Permit

Environmental Protection Act 1994

Environmental authority P-EA-100205095

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

Environmental authority number: P-EA-100205095

Environmental authority takes effect on 18 January 2024.

The anniversary date of this environmental authority is 14 December each year.

Environmental authority holder(s)

Name(s)	Registered address
Mainstream Aquaculture Queensland Pty Ltd ACN 625 858 693	73-79 Lock Ave WERRIBEE VIC 3030 Australia

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
ERA 1 – Aquaculture 1(b) – Cultivating or holding crustaceans in enclosures that are on land and have a total area of more than 10ha but not more than 100ha.	Lot 204 on Plan SP264765
ERA 1 – Aquaculture 2(b) – Cultivating or holding marine, estuarine or freshwater organisms, other than crustaceans, in enclosures that are on land and have a total area of more than 10ha but not more than 100ha	Lot 204 on Plan SP264765
ERA 27 – Seafood Processing - Processing, in a year, 500t or more of seafood or seafood products.	Lot 204 on Plan SP264765

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.

Queensland Government

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

Mobile and temporary activities

If you operate a mobile and temporary environmentally relevant activity (ERA), other than regulated waste transport, you are required to maintain a work diary. You must:

- use the approved form for a work diary (ESR/2015/1696);
- keep the work diary records for 2 years after the last entry;
- inform the administering authority within 7 days of the work diary being lost or stolen;
- record the information required in the work diary for each location within 1 day of leaving the location.

Contaminated land

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

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

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

Take effect

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

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority – on the nominated day; or

b) if the authority states a day or an event for it to take effect – on the stated day or when the stated event happens; or

c) otherwise – on the day the authority is issued.

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

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

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

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

Amanda Gray	18/1/2024
Signature	Date

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

Enquiries:
Coastal and Marine Assessment
Department of Environment and Science

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

Obligations under the *Environmental Protection Act 1994*

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

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

Other permits required

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

Development Approval

This permit is not a development approval under the *Planning Act 2016*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval. If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. Please contact the Department of Environment and Science to ensure that you have the most current version of the environmental authority relating to this site.

Conditions of environmental authority

<table>
<tr><th colspan="2">General</th></tr>
<tr><td>G1A</td><td>If any condition, or a requirement of any condition, of this authority is not consistent with any part of the Point Source Water Quality Offsets Policy 2019, as updated from time to time, then the condition, or requirement of the condition, prevails to the extent of any inconsistency.</td></tr>
<tr><td>G1</td><td>Activities conducted under this environmental authority must be conducted in accordance with the following:
<table>
<tr><th>Maximum number of production ponds</th><th>Maximum combined area of production ponds (ha)</th></tr>
<tr><td>49</td><td>62</td></tr>
</table></td></tr>
<tr><td>G2</td><td>Any contravention of a condition of this environmental authority must be reported to the administering authority as soon as practicable, and no more than 24 hours after becoming aware of the contravention.</td></tr>
<tr><td>G3</td><td>A report under condition G2 that relates to a release to waters must be submitted via WaTERS, unless otherwise agreed by the administering authority.</td></tr>
<tr><td>G4</td><td>Records of any contravention of this environmental authority must include details of the contravention and any subsequent actions taken including:
a) Time, date and place of the contravention;
b) Details of a relevant contact person;
c) The time the holder of the environmental authority became aware of the emergency event, incident or exceedance;
d) Estimated quantity and type of substance involved;
e) The cause of the contravention if known;
f) A description of the nature and effects of the emergency event, incident or exceedance including the risks to the environment; and
g) Immediate actions taken to prevent or mitigate any further environmental harm caused by the contravention.</td></tr>
<tr><td>G5</td><td>All records required by the conditions of this environmental authority must be kept for a minimum of five years. All environmental monitoring results and underlying raw data must be kept until the surrender or cancellation of this environmental authority.</td></tr>
<tr><td>G6</td><td>All records required by the conditions of this environmental authority must be provided to the administering authority upon request and by the time and in the format requested.</td></tr>
</table>

G7	All reasonable and practicable **measures** must be taken to prevent or minimise any environmental harm caused by the **activity**.
G8	Written procedures must be developed and documented within three months of the environmental authority taking effect that: a) identify all potential risks to the environment from the **activity**, including during and outside routine operations, during closure, and in an emergency; and b) identify **measures** to prevent or minimise the potential for environmental harm for each of the potential risks identified; and c) establish an inspection and maintenance program for plant and equipment including calibration and servicing that is in accordance with manufacturer's instructions; and d) establish a staff training program on obligations under this environmental authority and the *Environmental Protection Act 1994* to be conducted as part of staff inductions and at least annually; and e) establish processes to review environmental risks, incidents, performance and complaints; and f) the prevention of unauthorised releases of contaminants to water, including during wet weather events; and g) effective stormwater management.
G9	Written procedures required by condition G8 must be: a) implemented; and b) reviewed at least annually; and c) provided to the **administering authority** upon request at the time and in the format requested.
G10	Plant and equipment necessary to comply with the conditions of this environmental authority must be installed, operated and maintained: a) in a proper and effective manner; and b) in accordance with any written procedures developed under condition G8 for the plant and equipment.
G11	Contaminants and fuels in containers of greater than 15 litres must be stored within a **secondary containment system.**
G12	All laboratory analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (**NATA**) certification, or an equivalent certification, for such analyses. The only exception to this condition is for monitoring of Dissolved Oxygen, salinity, temperature and pH.
G13	All monitoring required by this environmental authority must be recorded, including details of the date and time of the monitoring.
G14	All monitoring required by this environmental authority must be carried out and interpreted by an **appropriately qualified persons(s)**.

G15	Details of all **environmental complaints** received must be recorded including: a) date and time the complaint was received; and b) name and contact details of the complainant when provided by the complainant; and c) nature and details of the complaint; and d) investigations undertaken; and e) conclusions formed; and f) actions taken.
G16	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority** to investigate any alleged **environmental harm**, including environmental nuisance caused by the **activity**.
G17	Any report, results and underlying raw data, of monitoring required by condition G16 must be recorded.
G18	Prior to the commencement of the **activity**, a **receiving environment monitoring program**[1] for the **activity** must be designed and implemented by an **appropriately qualified person(s)** to monitor the impacts of the **activity** on **waters**. [1] Note: The **receiving environment monitoring program** is subject to review and amendment as required by changing regulation, monitoring results or **administering authority** recommendations.

G19	The **receiving environment monitoring program** must include at least the following: 1. Clearly stated aims and objectives. 2. A description of the operation of the **activity** including: a. Operational procedures detailing rules, accountabilities, recording and reporting requirements and actions to be taken in the event of non-conformance with the procedure for the following aspects of the **activity**: i. Water management (**pond** water and discharges); ii. Organic waste (sludge) and pond sediment management (handling, storage and monitoring); iii. Land management (vegetation, sediment and erosion, acid sulfate soils, wildlife, weed and feral animals, fire and cultural heritage); iv. Hazardous substances and chemicals management; v. Waste management; vi. Air emissions (odour and noise); and vii. Complaints management. b. Duration and timing of the growing and harvest cycles; c. Timing and procedure for inspecting any waste disposal area (if applicable) and drainage systems. 3. A monitoring program[1] to monitor the effects of the **activity** on the receiving environment regularly and while wastewater is being discharged from the site, that includes: a. Suitable test sites within the receiving waters[2] that are potentially impacted by the release, being Monitoring Point MC1, Monitoring Point MC2, Monitoring Point MC3, Monitoring Point MC4, Monitoring Point PC1, Monitoring Point PC2, Monitoring Point PC3, and Monitoring Point PC4; b. Control sites CC1 and CC2 where relevant background or reference conditions can be established, and c. Monthly sampling not including periods during or immediately after rainfall. 4. A program for annual assessment and reporting that complies with the requirements of conditions G24 and G25. 5. A program to assess any change to coastal processes (including erosion) due to wastewater releases and impacts to tidal prism. [1]The monitoring program should be developed using the latest version of the **administering authority's** Receiving Environment Monitoring Program Guideline (ESR/2016/2399). [2]The receiving waters are the waters of Packers Creek and Muddy Creek. The REMP should encompass any sensitive receiving waters or environmental values that will potentially be affected by an authorised release from the facility.
G20	The **receiving environment monitoring program** must be submitted to the **administering authority** at least 20 business days prior to the commencement of the **activity** and amended in accordance with any comments made by the **administering authority**.

G21	If the **receiving environment monitoring program** is amended at any time, the amended program must be submitted to the **administering authority** at least 20 business days prior to commencing activities under the amended **receiving environment monitoring program**.
G22	Any comments made by the **administering authority** on the amended **receiving environment monitoring program** provided in accordance with condition G21 must be addressed to the satisfaction of the **administering authority** prior to implementing the amended **receiving environment monitoring program.**
G23	Condition G21 and G22 apply each time the **receiving environment monitoring program** is amended.
G24	An annual monitoring report must be prepared and submitted to the **administering authority** by 30 November each year, for the preceding **financial year**.
G25	The annual monitoring report required by condition G24 must include: a) Findings as a result of the **receiving environment monitoring program** for the period; and b) Calculation of **annual mass load** of both nitrogen and phosphorus in accordance with condition WT5; and c) The amount of the **base offset** required by condition WT14 that has been implemented and how it is being maintained; and d) Monitoring and evaluation of the performance of the **base offset** required by condition WT14 (if applicable); and e) The amount of the **additional offset** in accordance with WT18 that has been implemented and how it is being maintained; and f) Monitoring and evaluation of the performance of the **additional offset** required by condition WT18 (if applicable); and g) A summary of the previous 12 months monitoring results including graphical representations identifying relevant contaminant/indicator limits, if this data has not already been reported to the **WaTERS** database; and h) An outline of actions taken or proposed to minimise any environmental risk identified from, for example, monitoring and **environmental complaints**; and i) Calculations of the volume and frequency of wet weather storage overflows, where applicable.
G26	Unless otherwise specified in a condition of this environmental authority, all **records** required to be submitted to the **administering authority** under this environmental authority, must be submitted to: 1300 130 372 (option 2) / pollutionhotline@des.qld.gov.au (for notifications under condition G2 that does not relate to a release to **waters**); or palm@des.qld.gov.au; or Permit and Licence Management Department of Environment and Science GPO Box 2454

	Brisbane QLD 4001
Air	
A1	Odours or airborne contaminants from the **activity** must not cause **environmental nuisance** at any **sensitive place** or **commercial place**.
Land	
L1	Contaminants from the **activity** must not be released to **land.**
L2	Treatment and management of **acid sulfate soils** must comply with the latest edition of the Queensland Acid Sulfate Soil Technical Manual.
L3	Rehabilitation of the site is required to achieve a safe, stable and non-polluting landform.
Acoustic	
N1	Noise from the **activity** must not cause **environmental nuisance** to any **sensitive place** or **commercial place**.
Waste	
W1	Other than as permitted by this environmental authority, all waste generated by the **activity** must be lawfully reused or recycled, and/or lawfully removed to a facility that can lawfully accept the waste.
W2	The **administering authority** must be notified as soon as practicable, but no more than 24 hours after becoming aware of any disease outbreak requiring treatment and/or drainage of **ponds**.
W3	Where diseased organisms and/or **affected water** require offsite disposal the following records must be kept: a) the date, quantity and type of waste disposed of; and b) name of the waste transporter and/or disposal operator that removed the waste; and c) details of suspected or confirmed disease; and d) the intended treatment and/or disposal destination of the waste.
W4	All sediments removed from any **ponds** must be stored on-site in a manner that prevents the release of contaminants, including copper.
W5	Any diseased, or potentially diseased, organisms and **affected water** removed from the **ponds** for disposal onsite must be disposed of in a separate lined and bunded disposal area.

W6	At the end of each day that diseased, or potentially diseased, organisms and **affected water** have been placed in the waste disposal area, the organisms and **affected water** must be covered with at least 200mm of earth.
W7	If organisms and/or **affected water** are placed in a waste disposal area, the following records must be kept: a) date placed; and b) quantity of organism and/or **affected water** disposed; and c) suspected or confirmed disease; and d) details of any treatment applied to neutralise disease.
Water	
WT1	Other than as permitted by this environmental authority, contaminants from the **activity** must not be released to **waters**.

WT2

Contaminants must only be released to surface waters where:

a) they are from the discharge locations; and

b) the release limits for each contaminant/indicator are met at the discharge locations; and

c) monitoring of all contaminant/indicators at all monitoring locations and at the frequency as per *Table 1 – Contaminant monitoring, discharge location and release limits;* and

d) the associated requirements are complied with.

Table 1 – Contaminant monitoring, discharge location and release limits

Monitoring location	Discharge location	Contaminant/ Indicator	Release limit				Minimum monitoring frequency
			Minimum	Mean	80th Percentile	Maximum	
Release Point W1	**Release Point W1**	Dissolved oxygen (mg/l)	2.0				Continuous Monitoring, at minimum 1 sample per 2 hours
		pH	6.5			8.5	Daily
		Total phosphorus (mg/L)			0.35	0.4	Weekly
		Total nitrogen (mg/L)			2.5	3.0	
		Salinity					Monthly (on the ebb tide)
		Turbidity					
		Electrical conductivity					
		Temperature					
		Ammonia (mg/L)					
		Oxidised nitrogen (mg/L)					
		Oxides of nitrogen (mg/L)					
		Dissolved organic nitrogen (mg/L)					
		Filtered reactive					

		phosphorus (mg/L)					
		Total organic carbon (µg/L)					
		Total suspended solids (mg/L)			90	120	
		5-day Biochemical Oxygen Demand (mg/l)				20	
		Chlorophyll-a (mg/L)			120	200	
		Total copper (µg/L)					
		Dissolved copper (µg/L)					
	Release Point W2	Dissolved oxygen (mg/l)	2.0				Continuous Monitoring, at minimum 1 sample per 2 hours
		pH	6.5			8.5	Daily
		Total phosphorus (mg/L)			0.35	0.4	Weekly
		Total nitrogen (mg/L)			2.5	3.0	
		Filtered reactive phosphorus (mg/L)					Monthly (on the ebb tide)
		Salinity					
		Turbidity					
		Electrical conductivity					
		Temperature					
		Ammonia (mg/L)					
		Oxidised nitrogen (mg/L)					

		Oxides of nitrogen (mg/L)					
		Dissolved organic nitrogen (mg/L)					
		Total organic carbon (µg/L)					
		Total suspended solids (mg/L)			90	120	
		5-day Biochemical Oxygen Demand (mg/l)				20	
		Chlorophyll-a (mg/L)			120	200	
		Total copper (µg/L)					
		Dissolved copper (µg/L)					

Associated requirements

1. *Mean is to be calculated as a 52-week mean (yearly long-term mean) for each **financial year**.*
2. *Monitoring must be carried out in accordance with the methods prescribed in the current edition of the Department of Environment and Science Monitoring and Sampling Manual as updated from time to time.*
3. *Water samples must be representative of the general condition of the water body.*
4. *All determinations must employ analytical practical quantification limits of sufficient sensitivity to enable comparisons to be made against water quality objectives/triggers/limits relevant to the particular water or sediment quality characteristics.*
5. *Monitoring must be undertaken during a release from the **activity** to the discharge location and at the frequency stated.*
6. *All monitoring devices must be calibrated and maintained according to the manufacturer's instruction manual.*
7. *Ammonia, NOx and filterable reactive phosphorus must be measured when total nitrogen and total phosphorus are monitored.*

<table>
<tr><td>WT3</td><td>All water quality monitoring data collected under this environmental authority must be provided to the administering authority annually via WaTERS and in the specified electronic format requested.</td></tr>
<tr><td>WT4</td><td>The annual mass load of total nitrogen and total phosphorus released to waters must comply with the limits listed in Table 2 – Contaminant release to waters – annual mass load limits.

Table 2 – Contaminant release to waters – annual mass load limit
<table>
<tr><th>Release point</th><th>Indicator</th><th>Limit type</th><th>Release limit</th></tr>
<tr><td rowspan="2">Release Point W1 and W2 (Combined)</td><td>Total nitrogen</td><td>Maximum</td><td>25,000 kg</td></tr>
<tr><td>Total phosphorus</td><td>Maximum</td><td>7,950 kg</td></tr>
</table></td></tr>
<tr><td>WT5</td><td>The yearly sum of daily release volume (ML) and annual mass load of total nitrogen and total phosphorus released to waters must be calculated for each financial year.</td></tr>
<tr><td>WT6</td><td>The total quantity of water released from Release Point W1 during any day must not exceed 39.5 ML.</td></tr>
<tr><td>WT7</td><td>The total quantity of water released from Release Point W2 during any day must not exceed 91.5ML.</td></tr>
<tr><td>WT8</td><td>The total quantity of water released from Release Point W1 during any day must be determined, using a method with an accuracy of at least +/-5% of the actual amount released, and recorded.</td></tr>
<tr><td>WT9</td><td>The quantity of water released from Release Point W2 during any day must be determined, using a method with an accuracy of at least +/-5% of the actual amount released, and recorded.</td></tr>
<tr><td>WT10</td><td>Notwithstanding any other condition of this environmental authority, any release of contaminants to waters must not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other objectionable matter.</td></tr>
<tr><td>WT11</td><td>Notwithstanding any other condition of this environmental authority, wastewater must be directed from the discharge structure in a manner that does not erode or otherwise disturb mangrove vegetation, the stream banks or the habitat in general.</td></tr>
<tr><td>WT12</td><td>All ponds, channels and containment structures used for the storage, use or treatment of aquaculture waters must be constructed and maintained:
a) to minimise the likelihood of any release of water through the bed or banks of the pond, channels or containment structures to any waters; and
b) to ensure the stability of the ponds, channels or containment structures; and
c) in accordance with the relevant edition of the Queensland Government guideline titled ‘Guideline for constructing and maintaining aquaculture containment structures’.</td></tr>
</table>

WT13	Contaminants from the activity must not be released to **groundwater** or to a location where they are likely to release to **groundwater**.
WT14	By 1 July 2028, a **base offset** of 6,750kg of Total Nitrogen (being 4,500kg with a delivery ratio of 1.5) must be implemented.
WT15	The **base offset** required by condition WT14 must be achieved through the purchase and retirement from **contaminant production** of 300 hectares of land used for sugarcane production (being an offset calculated as 22.5kg of Total Nitrogen per hectare per year) in the Wet Tropics region.
WT16	The **base offset** required by condition WT14 must be maintained and fully operational during any financial year in which a discharge occurs after 1 July 2028.
WT17	The **base offset** must meet the requirements of the *Point Source Water Quality Offsets Policy 2019,* as updated from time to time.
WT18	Prior to the release of **annual mass load** of Total Nitrogen greater than 18,000kg, an **additional offset** of 5,250kg of Total Nitrogen (being 3,500kg with a delivery ratio of 1.5) must be implemented.
WT19	The **additional offset** required by condition WT18 must be achieved through the purchase and retirement from **contaminant production** of 235 hectares of land used for sugarcane production (being an offset calculated as 22.34kg of Total Nitrogen per hectare per year) in the Mossman catchment, or such other offset as may be agreed in writing with the administering authority.
WT20	The **additional offset** required by condition WT18 must be maintained and fully operational during any financial year in which a discharge occurs.
WT21	The **additional offset** must meet the requirements of the *Point Source Water Quality Offsets Policy 2019,* as updated from time to time.
WT22	Prior to the implementation of any offset, an offset plan must be prepared and submitted to the **administering authority**, that demonstrates how the offset meets the requirements of the *Point Source Water Quality Offsets Policy 2019*, as updated from time to time.
WT23	Prior to the implementation of any change to offsets under this EA the offset plan required under condition WT22 must be updated and submitted to the **administering authority**.
WT24	Land managed as an offset under condition WT14 and/or WT18 must deliver the required offset and maintain a safe, stable, non-polluting (i.e. eroding) landform.
WT25	An **appropriately Qualified Person(s)** must design and implement an annual monitoring program to evaluate the performance of any offset(s) in achieving its outcome and meeting the requirements of the *Point Source Water Quality Offsets Policy 2019*, as updated from time to time.

<table>
<tr><td>WT26</td><td>The quality of the receiving waters must be monitored at the locations for each quality characteristic and at the monitoring frequency stated in ‘Table 3 - Receiving waters impact monitoring characteristics’.

Table 3 - Receiving water impact monitoring characteristics

<table>
<tr><th>Monitoring points</th><th>Quality Characteristic</th><th>Monitoring Frequency</th></tr>
<tr><td rowspan="14">MC1
MC2
MC3
MC4
PC1
PC2
PC3
PC4
CC1
CC2</td><td>Total Nitrogen (µg/L)</td><td rowspan="14">Monthly on ebb tide</td></tr>
<tr><td>Total Phosphorus (µg/L)</td></tr>
<tr><td>Ammonia (µg/L)</td></tr>
<tr><td>Oxides of nitrogen (µg/L)</td></tr>
<tr><td>Dissolved Organic Nitrogen (µg/L)</td></tr>
<tr><td>Total Organic Carbon (µg/L)</td></tr>
<tr><td>Biochemical Oxygen Demand (mg/L)</td></tr>
<tr><td>Filtered reactive phosphorus (µg/L)</td></tr>
<tr><td>Dissolved oxygen (mg/l)</td></tr>
<tr><td>Salinity (ppm)</td></tr>
<tr><td>Dissolved Copper</td></tr>
<tr><td>Total Copper</td></tr>
<tr><td>Temperature (°C)</td></tr>
<tr><td>pH</td></tr>
<tr><td>Chlorophyll-a</td></tr>
</table>
</td></tr>
<tr><td>WT27</td><td>The concentration of dissolved copper at monitoring locations PC1-4 and MC1-4 must not exceed the 95% protection level of species (1.3µg/L), as outlined in Table 3.4.1 of the Australia and New Zealand Guidelines for Fresh and Marine Water Quality volume 1, and as updated from time to time.</td></tr>
<tr><td>WT28</td><td>You must not release to waters any water from ponds that have been treated with copper within the preceding 7 days:
a) following a sampling result indicating the concentration of dissolved copper exceeds the limit in Condition WT27 at any of the monitoring locations PC1-4 or MC1-4; and
b) until sampling results indicate that the concentration of dissolved copper has remained below the limit in Condition WT27 for a minimum of 7 consecutive days, at all monitoring sites in the creek in which the exceedance occurred (PC1-4 or MC1-4).</td></tr>
</table>

WT29

Sediments must be monitored at the locations and at the monitoring frequency stated in '*Table 4 - Sediment impact monitoring points and characteristics'*.

Table 4 - Sediment impact monitoring points and characteristics

Monitoring points*	**Quality Characteristic**	**Monitoring Frequency**
MC1 MC2 PC1 PC2 CC1 CC2	**Total Nitrogen** (**µg/kg**)	Quarterly
	Total Phosphorus (**µg/kg**)	
	Total Organic Carbon (**µg/kg**)	
	Redox potential	
	Total Copper (**µg/kg**)	
	Nitrogen exchange rate	
	Oxygen exchange rate	

WT30

All water monitoring data must be uploaded to **WaTERS** quarterly in accordance with '*Table 5 – WaTERS Upload Schedule'*.

Table 5 – WaTERS Upload Schedule

Quarter	**Reporting Period**	**Upload Due**
1	January 1 – March 31	April 30
2	April 1 – June 30	July 31
3	July 1 – September 30	October 31
4	October 1 – December 31	January 31

Definitions

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

80th percentile means that the measured values of the quality characteristic must not be greater than the release limit for any more than one out of five consecutive samples.

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

Acid sulfate soils means a soil, sand, mud or clay containing significant levels of pyrite (iron sulphide), which on exposure to oxidising conditions results in, or has the potential to result in, the generation of sulphuric acid in quantities greater than the inherent buffer capacity of the soil.

Additional offset means the offset required to permit the release of an annual mass load of Total Nitrogen greater than 18,000kg.

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

Affected water means water that has come into contact with diseased, or potentially diseased, organisms, fated for onsite disposal.

Annual mass load is calculated as follows:

> Annual mass load total nitrogen (kg) = **yearly sum of daily release volume** (ML) x **yearly long term mean** total nitrogen concentration (mg/L)
>
> Annual mass load total phosphorus (kg) = **yearly sum of daily release volume** (ML) x **yearly long term mean** total phosphorus concentration (mg/L)
>
> *Note: calculations should be undertaken on a rolling basis based on nutrient sampling.*

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

Base offset means the offset of 6,750kg of Total Nitrogen (being 4,500kg with a deliver ratio of 1.5) required by condition WT14.

Commercial place means a place, or part of a place, used as a workplace, an office or for business or commercial purposes.

Contaminants include chemicals or compounds that may be harmful in any way to waters or wetlands including nitrogen or phosphorous**.**

Contaminant production means an activity or land use that results in the release of a prescribed contaminant from a site, other than arising from the introduction or maintenance of vegetation on that site that is consistent with condition WT24.

Control site CC1 means the location at Latitude -16.486820, Longitude 145.431140.

Control site CC2 means the location at Latitude -16.482940, Longitude 145.429870.

Day means any continuous 24-hour period.

Environmental complaints means an expression of dissatisfaction, concern or report, whether written or verbal, about the activity and/or its impact on the environment.

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

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

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

Financial year means a period of one year beginning on 1 July.

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

Land does not include **waters**.

Measures have the broadest interpretation and includes plant, equipment, physical objects, monitoring, procedures, actions, directions and competency.

µg/l means micrograms per litre.

mg/l means milligrams per litre.

Monitoring Point MC1 means the location at Latitude -16.496433, Longitude 145.442195.

Monitoring Point MC2 means the location at Latitude -16.488880, Longitude 145.443250.

Monitoring Point MC3 means the location at Latitude -16.484350, Longitude 145.437450.

Monitoring Point MC4 means the location at Latitude -16.479780, Longitude 145.431961.

Monitoring Point PC1 means the location at Latitude -16.508720, Longitude 145.451210.

Monitoring Point PC2 means the location at Latitude -16.507929, Longitude 145.455591.

Monitoring Point PC3 means the location at Latitude -16.502886, Longitude 145.45824.

Monitoring Point PC4 means the location at Latitude -16.499071, Longitude 145.455593.

NATA means National Association of Testing Authorities.

Pond includes a tank, channel or containment structure:

a) used to hold, or cultivate, freshwater, marine or estuarine organisms; or

b) used for the storage, use or treatment of aquaculture waters.

Prescribed water contaminants means contaminants listed within Schedule 10 of the Environmental Protection Regulation 2019.

Receiving environment monitoring program means a monitoring program designed to monitor and assess the potential impacts of controlled and/or uncontrolled releases of contaminants to the environment from the **activity**.

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

Release Point W1 means the location at Latitude -16.496412, Longitude 145.442154.

Release Point W2 means the location at Latitude -16.508737, Longitude 145.445659.

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 places and parts of places as follows:

a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or

b) a motel, hotel or hostel; or

c) a kindergarten, school, university or other educational institution; or

d) a medical centre or hospital; or

e) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or

f) a public park or garden; or

g) for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2019.

Total nitrogen means the sum of Organic Nitrogen, Ammonia Nitrogen, Nitrite plus Nitrate Nitrogen, expressed as mg/L as Nitrogen. This includes both the inorganic and organic fraction of nitrogen.

Total phosphorus means the sum of the reactive phosphorus, acid-hydrolysable phosphorus and organic phosphorus, as mg/L of phosphorus. This includes both the inorganic and organic fraction of phosphorus**.**

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.

WaTERS is the Water Tracking and Electronic Reporting System (WaTERS) database formally known as the Point Source Database (PSD).

Yearly long-term mean means the arithmetic mean of samples for a 52-week period in each **financial year**.

Yearly sum of daily release volume means the sum of total daily release volumes (including any stormwater discharged from site) for a 52-week period in each **financial year.**

Appendices

END OF ENVIRONMENTAL AUTHORITY