                 |                   |   |   |                 |   |              |                 |                 |                 |                 |             |                 |                 |                 |                 |
| LAeq, adj, 1 hour                 | 35 <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 44 <sup>2</sup>                                  | 30 <sup>1</sup>                              | 39 <sup>2</sup>                               |  |  |                                      |  |                          |  |                                              |                                                  |                                              |                                               |                   |                 |                 |                 |                 |                   |   |   |                 |   |              |                 |                 |                 |                 |             |                 |                 |                 |                 |
| LAm <sub>ax</sub>                 | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -                                                | 42 <sup>2</sup>                              | -                                             |  |  |                                      |  |                          |  |                                              |                                                  |                                              |                                               |                   |                 |                 |                 |                 |                   |   |   |                 |   |              |                 |                 |                 |                 |             |                 |                 |                 |                 |
| LA10,adj,1hr                      | 40 <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 49 <sup>2</sup>                                  | 35 <sup>1</sup>                              | 44 <sup>2</sup>                               |  |  |                                      |  |                          |  |                                              |                                                  |                                              |                                               |                   |                 |                 |                 |                 |                   |   |   |                 |   |              |                 |                 |                 |                 |             |                 |                 |                 |                 |
| LA1,adj,1hr                       | 45 <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 54 <sup>2</sup>                                  | 40 <sup>1</sup>                              | 49 <sup>2</sup>                               |  |  |                                      |  |                          |  |                                              |                                                  |                                              |                                               |                   |                 |                 |                 |                 |                   |   |   |                 |   |              |                 |                 |                 |                 |             |                 |                 |                 |                 |
| N3                                | When requested by the administering authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                  |                                              |                                               |  |  |                                      |  |                          |  |                                              |                                                  |                                              |                                               |                   |                 |                 |                 |                 |                   |   |   |                 |   |              |                 |                 |                 |                 |             |                 |                 |                 |                 |

## Environmental authority

|                           | opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, against the noise limits specified in <i>Table 1 - Noise limits</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |                                             |                                                                                                                       |                                               |                           |                                  |  |                              |                        |                     |     |        |         |                               |                                                                       |     |     |        |         |                                            |                                                                                                                       |                                               |     |        |         |                                             |
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| N4                        | Noise monitoring and recording must include the following descriptor characteristics and matters:<br>a) LAN <sub>1</sub> T (where N equals the statistical levels of 1, 10 and 90 and T = 15 mins);<br>b) Background noise LA90;<br>c) The level and frequency of occurrence of impulsive or tonal noise and any adjustment and penalties to statistical levels;<br>d) Atmospheric conditions including temperature, relative humidity and wind speed and directions;<br>e) Effects due to any extraneous factors such as traffic noise;<br>f) Location, date and time of monitoring;<br>g) If the complaint concerns low frequency noise, Max LpLIN <sub>1</sub> T and one third octave band measurements in dB(LIN) for centre frequencies in the 10 — 200 Hz range.                                                                                                                                                                                                                                                                                                                                                               |         |                                             |                                                                                                                       |                                               |                           |                                  |  |                              |                        |                     |     |        |         |                               |                                                                       |     |     |        |         |                                            |                                                                                                                       |                                               |     |        |         |                                             |
| Agency interest: Water    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |         |                                             |                                                                                                                       |                                               |                           |                                  |  |                              |                        |                     |     |        |         |                               |                                                                       |     |     |        |         |                                            |                                                                                                                       |                                               |     |        |         |                                             |
| Condition number          | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |         |                                             |                                                                                                                       |                                               |                           |                                  |  |                              |                        |                     |     |        |         |                               |                                                                       |     |     |        |         |                                            |                                                                                                                       |                                               |     |        |         |                                             |
| WA1                       | Other than as permitted within this environmental authority, contaminants must not be released to any <b>waters</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |                                             |                                                                                                                       |                                               |                           |                                  |  |                              |                        |                     |     |        |         |                               |                                                                       |     |     |        |         |                                            |                                                                                                                       |                                               |     |        |         |                                             |
| WA2                       | <p>All contaminants released to surface <b>waters</b> must be in accordance with <i>Table 2 – Authorised contaminant release points</i> and <i>Table 3 - Contaminant release limits</i> and the associated monitoring requirements.</p> <p><b>Table 2 – Authorised contaminant release points</b></p> <table><tr><th>Release Point Description</th><th colspan="2">Location (GDA94 decimal degrees)</th><th>Monitoring Point Description</th><th>Criteria for discharge</th><th>Recording Frequency</th></tr><tr><td>RP1</td><td>489650</td><td>7778179</td><td>Reverse Osmosis Permeate Tank</td><td>Maximum daily discharge of 4ML/day; and maximum discharge of 46L/sec.</td><td>N/A</td></tr><tr><td>RP2</td><td>491344</td><td>7776211</td><td>Waste Rock Dump East Sediment Dam Spillway</td><td rowspan="2">Background natural flow (upstream of the release point) must be at least twenty (20) times the volume of the release.</td><td rowspan="2">Continuously during release events in m³/sec.</td></tr><tr><td>RP3</td><td>490947</td><td>7775480</td><td>Waste Rock Dump South Sediment Dam Spillway</td></tr></table> |         |                                             |                                                                                                                       |                                               | Release Point Description | Location (GDA94 decimal degrees) |  | Monitoring Point Description | Criteria for discharge | Recording Frequency | RP1 | 489650 | 7778179 | Reverse Osmosis Permeate Tank | Maximum daily discharge of 4ML/day; and maximum discharge of 46L/sec. | N/A | RP2 | 491344 | 7776211 | Waste Rock Dump East Sediment Dam Spillway | Background natural flow (upstream of the release point) must be at least twenty (20) times the volume of the release. | Continuously during release events in m³/sec. | RP3 | 490947 | 7775480 | Waste Rock Dump South Sediment Dam Spillway |
| Release Point Description | Location (GDA94 decimal degrees)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |         | Monitoring Point Description                | Criteria for discharge                                                                                                | Recording Frequency                           |                           |                                  |  |                              |                        |                     |     |        |         |                               |                                                                       |     |     |        |         |                                            |                                                                                                                       |                                               |     |        |         |                                             |
| RP1                       | 489650                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 7778179 | Reverse Osmosis Permeate Tank               | Maximum daily discharge of 4ML/day; and maximum discharge of 46L/sec.                                                 | N/A                                           |                           |                                  |  |                              |                        |                     |     |        |         |                               |                                                                       |     |     |        |         |                                            |                                                                                                                       |                                               |     |        |         |                                             |
| RP2                       | 491344                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 7776211 | Waste Rock Dump East Sediment Dam Spillway  | Background natural flow (upstream of the release point) must be at least twenty (20) times the volume of the release. | Continuously during release events in m³/sec. |                           |                                  |  |                              |                        |                     |     |        |         |                               |                                                                       |     |     |        |         |                                            |                                                                                                                       |                                               |     |        |         |                                             |
| RP3                       | 490947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 7775480 | Waste Rock Dump South Sediment Dam Spillway |                                                                                                                       |                                               |                           |                                  |  |                              |                        |                     |     |        |         |                               |                                                                       |     |     |        |         |                                            |                                                                                                                       |                                               |     |        |         |                                             |

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|     |        |         |                                                        |  |  |
|-----|--------|---------|--------------------------------------------------------|--|--|
| RP4 | 489641 | 7775512 | Processing Pond<br>Sediment Dam<br>Spillway            |  |  |
| RP5 | 490268 | 7776077 | Mining East<br>Sediment Dam<br>Spillway                |  |  |
| RP6 | 490649 | 7775244 | Nolan's East<br>Sediment Dam<br>Spillway               |  |  |
| RP7 | 489895 | 7775300 | Nolan's West<br>Sediment Dam<br>Spillway               |  |  |
| RP8 | 490383 | 777588  | Dry Stack Tailings<br>Storage Facility<br>Dam Spillway |  |  |

Table 3 – Contaminant release limits

| Quality characteristic (units)                      | Limit for RP1 | Limit for RP2, RP3, RP4, RP5, RP6, RP7, RP8 | Limit Type | Minimum Monitoring Frequency                                                                           |
|-----------------------------------------------------|---------------|---------------------------------------------|------------|--------------------------------------------------------------------------------------------------------|
| Electrical conductivity ( $\mu\text{S}/\text{cm}$ ) | 271           | 800                                         | Maximum    | Daily during release (the first sample must be taken within two (2) hours of commencement of release). |
| pH                                                  | 6.5-8.0       | 6.5-8.5                                     | Range      |                                                                                                        |
| Turbidity (NTU)                                     | 25            | 25                                          | Maximum    |                                                                                                        |
| Dissolved Oxygen (mg/L)                             | 2             | 2                                           | Minimum    |                                                                                                        |

## Associated monitoring requirements

1. Monitoring location and release points must be situated and maintained in accordance with Appendix 1 attached.
2. Monitoring must be in accordance with the methods prescribed in the current edition of the administering authority's *Monitoring and Sampling Manual*.
3. Water and sediment samples must be representative of the general condition of the water body or sediments.
4. All determinations must employ analytical practical quantification limits of sufficient sensitivity to

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|     |                                                                                                                                                                                                                                                                                                                                                                         |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | <p>enable comparisons to be made against water quality objectives/triggers/limits relevant to the particular water or sediment quality characteristic.</p> <p>5. Monitoring must be undertaken during a release and at the frequency stated.</p> <p>6. All monitoring devices must be calibrated and maintained according to the manufacturer's instruction manual.</p> |
| WA3 | The release to <b>waters</b> permitted under WA2 must not contain any other properties at a concentration capable of causing environmental harm.                                                                                                                                                                                                                        |
| WA4 | The release to <b>waters</b> permitted under WA2 must not produce any slick or other visible evidence of oil or grease, scum, litter or other visually objectionable matter.                                                                                                                                                                                            |
| WA5 | <b>Stormwater that is not contaminated by the activity</b> must be diverted away from areas where it may become contaminated by the activity. Stormwater that is contaminated by the activity must be directed to a treatment system.                                                                                                                                   |

## Definitions

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

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

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

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

**Airblast overpressure** is the energy transmitted from the blast site within the atmosphere in the form of pressure waves. As these waves pass a given position, the pressure of the air rises very rapidly then falls more slowly then returns to the ambient value after a number of oscillations. The pressure wave consists of both audible (noise) and inaudible (concussion) energy. The maximum excess pressure in this wave is known as the peak air overpressure, generally measured in decibels using the linear frequency-weighting.

**Appropriately qualified person(s)** means a person or persons who has professional qualifications, training, skills or experience relevant to the EA requirement and can give authoritative assessment, advice and analysis in relation to the EA requirements using the relevant protocols, standards, methods or literature.

**Background** means noise, measured in the absence of the noise under investigation, as  $L_{A90, adj, T}$  being the A-weighted sound pressure level exceeded for 90 per cent of the time period of not less than 15 minutes, using Fast response.

**Blasting** is the use of explosives to fracture:

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

**Commercial place** means a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

**Disturbed areas** includes areas:

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

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

**Environmental value –**

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

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

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

**$L_{Aeq, adj, T}$**  means the adjusted A weighted equivalent continuous sound pressure level measured on fast response, adjusted for tonality and impulsiveness, during the time period T, where T is measured for a period no less than 15 minutes when the **activity** is causing a steady state noise, and no shorter than one hour when the approved **activity** is causing an intermittent noise.

**Low risk waste rock** is rock that representative sampling shows is:

- Non-acid forming, characterised to have an average total sulphur concentration  $\leq 0.2\%$ ; and
- Compliant with the National Environment Protection (Assessment of Site Contamination) Measure 1999 Health investigation levels for the intended use and final location; and
- If applicable, fit for the intended use in a marine environment as demonstrated through Toxicity Characteristic Leaching Procedure (TCLP) testing.

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

**Measures** has the broadest interpretation and includes:

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

**NATA** means National Association of Testing Authorities.

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

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

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

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

**Priority ports**

Each of the following ports is a priority port as per the *Sustainable Ports Development Act 2015*—

- (a) Port of Abbot Point;
- (b) Port of Gladstone;
- (c) the ports of Hay Point and Mackay;
- (d) Port of Townsville.

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

**Release of a contaminant into the environment** means to:

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

**Restricted area** means an area that is within the Great Barrier Reef World Heritage Area but outside the Commonwealth marine park.

Note—See the Commonwealth *Marine Park Act* for prohibitions relating to the Commonwealth marine park and Great Barrier Reef Region under that Act.

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

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

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

**Stormwater that is not contaminated by the activity** includes stormwater runoff from external or undisturbed catchments.

**Substantial low frequency noise** means a noise emission that has an unbalanced frequency spectrum shown in a one-third octave band measurement, with a predominant component within the frequency range 10 to

200 Hz. It includes any noise emission likely to cause an overall sound pressure level at a sensitive place exceeding 55 dB(Z).

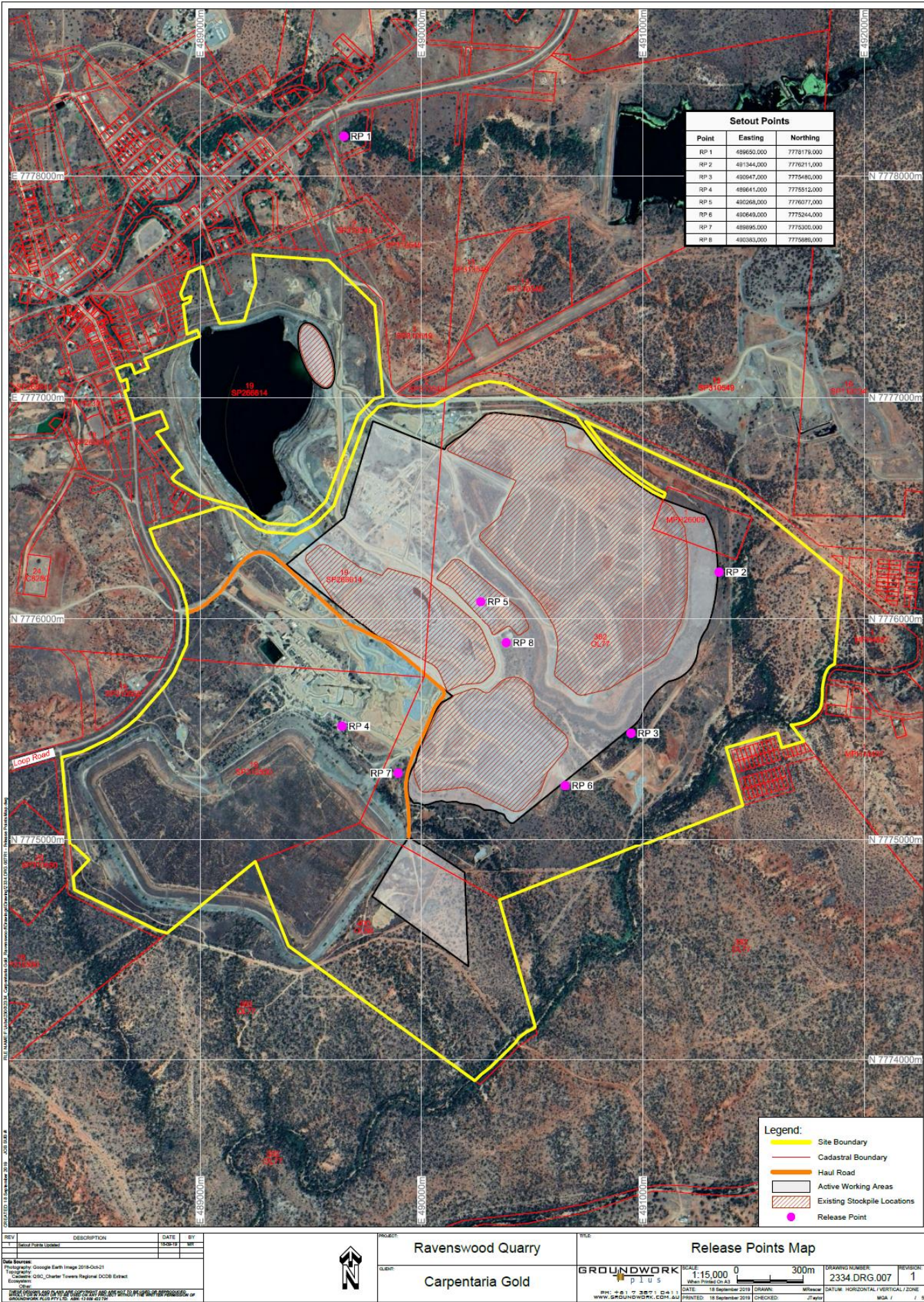
**Tidal land** means land that is submerged at any time by tidal water.

**You** means the holder of the environmental authority.

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

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

Appendix 1 – Authorised Water Release Points



END OF ENVIRONMENTAL AUTHORITY