Permit[1]

Environmental Protection Act 1994
EPPR00685313

Environmental authority

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

Permit[1] number: EPPR00685313

The Environmental Authority takes effect upon the signing by the Delegate

The anniversary date of this environmental authority is 6 March each year.

Environmental authority holder(s)

Name	Registered address
Department of Agriculture and Fisheries	80 Ann Street, Brisbane QLD 4000

Environmentally relevant activity and location details

Environmentally relevant activity(ies)	Location(s)
1(a) Cultivating or holding crustaceans in enclosures that are on land and have a total area of more than 100m2	Walkamin Freshwater Fishers and Aquaculture Centre Corner of Morganbury Road and Kenney Highway Walkamin QLD 4872 Lot 568 on N157284

Additional information for applicants

Environmentally relevant activities

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

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

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

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

Contaminated land

It is a requirement of the EP Act that if an owner or occupier of land becomes aware a notifiable activity (as defined in Schedule 3 and Schedule 4) is being carried out on the land, or that the land has been, or is being, contaminated by a hazardous contaminant, the owner or occupier must, within 22 business days after becoming so aware, give written notice to the chief executive.

CMooney	31/7/17
Signature	Date

Chris Mooney
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
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Obligations under the *Environmental Protection Act 1994*

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

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

Conditions of environmental authority

Location: Walkamin Freshwater Fishers and Aquaculture Centre

Corner of Morganbury Road and Kenney Highway Walkamin QLD 4872

Lot 568 on N157284

Relevant activity/ies:

1(a) Cultivating or holding crustaceans in enclosures that are on land and have a total area of more than 100m2

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

Agency interest: General	
Condition number	**Condition**
G1	All reasonable and practicable **measures** must be taken to prevent the likelihood of environmental harm being caused.
G2	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
G3	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
G4	All information and records required by the conditions of this environmental authority must be kept for a minimum of five years with the exception of environmental monitoring results which must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request and in the format requested.
G5	An **appropriately qualified person(s)** 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.
G6	All 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.
G7	An annual monitoring report must be prepared and submitted to the **administering authority** by 30 November each year, for the preceding financial year.
G8	**You** must record the following details for all environmental **complaints** received: a) date and time complaint was received b) name and contact details of the complainant c) nature of the complaint d) investigations undertaken e) conclusions formed f) actions taken.
G9	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a **complaint** not considered by the **administering authority** to be frivolous or vexatious, of **environmental nuisance** arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.

G10	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency 2. establish and maintain control **measures** that minimise the potential for environmental harm 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition 4. ensure plant, equipment and **measures** are operated in a proper and effective manner 5. ensure that staff are trained in and aware of their obligations under the *Environmental Protection Act 1994* 6. ensure that reviews of environmental performance are undertaken at least annually
G11	Chemicals and fuels in containers of greater than 15 litres must be stored within a **secondary containment system.**
Agency interest: Air	
Condition number	**Condition**
A1	Odours or airborne contaminants must not cause **environmental nuisance** at a **sensitive place** or **commercial place**.
Agency interest: Noise	
Condition number	**Condition**

<table>
<tr><td>N1</td><td>In the event of a complaint about noise that constitutes intrusive noise being made to the administering authority, that the administering authority considers is not frivolous or vexatious, then the emission of noise from the approved place must not result in levels greater than those specified in Table 1 – Noise Limits.

Table 1 – Noise Limits

<table>
<tr><th colspan="2">Noise Limits at a Noise Sensitive Place</th></tr>
<tr><th>Period</th><th>Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax\ adj,\ T}$</th></tr>
<tr><td>7am – 6pm</td><td>Background noise level plus 5 dB(A)</td></tr>
<tr><td>6pm – 10pm</td><td>Background noise level plus 5 dB(A)</td></tr>
<tr><td>10pm – 7am</td><td>Background noise level plus 3 dB(A)</td></tr>
<tr><th colspan="2">Noise Limits at a Commercial Place</th></tr>
<tr><th>Period</th><th>Noise Level at a Commercial Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax\ adj,\ T}$</th></tr>
<tr><td>7am – 6pm</td><td>Background noise level plus 10 dB(A)</td></tr>
<tr><td>6pm – 10pm</td><td>Background noise level plus 10 dB(A)</td></tr>
<tr><td>10pm – 7am</td><td>Background noise level plus 8 dB(A)</td></tr>
</table></td></tr>
<tr><td>N2</td><td>The absolute maximum instantaneous sound pressure level, when measured at a noise sensitive or commercial place, Max $L_{pA\ T}$, must not exceed 75 dB(A).</td></tr>
<tr><td>N3</td><td>Methods used to deter birdlife and other native fauna considered pests or competitors shall not include scare guns or firearms.</td></tr>
<tr><td colspan="2">Agency interest: Water</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>WT1</td><td>The only contaminant permitted to be released from the approved place(s) is aquaculture effluent from the ponds and/or tanks used for cultivating or holding marine, estuarine or freshwater organisms.</td></tr>
<tr><td>WT2</td><td>The total quantity of contaminants released from the release points specified in condition WT4 must not exceed those specified in Table 2 – Walkamin Freshwater Fisheries and Aquaculture Centre.

Table 2 - Walkamin Freshwater Fisheries and Aquaculture Centre

<table>
<tr><th>Release Point</th><th>Release Point Description .</th><th>Total Quantity</th></tr>
<tr><td>W1(g)</td><td>Discharge pipe from laboratory tanks to waters described as a tributary of Maud Creek</td><td>480m^3 in any day</td></tr>
<tr><td>W1(h-p)</td><td>Discharge pipe from numerous ponds to waters described as a tributary of Maud Creek.</td><td>260m^3 in any day</td></tr>
</table></td></tr>
</table>

<table>
<tr><td>WT3</td><td>The release of contaminants to waters from the release points specified in condition WT2 and labelled on the maps for the approved place in Schedule 1, must be carried out at non-erosive velocities and must not disturb marine or riparian vegetation, the bed and banks of the waterway or the habitat in general.</td></tr>
<tr><td>WT4</td><td>Contaminants must not be directly or indirectly released from any source on the approved place to any waters at any location other than the contaminants and sources at the locations specified in Table 2 and labelled on the maps for the approved place in Schedule 1.</td></tr>
<tr><td>WT5</td><td>The release of contaminants to waters must comply, at the sampling and in situ monitoring point(s) specified in Table 2, with each of the release limits specified in Table 3 – Walkamin Freshwater Fisheries and Aquaculture Centre.

Table 3 - Walkamin Freshwater Fisheries and Aquaculture Centre

<table>
<tr><th>Quality Characteristic</th><th>Release Point</th><th>Release Limit</th><th>Limit Type</th></tr>
<tr><td>pH</td><td>W1(g)—W1(p)</td><td>6.5 to 9.0 pH units</td><td>range</td></tr>
<tr><td>Dissolved Oxygen</td><td>W1(g)—W1(p)</td><td>4.0 mg/L</td><td>minimum</td></tr>
<tr><td rowspan="2">Suspended Solids</td><td>W1(g)— W1(p)</td><td>10 mg/L</td><td>80th percentile</td></tr>
<tr><td>W1(g)— W1(p)</td><td>20 mg/L</td><td>maximum</td></tr>
<tr><td rowspan="2">Total Nitrogen (as nitrogen)</td><td>W1(g)—W1(p)</td><td>0.8 mg/L</td><td>80th percentile</td></tr>
<tr><td>W1(g)—W1(p)</td><td>1.0 mg/L</td><td>maximum</td></tr>
<tr><td rowspan="2">Total Phosphorus</td><td>W1(g)—W1(p)</td><td>0.15 mg/L</td><td>80th percentile</td></tr>
<tr><td>W1(g)—W1(p)</td><td>0.2 mg/L</td><td>maximum</td></tr>
<tr><td rowspan="2">Chlorophyll a</td><td>W1(g)—W1(p)</td><td>20µg/L</td><td>80th percentile</td></tr>
<tr><td>W1(g)—W1(p)</td><td>40µg/L</td><td>maximum</td></tr>
</table></td></tr>
<tr><td>WT6</td><td>Determinations of the quality of contaminants released to waters to check conformity with the release quality characteristics specified in condition WT5 must be undertaken at the sampling and in situ measurement point(s) described as:
<u>Walkamin Freshwater Fisheries and Aquaculture Centre</u>
Sampling point FN1 - waters discharging from the weir on unnamed creek.
Sampling point SW1 - controlled release outlet of the settling/settlement pond.</td></tr>
</table>

<table>
<tr><td>WT7</td><td>The holder of this environmental authority is responsible for the making of determinations of the quality of the contaminants released to waters from the approved place for the release points, quality characteristics, and at the frequency specified in Table 4 – Walkamin Freshwater Fisheries and Aquaculture Centre.

Table 4 - Walkamin Freshwater Fisheries and Aquaculture Centre

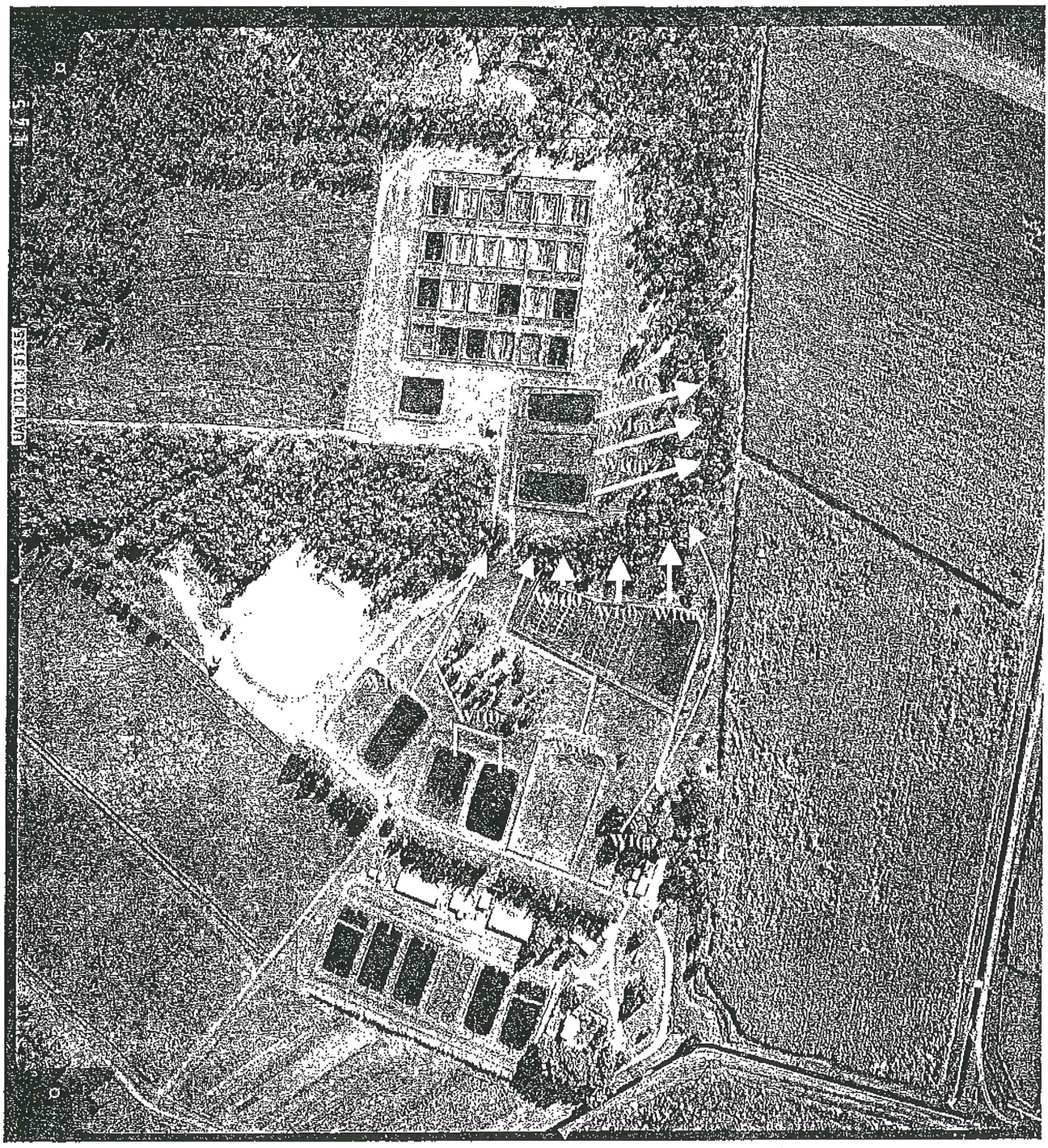
<table>
<tr><th>QUALITY CHARACTERISTIC DETERMINATION</th><th>SAMPLING METHOD</th><th>SAMPLING AND IN-SITU MONITORING POINT(S)</th><th>FREQUENCY OF SAMPLING</th></tr>
<tr><td>pH</td><td>In flow sample</td><td>FN1 and SW1</td><td>Weekly whilst discharging</td></tr>
<tr><td>Dissolved Oxygen (mg/L)</td><td>Inflow sample</td><td>FN1 and SW1</td><td>Weekly whilst discharging</td></tr>
<tr><td>Suspended Solids (mg/L)</td><td>Grab sample</td><td>FN1 and SW1</td><td>Monthly whilst discharging</td></tr>
<tr><td>Total Nitrogen (mg/L)</td><td>Grab sample</td><td>FN1 and SW1</td><td>Monthly whilst discharging</td></tr>
<tr><td>Total Phosphorus as P (mg/L)</td><td>Grab sample</td><td>FN1 and SW1</td><td>Monthly whilst discharging</td></tr>
<tr><td>Chlorophyll a (µg/L)</td><td>Grab sample</td><td>FN1 and SW1</td><td>Monthly whilst discharging</td></tr>
</table>
</td></tr>
<tr><td>WT8</td><td>Notwithstanding the quality characteristic limits specified in Table 3 the release of contaminants to waters must comply with the following qualitative characteristics:
1. The release must not produce any plume or other visible evidence of the release of suspended solids or other contaminants which adversely affects the values of the receiving environment; and
2. The release 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; and
3. The release must not have any properties nor contain any organisms or, other contaminants which, are capable of causing environmental harm or an environmental nuisance.</td></tr>
<tr><td>WT9</td><td>The holder of this environmental authority must prepare and submit a Wastewater Irrigation Plan for the Walkamin Freshwater Fisheries and Aquaculture Centre to the administering authority for its review and comment.</td></tr>
</table>

WT10	The Wastewater Irrigation Plan must investigate the methods for onsite and offsite irrigation of aquaculture effluent/wastewaters that cannot be recycled and the selection of a method that has long term sustainability and minimal environmental impacts. The Wastewater Irrigation Plan must address the following: i. Initial Investigations a. A site description and plans with the following details: 1. area and topography; 2. surface drainage features (intermittent and permanent watercourses); 3. beneficial uses of surface waters identified in (b) above; 4. flood potential; 5. soil type(s) and underlying geology; and 6. vegetation type, structure and distribution; and b. A soil sampling program which examines the following soil physical and chemical characteristics: 1. a description of the soil profile based on the methods set out in Australian Soil and Land Survey Field Handbook (McDonald *et al.,* 1990) and classification of soil type(s); 2. depth to water table (wet and dry season levels); 3. phosphorus adsorption isotherm for each soil profile and soil phosphorus storage capacity; 4. saturated hydraulic conductivity of each soil profile for each soil type; and 5. soil sodicity (in terms of Sodium Absorption Ratio) and pH; and c. A review of typical characteristics of irrigation waters including: 1. means, medians, 80th percentile and maximum values of total nitrogen and its constituents, phosphorus and electrical conductivity; and 2. sodium and chloride concentrations and Sodium Absorption Ratio; and d. Groundwater characteristics in the proposed irrigation area(s) including: 1. groundwater height (wet and dry season), depth, connectivity (if more than one aquifer), flow rate and direction; 2. background groundwater quality in terms of nitrate, total phosphorus, electrical conductivity and sodium; and 3. existing or potential beneficial uses; and ii. Impact Assessment a. A daily water and contaminants balance describing the impact of contaminant loads in respect of nitrogen, phosphorus and salinity on groundwater and any adjacent surface waters. These impacts must be related to the beneficial uses; and b. An assessment of contaminant loads under various run-off event scenarios (based on various rainfall intensities generated in differing event recurrence intervals and duration's) and impacts on background contaminant loads in waters downstream; and iii. Site Management a. Plant uptake including: 1. plant species, structure and distribution in irrigation area; 2. plant nitrogen, phosphorus and water demand and any seasonality of demand and changes in plant maturity; 3. proposed harvesting regime and quantification of nutrient removal in harvesting; and 4. plant salinity tolerance and leaching requirement; and b. If grazing is proposed in irrigation area: 1. types of grazing animals, densities and management (eg. spelling of paddocks, harvesting, etc..);. 2. quantification of nutrient storage at differing maturities and nutrient removal efficiency; and 3. irrigation management (eg. buffers, timing, etc..) to minimise risks; and c. Irrigation methods including:

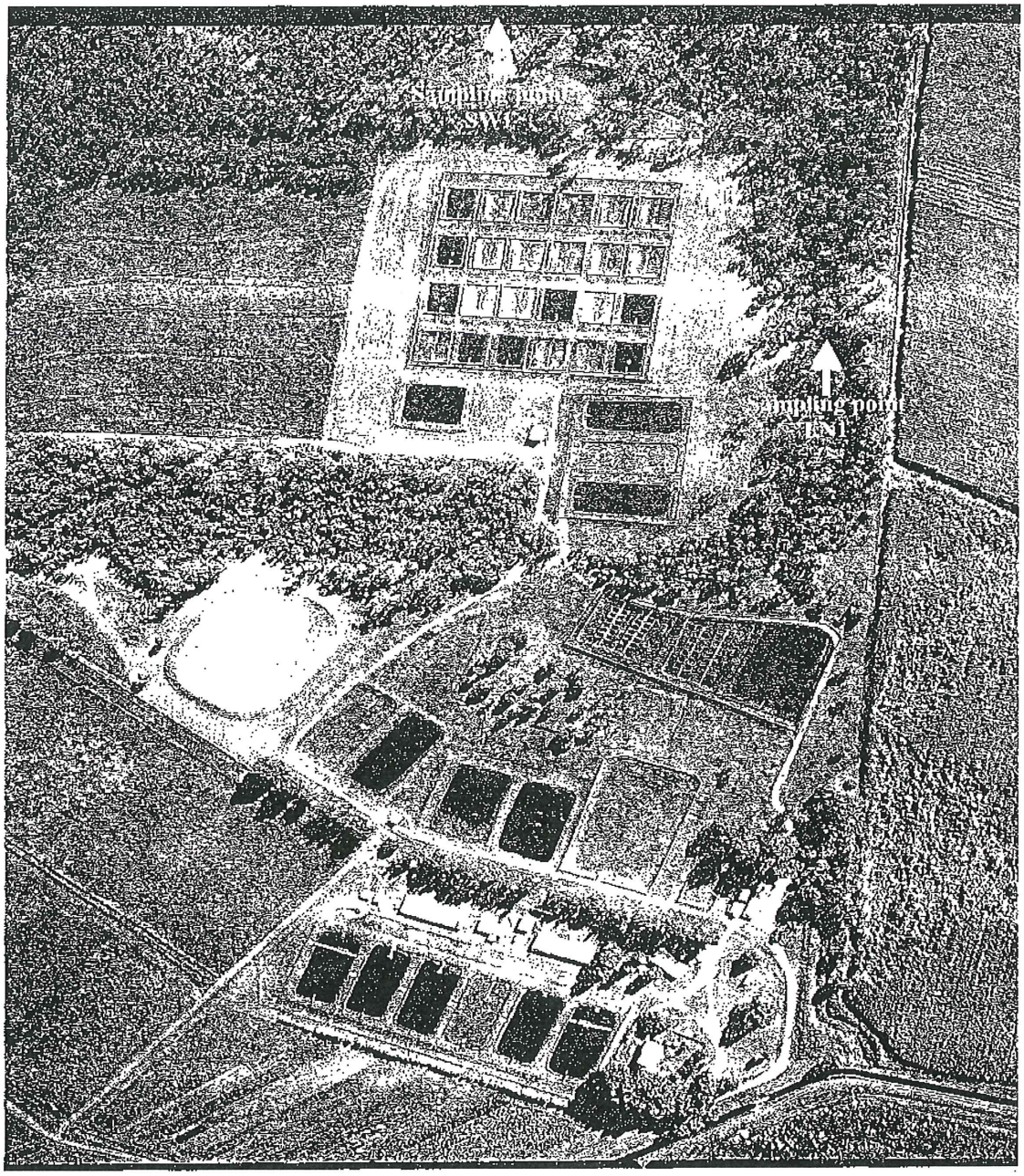
	1. details on location and design of proposed irrigation reticulation system; and 2. irrigation methods, timing and daily application rate; and 3. proposed methods of minimising surface run-off (eg. wet weather storage); and 4. contaminant release precautions to protect environmental values of waters and public health (eg. buffers distances from any watercourse and the boundary of the irrigation, area, public access restrictions to irrigation area, warning notices, etc..); and 5. details of a written agreement with other person(s) for the provision of aquaculture effluent in accordance with conditions L5 and L6; and iv. Proposed monitoring program a. Effluent quality and quantity in terms of: 1. total nitrogen; 2. phosphorus; 3. electrical conductivity; and 4. measurement of daily flows to irrigation area; and b. Background and downgradient groundwater monitoring bores for the following parameters: 1. nitrate; 2. phosphorus; 3. electrical conductivity; and 4. groundwater height.
Agency interest: Waste	
Condition number	**Condition**
W1	All waste generated in carrying out the **activity** must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.
W2	The holder of this environmental authority must not: 1. allow waste to burn or be burnt at or on the premises to which this environmental authority relates; nor 2. remove waste from the premises to which this environmental authority relates and burn such waste elsewhere other than an appropriate waste disposal facility that can lawfully burn such waste.
W3	The holder of this environmental authority notify the administering authority of any disease outbreak requiring treatment and/or drainage of pond and/or tank contents.
Agency interest: Land	
Condition number	**Condition**
L1	The holder of this environmental authority must ensure that all aquaculture and settlement ponds have a permeability of not more than 0.1 mm/day.

L2	All ponds used for cultivating or holding marine, estuarine or freshwater organisms must be installed and maintained so that a freeboard of not less than 0.3 metres is maintained at all times.
L3	The only contaminants that are permitted to be released to land on the approved place are aquaculture wastewaters and aquaculture pond sludges, which must not be released to land within twenty (20) metres of any waters.
L4	Any aquaculture pond sludge disposed of on the approved place must be evenly dispersed to allow for absorption into the land.
L5	If the holder of this environmental authority gives or transfers responsibility of aquaculture effluent to another person(s), the holder of this environmental authority must: 1. prior to giving such effluent or transferring responsibility of such effluent to that person(s), obtain from that person(s) details of how that person(s) intends to comply with the general environmental duty provided for by Section 319 of the Act in respect of the use and disposal of such effluent, particularly in relation to environmental sustainability of any effluent disposal, protection of public health and protection of environmental values of waters; and 2. only give or transfer responsibility of such effluent in accordance with a written agreement between the holder of this environmental authority and that person(s) which clearly defines responsibilities for management, maintenance, monitoring and contingency plans; and 3. upon becoming aware that the person(s) is not or is not likely to comply with the general environmental duty provided by Section 319 of the Act, cease the giving or transferring responsibility of such effluent, as the case may be.
L6	The holder of this environmental authority must keep a copy of all agreements entered into to give or transfer responsibility of aquaculture effluent and must: 1. provide a copy of the agreement to the administering authority within thirty (30) days of the agreement taking effect; and 2. advise the administering authority in writing of rescission of any agreement within thirty (30) days of such rescission.

Schedule 1 - Figure 1. Effluent Release Points



Schedule 1 - Figure 2. Sampling and In-situ Monitoring Points



Definitions

Note that where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

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 Heritage Protection or its successor or predecessors.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

Aquaculture sludge means the solids or sludges which accumulate or deposit on the bottom of a pond and/or tank as a result of cultivating or holding marine, estuarine or freshwater organisms. .

Background noise level means either:

i. LAgg, T being the A-weighted sound pressure level exceeded for 90 percent of the time period of not less than fifteen (15) minutes, using Fast response, or
ii. $L_{A}b_{g}$, T being the arithmetic average of the minimum A-weighted sound pressure level readings measured in the absence of the noise under investigation during a representative time period of not less than fifteen (15) minutes, using Fast response.

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.

Day means any 24 hour period.

Disease means a disease or notifiable event that is listed on a Declared Disease List prepared by the Department of Primary Industries under the *Fisheries Act 1994.*

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

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

Grab sample means a single instantaneous sample which is collected in a manner that ensures that it is a representative sample.

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

Inflow sample means an instantaneous readout from an electronic probe immersed in the flow of liquid, at a location that is representative of the characteristics of the flow.

Land means land excluding waters and the atmosphere.

Maximum means that the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.

Measures has the broadest interpretation and includes plant, equipment, physical objects, bunding, containment systems, monitoring, procedures, actions, directions and competency.

Minimum means that the measured value of the quality characteristic or contaminant must not be less than the release limit stated.

mg/L means milligrams per litre.

NATA means National Association of Testing Authorities.

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

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

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

Range means that the measured value of the quality characteristic or contaminant must not be greater than the higher release limit stated nor lower than the lower release limit stated.

Release of a contaminant into the environment means to:

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

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

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

Total Nitrogen means the sum of Organic Nitrogen, Ammonia Nitrogen, Nitrite plus Nitrate 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.

You means the holder of the environmental authority.

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 where the time interval between the taking of each consecutive sample is not less than three (3) days.

µg/L means micrograms per litre.

$L_{Amax\ adj,\ T}$ means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than fifteen (15) minutes, using Fast response.

Max $L_{pA,\ T}$ means the average maximum A-weighted sound pressure level measured over a time period of not less than fifteen (15) minutes, using Fast response.

END OF PERMIT