

ENVIRONMENT PROTECTION LICENCE

(Pursuant to section 34 of the *Waste Management and Pollution Control Act*)

Licensee	PROJECT SEA DRAGON PTY LTD
Licence Number	EPL310 - 01
Registered Business Address	PROJECT SEA DRAGON PTY LTD 490 Upper Edward Street Spring Hill QLD 4000
ABN	11 604 936 192
Premises Address	N.T. Portion 03222 plan(s) CP5375 and N.T. Portion 00798 plan(s) CP5375 BAINES and BAINES
Anniversary Date:	08 December
Commencement Date:	08/12/2025
Expiry Date:	07/12/2027
Scheduled Activity	Operating premises , other than a sewage treatment plant, associated with collecting, transporting, storing, re-cycling, treating or disposing of a listed waste (as per Table 1) on a commercial or fee for service basis.
Description	Operation of an aquaculture facility to produce black tiger prawns. Listed waste (animal effluent and residues) is treated in a series of farm and pond feeder channels that discharge into an internal farm recycling pond (IFRP). The IFRP recycles water back into the production ponds for further use, and releases wastewater via a main discharge channel to an environment protection zone (EPZ). The EPZ disposes of treated wastewater via an authorised discharge point to Alligator Creek subject to conditions of this licence.

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Table 1 - Listed Wastes Authorised to be Handled

Listed Waste	Collection	Transport	Storage	Treatment	Recycling	Disposal
Animal effluent and residues	✗	✓	✓	✓	✗	✓

✓ Activity authorised by this licence

✗ Activity not authorised by this licence

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INFORMATION ABOUT THIS LICENCE

- This licence does not in any way relieve the licence holder from its obligations to comply with the WMPC Act, including the general environmental duty in section 12 of the WMPC Act and the duty to notify of incidents causing or threatening to cause pollution under section 14 of the WMPC Act.

Duration of a licence (section 40, 43 and 45 of the WMPC Act)

- A licence will remain in force until its expiry date or until it is surrendered by the licensee or is suspended or cancelled in accordance with the WMPC Act.
- The licensee must notify the Northern Territory Environment Protection Authority (NT EPA) within 14 days after ceasing to conduct the activity.
- The licensee may, with the approval of the NT EPA, surrender the licence to the NT EPA.

Amendment or Revocation of a licence (section 37 of the WMPC Act)

- The licensee may apply to amend or revoke a condition of this licence.
- A fee applies and the application must be made using the designated form via NT EPA Online.
- The NT EPA may also amend or revoke a condition of this licence as set out in section 38 of the WMPC Act.

Transfer of a licence (section 46 of the WMPC Act)

- The licensee can apply to transfer their licence to another person.

Renewal of a licence (section 40 of the WMPC Act and section 3 of the Regulations)

- The licensee may apply for the renewal of their licence not earlier than 90 days, and not later than 30 days, before their licence expires.
- A fee applies and the application must be made via NT EPA Online.

Public Register

- A copy of environment protection licences and any plans for environmental management, reports, submissions or documents required as a condition of an environment protection licence, will be placed on a register in accordance with section 9 of the WMPC Act.
- A copy of the Annual Return will be placed on the register.
- The NT EPA makes this register freely available from the NT EPA website.

Environment Protection Objectives (Part 4 of the WMPC Act), and Water Quality Standards (section 73 of the *Water Act 1992*)

- An Environment Protection Objective (EPO) is a statutory instrument to establish principles on which:
 - a. environmental quality is to be maintained, enhanced, managed or protected;
 - b. pollution, or environmental harm resulting from pollution, is to be assessed, prevented, reduced, controlled, rectified or cleaned up; and
 - c. effective waste management is to be implemented or evaluated.
- In accordance with section 18 of the WMPC Act a beneficial use, quality standard, criteria or objective declared under section 73 of the *Water Act 1992* and in force is an environment protection objective for the purposes of the WMPC Act.

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- At the time of issue of this licence no EPO or Beneficial Use Declarations or Water Control areas have been gazetted for the region.

Environmental Interests

- This section highlights sensitivity of the surrounding land use and environment associated with the location of the approved activity.
- Sites of Conservation Significance:
 - SOCS Number 27 - Legune coastal floodplain
- Ramsar Wetland
 - No Ramsar listing, but the Legune Wetlands are a Nationally Important Wetland and are considered to meet the criteria for Ramsar listing (NT EPA Assessment Report 80).

Cultural Interests

- It is the licensee's responsibility to contact the Aboriginal Areas Protection Authority, appropriate land council or other governing body and ensure that any Authority Certificates required as a result of conducting the licenced activity are obtained and complied with.
- Sites of Aboriginal significance including registered and recorded Aboriginal sacred sites may exist in the vicinity of the aquaculture frams comprising the Project Sea Dragon Stage 1 Legune Grow-out Facility at Legune Station.

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RULES FOR INTERPRETING THE CONDITIONS OF THIS LICENCE

- Where there is a discrepancy between the conditions of this licence and any plan, standard, guideline or other document referred to in this licence, the conditions of this licence prevail to the extent of the inconsistency.
- Any reference to any standard (Australian or international) in this licence means the relevant parts of the current version of that standard.
- A reference to any guideline or code of practice (or to the relevant parts of any guideline or code of practice) in this licence means the current version of the guideline or code of practice.
- Under section 39 of the WMPC Act, any contravention of or failure to comply with this licence by the licensee may be an offence.
- In determining whether the licensee has committed an offence, the licensee may be liable for the conduct of its directors, employees or agents.
- The licensee should ensure that each of its directors, employees, contractors or agents are aware of, and comply with, this licence.
- In this licence, unless the contrary intention appears, words that are defined in the WMPC Act are intended to have the meaning given to them in that Act.

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LICENCE CONDITIONS

GENERAL

- 1 The licensee must ensure the contact details recorded in NT EPA Online for this licence are correct at all times.
- 2 The licensee must at all times have a 24 hour emergency contact.
- 3 The licensee must pay via NT EPA Online the annual fee calculated in accordance with the method prescribed in the Regulations within 10 business days of the anniversary date of this licence, for each year or part of a year that this licence is in force.
- 4 The licensee must, 20 business days prior to commencement of licensed activity (discharge of listed waste being prawn farm wastewater from authorised discharge point), cause clear and legible signage, in English, to be displayed in a prominent location at each public entrance to the premises that includes the following details:
 - 4.1 environment protection licence number issued under the WMPC Act; and
 - 4.2 24 hour emergency contact details.
- 5 The licensee must cause a copy of this licence to be available for inspection by any person, in hard copy form, at the premises.
- 6 The licensee must implement, maintain and follow the documents listed in Table 2 from commencement of this licence.

Table 2. Licence documents

Document Name	Document Reference
Project Sea Dragon Stage 1 Legune Grow-out Facility Environmental Management Plan	EMP; EN-01-MP-EM4001 (Rev:1, 24-Jul-2018)
Project Sea Dragon Stage 1 Legune Grow-out Facility Emergency Response Plan	ERP; Rev 0 - June 2020
Project Sea Dragon Stage 1 Legune Grow-out Facility Water Quality Monitoring and Management Plan	WQMMP; Rev 3.0, 11-Jun-2019

- 7 Within 10 business days of any amendment being made to a document listed in Table 2 the licensee must provide the amended document to the NT EPA, along with:
 - 7.1 a tabulated summary of the amendment(s) with document references;
 - 7.2 reasons for the amendment(s); and
 - 7.3 an assessment of environmental risk associated with the amendment(s).
- 8 The NT EPA may require the licensee to revise or amend and resubmit any document to the NT EPA by a specified date.
- 9 The licensee must provide to the NT EPA, within 10 business days of a request, a copy of any document, monitoring data or other information in relation to the activity, in the format requested by the NT EPA.
- 10 All notices, reports, documents or other correspondence required to be provided as a condition of this

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licence, unless otherwise specified as a condition of this licence, must be provided in electronic form by uploading the document via NT EPA Online (or by emailing environmentalregulation@nt.gov.au).

- 11 The licensee must, for the duration of this licence, implement, maintain and follow a Consultation and Communication Plan which includes a strategy for communicating with persons who are likely to have a real interest in, or be affected by, the activity.
- 12 The licensee must maintain a Complaint Log for all complaints received by the licensee in relation to the activity.
- 13 The licensee must ensure that the Complaint Log includes, for each complaint received by the licensee, the following information:
 - 13.1 the person to whom the complaint was made;
 - 13.2 the person responsible for managing the complaint;
 - 13.3 the date and time the complaint was reported;
 - 13.4 the date and time of the event(s) that led to the complaint;
 - 13.5 the contact details of the complainant if known, or where no details are provided a note to that effect;
 - 13.6 the nature of the complaint;
 - 13.7 the nature of event(s) giving rise to the complaint;
 - 13.8 prevailing weather conditions at the time (where relevant to the complaint);
 - 13.9 the action taken in relation to the complaint, including any follow-up contact with the complainant; and
 - 13.10 if no action was taken, why no action was taken.

EARLY SURRENDER OF LICENCE

- 14 Any reports, records or other information required or able to be provided by the licensee under this licence must be submitted to the NT EPA prior to the licensee surrendering the licence. If the date on which a report, record or other information is required falls after the date the licensee requests to surrender this licence, the licensee must provide the report, record or information as far as possible using data available to the licensee up to and including the date the request to surrender the licence is made.

OPERATIONAL

- 15 The licensee must not collect, transport, store, recycle, treat or dispose of listed waste other than the listed waste specified in Table 1.
- 16 The licensee must ensure any plant and equipment used by the licensee in conducting the activity:
 - 16.1 is fit for the purpose and use to which it is put;
 - 16.2 is maintained;
 - 16.3 is operated by a person trained to use the plant and equipment.
- 17 The licensee must ensure that wastewater generated from washing plant and equipment associated with the activity does not cause pollution.

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- 18 The licensee must segregate waste at the premises in clearly designated areas for recycling, re-use or disposal.
- 19 The licensee must ensure that all materials that are likely to cause environmental harm are handled and stored in areas with a containment system in accordance with the relevant Australian Standard. Where no relevant Australian Standard exists, the containment system must be sized to contain 110% of the volume of the largest container within the area.
- 20 The licensee must ensure that all listed waste being transported from the premises is transported by a person licenced to transport the listed waste, and the listed waste is delivered to a facility that is licensed to accept that waste.

DISCHARGES AND EMISSIONS

Discharges to water

- 21 This licence only authorises discharge of listed waste, being animal effluent in wastewater produced during the growout of prawns. The authorised discharge point (DP1) is defined in Table 3, Attachment 1 (Location Map) and Attachment 2 (Monitoring Locations).

Table 3

Authorised Discharge Point	Description	Location
Discharge Point 1 (DP1)	Discharge Point 1 (DP1) is the outfall to Alligator Creek. DP1 can only receive prawn pond wastewater from three prawn grow-out farms. The prawn pond wastewater from each farm is drained to internal farm recycling ponds (IFRP), which drain to the main drainage channel (MDC). The MDC discharges into an environmental protection zone (EPZ), which is a wide channel designed to slow the rate of flow and to facilitate passive removal of nutrients and sediment. DP1 is located near the south east boundary of the EPZ, about 10-20 metres from the bank of Alligator Creek. Discharge to Alligator Creek from DP1 can only occur during an ebbing tide.	Latitude: -15.100136° Longitude: 129.289151°

- 22 The licensee must, for each authorised discharge point, install, operate and maintain a device to measure and record, for each discharge event:
- 22.1 the time the discharge commenced and the duration of the discharge;
- 22.2 the discharge rate of flow; and
- 22.3 the discharge volume.

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- 23 Prawn pond wastewater is only permitted to be discharged from authorised discharge point DP1:
- 23.1 from slack high tide in Alligator Creek during the ebb tide until 5.5 hours before low slack water in Alligator Creek; and
 - 23.2 the annual average daily discharge rate (ADDR) must not exceed 420 ML/day.
- 24 The licensee must ensure that the discharge from all discharge events at the authorised discharge point DP1 does not exceed the licence limits specified for that discharge point in Attachment 3 (Discharge Monitoring Program).
- 24.1 that the discharge for all discharge events at the authorised discharge point (DP1) does not exceed the licence limits specified for that discharge point in Attachment 3 (Discharge Monitoring Program); and
 - 24.2 all incidents when water quality exceeds the trigger values at monitoring locations in the receiving environment as specified in Attachment 4 (Receiving Environment Monitoring Program) are investigated and mitigation measures are implemented, where required, to protect the receiving environment.
- 25 The licensee must ensure that the discharge from all discharge events at each authorised discharge point does not:
- 25.1 contain any floating debris, oil, grease, petroleum hydrocarbon sheen, scum, litter or other objectionable matter;
 - 25.2 cause or generate odours which would adversely affect the use of surrounding waters;
 - 25.3 cause algal blooms in the receiving water;
 - 25.4 cause visible change in the behaviour of fish or other aquatic organisms in the receiving water;
 - 25.5 cause mortality of fish or other aquatic organisms; or
 - 25.6 cause adverse impacts on plants.

MONITORING

- 26 The licensee must conduct monitoring in accordance with the WQMMP, Attachment 2 (Monitoring Locations), Attachment 3 (Discharge Monitoring Program) and Attachment 4 (Receiving Environment Monitoring Program).
- 27 The licensee must ensure that all samples and field environmental data are representative of the conditions at the time of sampling.
- 28 The licensee must ensure that all samples and field environmental data are collected in accordance with recognised Australian Standards and guidelines (such as AS/NZS 5667, ANZECC/ARMCANZ)
- 29 The licensee must ensure that all monitoring samples are analysed at a laboratory with current NATA accreditation or equivalent, for the parameters to be measured.
- 30 The licensee must implement the WQMMP from the commencement date of this licence.
- 31 The licensee must ensure that any revisions to the WQMMP (other than typographical changes or revisions to formatting or referencing) are:
- 31.1 reviewed by an independent qualified professional, who must produce a written report about their review;

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- 31.2 submitted to the NT EPA with justification for revisions in accordance with condition 7; and
- 31.3 submitted to the NT EPA, in both hard copy and electronic form, with a complete copy of the independent qualified professional's written review, 20 business days prior to the proposed implementation date of the revised WQMMP.
- 32 The licensee must for all land based monitoring points specified in Attachment 2 (Monitoring Locations):
 - 32.1 install and maintain appropriate identification signage so that they are reasonably identifiable at all times; and
 - 32.2 maintain safe access and egress, as is reasonably practicable.
- 33 The licensee must ensure any samples collected in accordance with this licence, are obtained by, or under the supervision of a qualified sampler.
- 34 The licensee must ensure that, for each sample collected in accordance with Attachment 3 (Discharge Monitoring Program) and Attachment 4 (Receiving Environment Monitoring Program), the following information is recorded and retained:
 - 34.1 the date on which the sample was collected;
 - 34.2 the time at which the sample was collected;
 - 34.3 the location at which the sample was collected;
 - 34.4 the name of the person who collected the sample;
 - 34.5 the chain of custody forms relating to the sample;
 - 34.6 the field measurements (if any) and analytical results (if any) relating to the sample; and
 - 34.7 laboratory quality assurance and quality control documentation.

RECORDING AND REPORTING

- 35 A non-compliance with this licence includes:
 - 35.1 an exceedance of a discharge limit at the authorised discharge point (DP1), as specified in Attachment 3 (Discharge Monitoring Plan);
 - 35.2 an exceedance of three times or more of a trigger value for the receiving environment monitoring sites defined in Attachment 4 (Receiving Environment Monitoring Program); or
 - 35.3 an exceedance of three times or more of the trigger value at the receiving environment sampling sites specified in Attachment 4 (Receiving Environment Monitoring Program).
- 36 The licensee must keep records of all non-compliances with this licence. These records must be adequate to enable the licensee to comply with the non-compliance notification conditions of this licence.
- 37 The licensee must notify the NT EPA of any non-compliance with this licence by completing the Non-Compliance Notification via NT EPA Online (or by emailing environmentalregulation@nt.gov.au), as soon as practicable after (and in any case within 24 hours after) first becoming aware of the non-compliance.
- 38 The licensee must include in the notification of non-compliance the following information:
 - 38.1 when the non-compliance was detected and by whom;
 - 38.2 the date and time of the non-compliance;

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- 38.3 the actual and potential causes and contributing factors to the non-compliance;
- 38.4 the risk of environmental harm arising from the non-compliance;
- 38.5 the action(s) that have or will be undertaken to mitigate any environmental harm arising from the non-compliance;
- 38.6 corrective actions that have or will be undertaken to ensure the non-compliance does not reoccur;
- 38.7 if no action was taken, why no action was taken; and
- 38.8 a date when an incident investigation report will be submitted to the NT EPA.
- 39 The licensee must submit a completed Annual Return form to environmentalregulation@nt.gov.au within 10 business days after each anniversary date of this licence, which relates to the preceding 12 month period.
- 40 The licensee must, on commencement of discharge from DP1, complete and provide to the NT EPA a Monitoring Report on the impact of wastewater discharge, as prescribed by this licence, within 10 business days after each anniversary date of this licence.
- 41 The licensee must ensure that each Monitoring Report:
- 41.1 is prepared in accordance with the requirements of the NT EPA 'Guideline for Reporting on Environmental Monitoring' (or any other guideline as adopted by the NT EPA from time to time);
- 41.2 includes a tabulation, in Microsoft ® Excel ® format, of all monitoring data required as a condition of this licence;
- 41.3 includes long term trend analysis of monitoring data to demonstrate any environmental impact associated with the activity over a minimum period of three years (where the data is available); and
- 41.4 includes an assessment of environmental impact from the activity.
- 42 The licensee must complete and provide to the NT EPA a report on the activity and operations at the premises, within 20 business days after each anniversary of the commencement date of this licence, which report relates to the preceding 12 month period and includes the following information:
- 42.1 progress of construction or operation of the activity;
- 42.2 the outcomes of implementing the following strategies as per the commitment in the WQMMP section A1 Water Quality Management during construction:
- Erosion and Sediment Control Management Strategy; and
 - Acid Sulfate Soil Management Strategy.

END OF LICENCE CONDITIONS

This licence is not valid unless signed below:



Hannah Julia Schult
Director Environmental Regulation
Delegate of the Northern Territory
Environment Protection Authority
Dated: 02/12/2025

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DEFINITIONS

All terms in the Licence which are defined in the *Waste Management and Pollution Control Act* have the meaning given in that Act unless otherwise or further defined in this section.

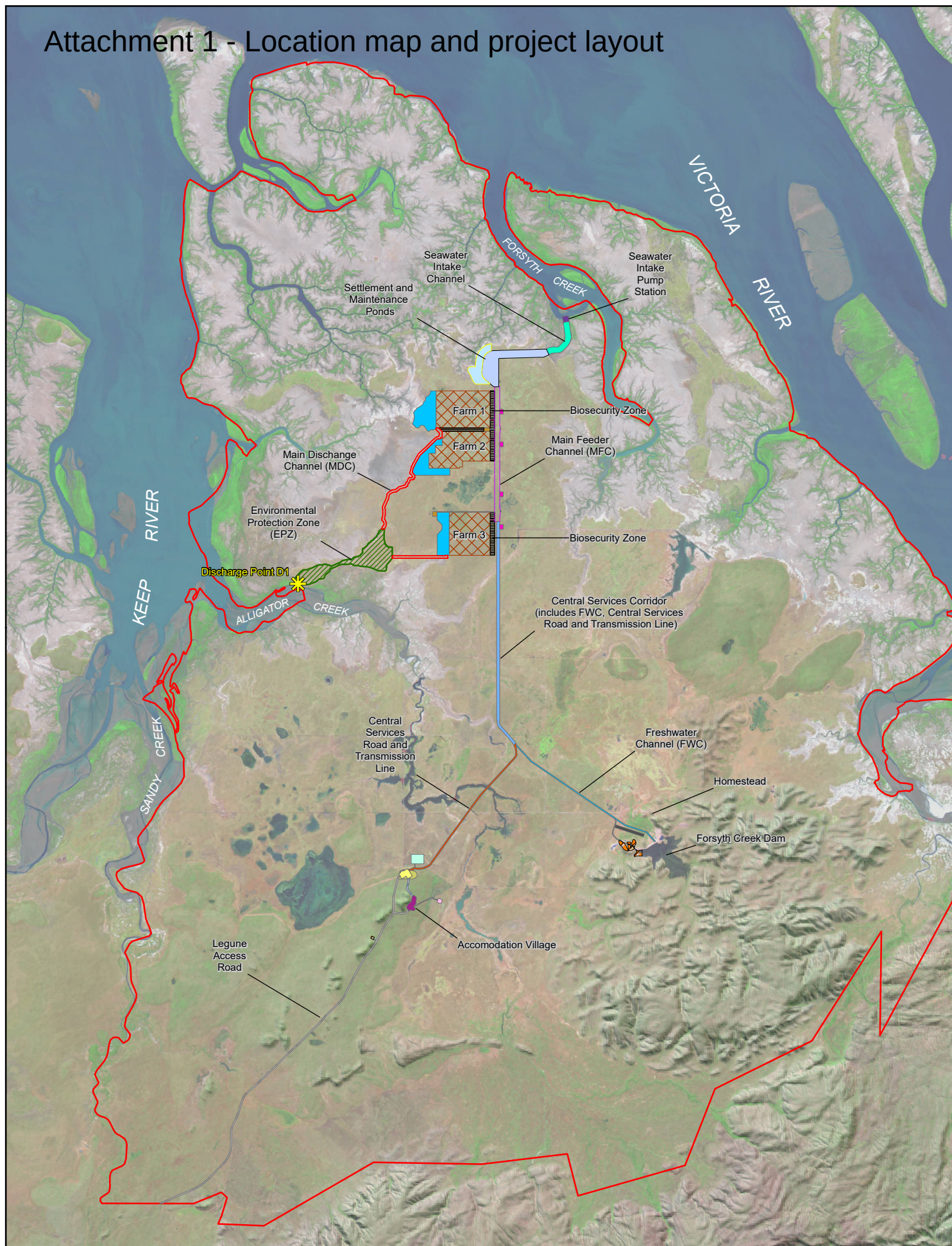
DEFINITION	In this licence, unless a contrary intention appears:
24 hour emergency contact	the phone number of a person who can be contacted at any time and be capable of responding to and providing information about any incident associated with the activity.
Activity	the Scheduled activity as described on the covering page of this licence.
ADDR	The “annual average daily discharge rate” on any day is the sum of the daily discharge rate for each of the 365 days preceding that day divided by 365. For the avoidance of doubt, the daily discharge rate for the days preceding commencement of the licenced discharge equals zero.
Annual Return	an NT EPA prescribed format for demonstrating and reporting compliance with the conditions of this licence and providing information on waste volumes for the preceding 12 month period.
ANZECC/ARMCANZ	Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, 2000: National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting.
Environmental Protection Zone (EPZ)	a wide, shallow water channel that is designed to regulate the flow of the wastewater by reducing the velocity and holding the wastewater so that discharge to Alligator Creek can be timed
Listed waste	a waste included under Schedule 2 of the Regulations.
NATA	National Association of Testing Authorities, Australia.
Non-compliance notification	an NT EPA prescribed format for notifying the NT EPA of a non-compliance.
NT EPA Online	online system for Environment Protection Licence (EPL), Environment Protection Approval (EPA) and Waste Discharge Licence (WDL) lodgement and maintenance.
Point source discharge	means any discernible, confined or discrete conveyance from which contaminants or waste are or may be discharged.
Qualified professional	a person: • a person who has professional qualifications, training and skills and experience relevant to the nominated subject matters and can give authoritative assessment, advice and analysis about performance relevant to the subject matters using relevant protocols, standards, methods, literature.
Qualified sampler	a person who has training and experience in obtaining samples from the relevant environmental medium.
Regulations	<i>Waste Management and Pollution Control (Administration) Regulations 1998.</i>
Trigger values	assigned value for each indicator used to assess the risk to an environmental

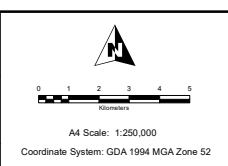
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value, a value that initiates some type of pre-defined management action.

Waste transport certificate	the NT EPA waste tracking documentation used to track listed waste being transported interstate as required in accordance with the National Environment Protection (Movement of Controlled Waste Between States and Territories) Measure.
Wastewater	water that contains a contaminant or waste.
Water	includes: (a) surface water, ground water and tidal waters; (b) coastal waters of the Territory, within the meaning of the <i>Coastal Waters (Northern Territory Powers) Act 1980</i> of the Commonwealth; and (c) water containing an impurity.
WMPC Act	the Northern Territory <i>Waste Management and Pollution Control Act 1998</i> .
WQMMP	Project Sea Dragon Stage 1 Legume Grow-out Facility Water Quality Monitoring and Management Plan

Attachment 1 - Location map and project layout



	Source: Legume Station: NT Land Information Services 2015 Project MasterPlan: Aurecon 2016 Landscape: Geoscience Australia 2006 Disclaimer: No warranty is given in relation to the data (including accuracy, reliability, completeness, currency or suitability) and no liability is accepted (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data. Data must not be used for direct marketing or be used in breach of the privacy laws. File: File: LegumeEPLA-FIG1-Location-200626 Date: 26/06/2020	 A4 Scale: 1:250,000 Coordinate System: GDA 1994 MGA Zone 52	 Legume Station  Discharge Point D1	Location Map
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Attachment 2 - Monitoring locations

Project Sea Dragon, Stage 1 Legume Grow-out Facility
Water Quality Monitoring and Management Plan

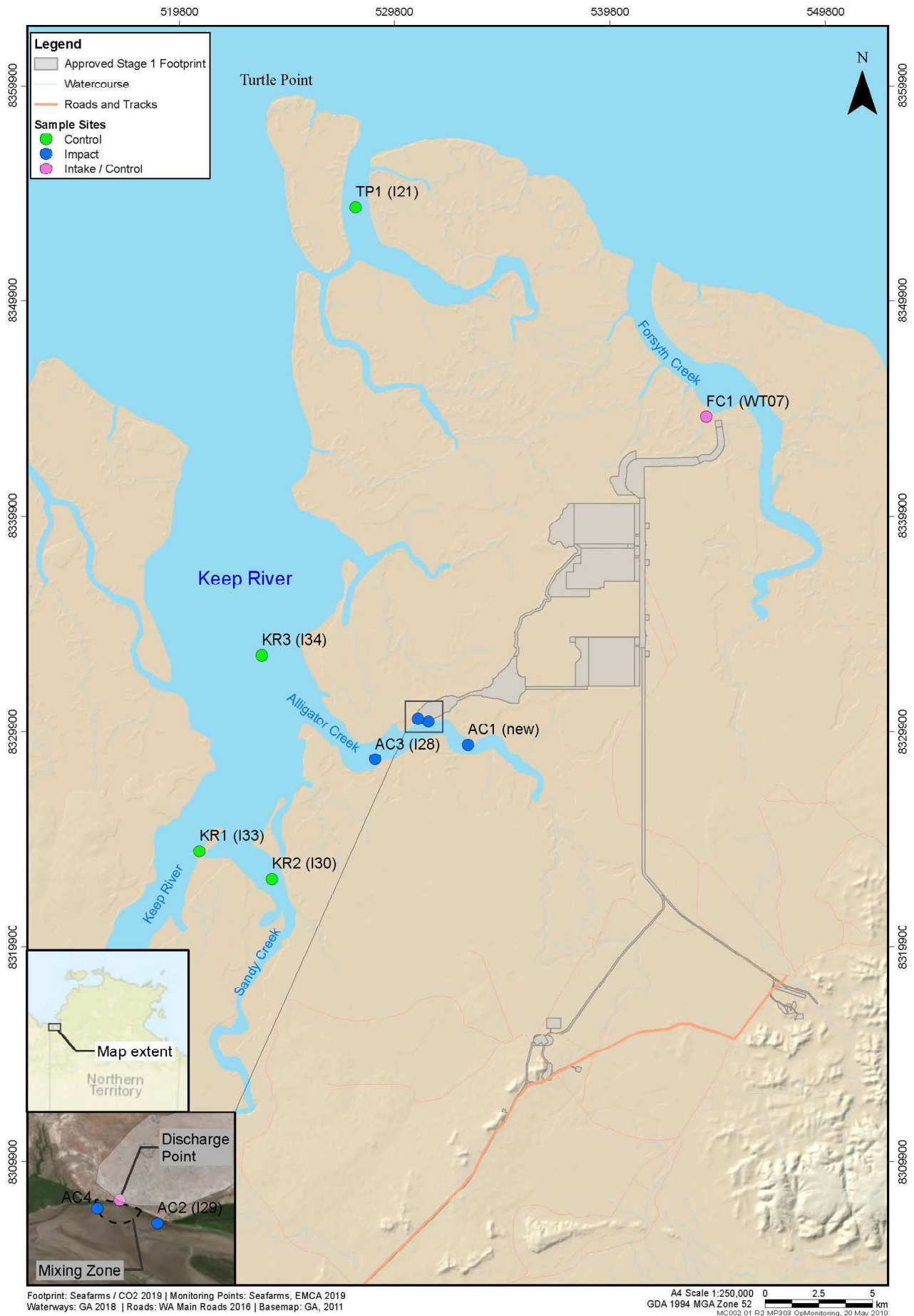


FIGURE A3-1 OPERATIONAL SAMPLING LOCATIONS

Ref: EN01-MN4201, Revision: 3.0, 11-Jun-2019, EPBC Ref: EPBC 2015/7527
Print date: 11-Jun-2019 | Note: printed copies are uncontrolled

ATTACHMENT 3: DISCHARGE MONITORING PROGRAM

	Site Code	Authorised Monitoring Points		Description	Latitude	Longitude
		DP1	EPZ01 ²			
		Authorised Discharge Point	TBA			
		-15.100136				
		129.289151				
Parameter	Unit	Monitoring Frequency		Discharge Limits ³		
				Mean	Maximum	
Field Measurements						
Flow	ML/day	C	-	420	-	
Flow timing ¹	-	C	-	-	-	
pH	pH units	M	M	-	>5 <9	
Electrical Conductivity (EC)	µS/cm	M	M	-	-	
Dissolved Oxygen (DO)	% saturation	M	M	-	>20	
Temperature (T)	°C	M	M	-	-	
Turbidity (NTU)	NTU	M	-	-	-	
Laboratory Parameters						
Total Nitrogen (TN)	mg/L	M	-	0.8	3.0	
Total Phosphorous (TP)	mg/L	M	-	0.1	0.3	
Chlorophyll-a (Chl-α)	µg/L	M	-	20	100	
Total Suspended Solids (TSS)	mg/L	M	-	20	100	

Key	
-	Not applicable
C	Continuous monitoring of discharge flow volumes and discharge parameters when discharge is occurring from DP1.
M	Monitoring must be conducted on a monthly basis when the discharge is occurring from DP1.
	¹ Real-time tidal level to demonstrate timing of authorised discharge coincides with tides from 1 hour prior to ebb tide commencing to 5.5 hours prior to ebb tide ending (i.e. low tide) in Alligator Creek.
	² PSD to identify additional monitoring locations in the EPZ that collectively represent performance of the EPZ. EPZ samples to be taken at the surface, near the bottom and (where depth >1.5m) at least one depth at the midway between the two.
	³ The discharge limits for TN, TP, Chl-a, TSS were defined using data collected at existing prawn farms operated by Seafarms, and the EIS impact assessment was based on this data and background levels built on the baseline data available at the time. These discharge limits apply to DP1.

Site Code	Source
DP1	Discharge Point 1 Located to the southeast boundary of the environmental protection zone (EPZ) approximately 18-20 metres back from receiving waters. DP1 receives all wastewater generated from three prawn aquaculture grow-out farms that feed through a series of aqueducts into via two main drainage channels (MDC) connected to farms 1 & 2 and farm 3. The MDC flows into the EPZ which discharges via weir onto a rock armoured spillway at the outfall to Alligator Creek.
EPZ01	Environmental Protection Zone Representative sample locations within the EPZ to monitor overall performance and detect potential stratification and turnover events (and other processes) that may lead to episodic water quality fluxes and discharge of poor quality effluent to the receiving environment. A weir, constructed at the interface of the MDC and the EPZ, will control water levels and flows, with capacity for water to be recycled back to the farm from the MDC to conserve freshwater supplies and reduce seawater intake. The EPZ would primarily function to regulate the flow of the discharge water by reducing the velocity and holding water for controlled discharge. At peak capacity, the discharge will maintain a constant rate of less than 420 ML/day during ebb tides. The majority of the discharge would flow through a 100 m wide channel in the centre of the EPZ, with 'overflow' areas built in to support peak discharge and water from storm events. The 'overflow' and the margins of the channel are expected to eventually be colonised by local samphire and/or mangrove species to assist with nutrient uptake.

ATTACHMENT 4: RECEIVING ENVIRONMENT MONITORING PROGRAM

[illegible]

Key	
-	Not applicable.
A	Monitoring must be conducted on an annual basis following first commencement of operational discharges from authorised discharge point (DP1).
M	Monitoring must be conducted on a monthly basis when the discharge is occurring from DP1. Water quality grab sampling according to the methods outlined in <i>AS/NZS 5667.1 - Water quality</i> (from ~30cm depth in the water column)
Q	Monitoring must be conducted quarterly: two (2) during the wet season, and two (2) during the dry season per year. Wet season sampling must be undertaken between January and February, and dry season sampling must be undertaken between July and Aug. Data must be collected as close as practicable in time on each sampling event, aiming as far as reasonable and practicable for the same tidal regime at each site.
M	
S	Sediment sampling parameters to be conducted on an annual basis in accordance with AS/NZS 5667.12 - Water quality - Sampling, Part 12: Guidance on sampling of bottom sediments, Simpson & Batley (2016) and a sediment core of 2 cm depth, and recommendations 2 and 3 of Munksgaard (2013).
MS	Denotes parameters to be monitored on a Monthly basis, and parameters for sediment monitoring to be conducted on an annual basis.
QS	Denotes parameters to be monitored on a Quarterly basis, and parameters for sediment monitoring to be conducted on an annual basis.

¹*Sediment and ecological monitoring - A departure of >1 standard deviations in the baseline data that indicates impact requires further investigation to determine whether an ecologically significant impact is occurring due to site operations*

² Monitoring must be conducted daily for the duration of discharges associated with emergency biosecurity measures that require the evacuation of farm pond water.

³ As defined in Table 5-5 Alligator Creek Trigger Values, (EN01-MN4201 WQMMP Rev 3.0).

⁴ Based on the upper and lower default trigger value for Tropical Australia, estuaries (ANZG 2018).

⁵ To assess for anoxic events that require action.

⁶ To assess the influence of acid sulphate soils at the boundary of the mixing zone.

⁷ Mangrove coverage / distribution / health from available satellite or aerial imagery and community composition and health at sites adjacent to each monitoring sites every 2 years. Ecological assessment to be conducted using methods comparable with those described in FRC (2016) – mangrove assessments will utilise multi-spectral imagery / NDVI metrics to assess extent, health and intactness, with ground truthing conducted generally as per FRC (2016).