

ENVIRONMENT PROTECTION LICENCE

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

Licensee	Project Sea Dragon Pty Ltd
Licence Number	EPL317
Premises Address	N.T. Portion 03192 plan(s) S86/198 BYNOE
Anniversary Date:	12 March
Commencement Date:	12/03/2021
Expiry Date:	11/03/2026
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 consisting of a core breeding centre (CBC), a broodstock maturation centre (BMC) and hatchery to produce black tiger prawn stock for transfer to a grow-out facility at Legune Station. Listed waste (animal effluent and residues) is treated in a series of three settlement ponds. Discharge water from the CBC, BMC, hatchery and settlement ponds is connected to a single 355 mm diameter high-density polyethylene (HDPE) pipeline that discharges via the authorised discharge point to an armoured outfall structure on the low tide mark at Wheatley 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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- 1 Project Layout.pdf
- 2 Authorised Monitoring Locations.pdf
- 3 Attachment A Discharge Monitoring Program.DOCX
- 4 Attachment B Environmental Impact Monitoring Program Final.DOCX

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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 *Waste Management and Pollution Control Act 1998* (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*)

- 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* and in force is an environment protection objective for the purposes of the WMPC Act.

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- The following EPOs and Beneficial Use Declarations (BUDs) are relevant to this licence:
 - Fog Bay Area beneficial uses:
 - *aquatic ecosystems protection*
 - *recreation water quality, and*
 - *aesthetics.*
- NTG Gazette No. G20, 27 May 1998.

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
- Ramsar Wetland

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.

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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 the annual fee calculated in accordance with the method prescribed in the Regulations within 50 business days of the anniversary of the commencement 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 activities, 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:
 - 5.1 in hard copy form, at the premises; and
 - 5.2 on the licensee's website.
- 6 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.
- 7 All notices, reports, documents or other correspondence required to be provided as a condition of this 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 waste@nt.gov.au).
- 8 The licensee must maintain and implement the documents listed in Table 2.

Table 2: Documents to Apply

Document Title	Document Reference
Environmental Management Plan	EN02-MP4001 (Rev 0, 8-May-2019)
Water Quality Monitoring and Management Plan	EN02-MN4201 (Rev 1, 25-Feb-2020)

- 9 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:
 - 9.1 a tabulated summary of the amendment(s) with document references;
 - 9.2 reasons for the amendment(s); and
 - 9.3 an assessment of environmental risk associated with the amendment(s).
- 10 The NT EPA may require the licensee to revise or amend and resubmit any amended document. Where the NT EPA requires a document to be resubmitted, the licensee must submit it to the NT EPA by the date specified by the NT EPA.
- 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

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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.
- 14 The licensee must implement, maintain and follow an Emergency Response Plan that addresses procedures for responding to emergencies associated with the activity that may cause environmental harm.

EARLY SURRENDER OF LICENCE

- 15 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

- 16 The licensee must, without limiting any other condition of this licence, in conducting the activity do all things reasonable and practicable to ensure the activity does not adversely affect Wheatley Creek.
- 17 The licensee must not collect, transport, store, recycle, treat or dispose of listed waste other than the listed waste specified in Table 1.
- 18 The licensee must ensure any plant and equipment used by the licensee in conducting the activity:
 - 18.1 is reasonably fit for the purpose and use to which it is put;
 - 18.2 is maintained;
 - 18.3 is operated by a person trained to use the plant and equipment; and

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- 18.4 is operated by, or operated by a person accompanied by, a person trained to handle, store or dispose of listed waste in connection with the activity.
- 19 The licensee must ensure that wastewater generated from washing plant and equipment associated with the activity does not cause pollution.
- 20 The licensee must segregate waste received at the premises in clearly designated areas for recycling, re-use or disposal.
- 21 The licensee must segregate waste generated at the premises in clearly designated areas for recycling, re-use or disposal.
- 22 The licensee must ensure that litter:
- 22.1 is contained within the boundary of the premises;
- 22.2 is not deposited or allowed to accumulate in stormwater drain(s), water or leachate dam(s); and
- 22.3 does not accumulate along the boundary of the premises.
- 23 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.
- 24 The licensee must ensure that all listed waste being transported from the premises is transported by a person licenced under section 30 of the WMPC Act to transport the listed waste.

DISCHARGES AND EMISSIONS

- 25 The licensee must ensure there is no migration or overflow of a contaminant or waste, which causes or may cause environmental harm, beyond the boundary of the land on which the premises are located. (For the avoidance of doubt, this condition is not intended to authorise the discharge of a contaminant or waste to any land or water which discharge has not been specifically authorised by another condition of this licence.)
- 26 The licensee must not allow a contaminant or waste, which causes or may cause environmental harm, to enter water.
- 27 The licensee must ensure that stormwater does not come into contact with a contaminant or waste, which causes or may cause environmental harm.

Discharges to water

- 28 This licence authorises discharge to Wheatley Creek from the authorised discharge point as identified in Table 3 and as otherwise allowed in accordance with the conditions of this licence.

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Table 3 - Authorised Discharge

Authorised Discharge Point	Description	Location
Discharge Point 1 (DP1)	Discharge Point 1 (DP1) receives wastewater from a series of three settlement ponds (Stage 1*) via a high-density polyethylene (HDPE) discharge pipeline connecting the CBC/BMC and settlement ponds to a discharge outfall structure at Wheatley Creek. The outfall structure extends the HDPE discharge pipe over the embankment to a constructed rock mattress on the low tide mark. DP1 is located on the bank of Wheatley Creek on the eastern boundary of NT Portion 3192, approximately 1.4 km from the confluence of Mackenzie Arm.	Latitude: -12.724254 Longitude: 130.530041

* Stage 2 will establish a series of release control ponds to provide a holding area until water is of a quality that can be discharged at mid to high tide .

- 29 The licensee must, prior to discharge from the authorised discharge point, install a device to measure and record each discharge event at DP1. The device must record:
- 29.1 the time the discharge commenced and the duration of the discharge;
 - 29.2 the discharge rate of flow; and
 - 29.3 the discharge volume.
- 30 The licensee must, in the event that trigger values cannot be met, install a diffuse discharge system to aid dilution.
- 31 The licensee must ensure that the discharge from all discharge events at DP1 listed in Table 1 does not:
- 31.1 contain any floating debris, oil, grease, petroleum hydrocarbon sheen, scum, litter or other objectionable matter;
 - 31.2 cause or generate odours which would adversely affect the use of surrounding waters;
 - 31.3 cause algal blooms in the receiving water;
 - 31.4 cause mortality of fish or other aquatic organisms; or
 - 31.5 cause adverse impacts on plants.
- 32 The licensee must ensure that the authorised discharge only occurs at mid to high tide, staged over two discharge cycles per day in line with semi-diurnal tides to maximise dispersion and mixing.
- 33 The licensee must not exceed a trigger value specified in Attachment B:
- 33.1 on three consecutive occasions; or
 - 33.2 on a single occasion where the parameter measures greater than or equal to three times the trigger value.

Environmental Audit

- 34 The licensee must undertake, annually, and as prescribed by the conditions of this licence, an environmental audit by a qualified person to evaluate the:
- 34.1 extent to which compliance has been achieved with the licence;

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- 34.2 ability of management systems to manage waste and prevent environmental harm resulting from pollution.
- 35 The licensee must submit the proposed scope for the environmental audit no later than 20 business days prior to the proposed commencement date of the environmental audit (which must be specified when the proposed scope is submitted), to the NT EPA for review and approval.
- 36 The NT EPA may require the licensee to revise or amend and resubmit any proposed scope for an environmental audit. Where the NT EPA requires the environmental audit scope to be resubmitted, the licensee must submit it to the NT EPA by the date specified by the NT EPA
- 37 The licensee must ensure that each environmental audit:
- 37.1 is not commenced until written approval of the environmental audit scope is received from the NT EPA; and
- 37.2 is undertaken in accordance with the approved scope.
- 38 The licensee must ensure that, for each environmental audit undertaken by the licensee:
- 38.1 a written report is prepared and signed by the qualified person who conducted the audit;
- 38.2 the written report is completed within 2 calendar months of the licensee's receipt of the NT EPA's approval of the environmental audit scope; and
- 38.3 the written report is provided in full to the NT EPA within 5 business days of being signed by the qualified person.
- 39 The environmental audit requirements of this licence shall:
- 39.1 take effect from the first commencement of operational discharges from authorised discharge point (DP1) under this licence;
- 39.2 be for the 12 month period from the commencement of the first authorised discharge; and
- 39.3 be informed by the results of monitoring undertaken in accordance with the Project Sea Dragon, CBC & BMC Bynoe Harbour Water Quality Monitoring and Management Plan (WQMMP) in Table 2, and Attachments A and B of this licence for the audit period specified in condition 39.2.

MONITORING

- 40 The licensee must implement, maintain and follow the WQMMP from the commencement date of this licence.
- 41 The licensee must ensure that any proposed revisions to the WQMMP (other than typographical changes or revisions to formatting or referencing) are:
- 41.1 reviewed by a suitably qualified independent professional, who must produce a written report about their review;
- 41.2 submitted to the NT EPA with justification for revisions; and
- 41.3 submitted to the NT EPA, in both hard copy and electronic form (with a complete copy of the qualified professional's/qualified person's/expert panel's/reference panel's written review), 20 business days prior to the proposed implementation date.
- 42 The NT EPA may require the licensee to revise or amend and resubmit the WQMMP. Where the NT EPA requires the WQMMP to be resubmitted, the licensee must submit it to the NT EPA by the date specified by the NT EPA.

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- 43 The licensee must ensure any samples collected in accordance with the WQMMP, Attachment A and B, or in connection with the activity or this licence, are obtained by, or under the supervision of a qualified sampler.
- 44 The licensee must conduct discharge and environmental impact monitoring at the Authorised Monitoring Points in accordance with Attachment A and Attachment B.
- 45 The licensee must ensure that all samples and field environmental data are representative of the conditions at the time of sampling.
- 46 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)
- 47 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.
- 48 The licensee must ensure that, for each sample collected in accordance with the WQMMP, Attachments A & B, or the activity the following information must be recorded and retained:
 - 48.1 the date on which the sample was collected;
 - 48.2 the time at which the sample was collected;
 - 48.3 the location at which the sample was collected;
 - 48.4 the name of the person who collected the sample;
 - 48.5 the chain of custody forms relating to the sample;
 - 48.6 the field measurements (if any) and analytical results (if any) relating to the sample; and
 - 48.7 laboratory quality assurance and quality control documentation.

RECORDING AND REPORTING

- 49 The licensee must retain records relating to waste, including listed waste, as required by the conditions of this licence, for a period of 2 years after the end of the 12 month period to which the record relates.
- 50 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.
- 51 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 waste@nt.gov.au), as soon as practicable after (and in any case within 24 hours after) first becoming aware of the non-compliance.
- 52 The licensee must include in the notification of non-compliance the following information:
 - 52.1 when the non-compliance was detected and by whom;
 - 52.2 the date and time of the non-compliance;
 - 52.3 the actual and potential causes and contributing factors to the non-compliance;
 - 52.4 the risk of environmental harm arising from the non-compliance;
 - 52.5 the action(s) that have or will be undertaken to mitigate any environmental harm arising from the non-compliance;
 - 52.6 corrective actions that have or will be undertaken to ensure the non-compliance does not reoccur;

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- 52.7 if no action was taken, why no action was taken; and
- 52.8 a date when an incident investigation report will be submitted to the NT EPA.
- 53 The licensee must keep records of all exceedances of trigger values specified in the most current WQMMP and Attachments A and B. These records must be adequate to enable the licensee to comply with the exceedance notification conditions of this licence.
- 54 The licensee must ensure that the notification of the trigger value exceedance includes the following information:
 - 54.1 when the exceedance was detected and by whom;
 - 54.2 the date and time of the exceedance;
 - 54.3 the actual and potential causes and contributing factors to the exceedance;
 - 54.4 the risk of environmental harm arising from the exceedance;
 - 54.5 the action(s) that have or will be undertaken to address the exceedance and/or environmental harm;
 - 54.6 if no action was taken, why no action was taken; and
 - 54.7 a date when an incident investigation report will be submitted to the NT EPA.
- 55 The licensee must submit a completed Annual Return via NT EPA Online within 10 business days after each anniversary date of this licence, which relates to the preceding 12 month period.
- 56 The licensee must complete and provide to the NT EPA a Monitoring Report, as prescribed by this licence, within 10 business days after each anniversary date of this licence.
- 57 The licensee must ensure that each Monitoring Report:
 - 57.1 is prepared in accordance with the requirements of the NT EPA 'Guideline for Reporting on Environmental Monitoring';
 - 57.2 includes a tabulation of all monitoring data required as a condition of this licence, and the data must be provided electronically in Microsoft Excel Format;
 - 57.3 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 the data used in this analysis must be provided electronically in Microsoft Excel format; and
 - 57.4 reports on all exceedances and investigations undertaken for this licence;
 - 57.5 reports on the total contaminant load discharged from the authorised discharge point annually; and
 - 57.6 includes an assessment of environmental impact from the activity.
- 58 The NT EPA may require the licensee to revise or amend and resubmit any Monitoring Report. Where the NT EPA requires the Monitoring Report to be resubmitted, the licensee must submit it to the NT EPA by the date specified by the NT EPA.

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END OF LICENCE CONDITIONS

This licence is not valid unless signed below:



Leonie Cooper
Director Environment Authorisations
Delegate of the Northern Territory
Environment Protection Authority
Dated: 16/03/2021

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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.
Air	includes any layer of the atmosphere.
Annual fee	yearly fee payable in respect of the activity as specified in the WMPC Act and the Regulations.
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.
Business days	a day not Saturday, Sunday or a public holiday, in the Northern Territory.
Complaint Log	a register of complaints to be maintained by the Licensee that records the details of each complaint received in relation to the activity.
Consultation and Communication Plan	a written plan documenting proposed consultation and communications for the activity before, during and after the activity which includes a strategy for communicating with members of the public who are likely to have a real interest in, or be affected by, the activity.
Contact details	includes the 24 hour emergency contact, and name, position title and phone number of a representative of the licensee who can be contacted about the licence and activity.
Contaminant	a solid, liquid or gas or any combination of such substances and includes: (a) noise, odour, heat and electromagnetic radiation; (b) a prescribed substance or prescribed class of substances; and (c) a substance having a prescribed property or prescribed class of properties.
Discharges	allow a liquid, gas or other substance to flow out from where it has been confined.
Emergency Response Plan	a written plan documenting the licensee's procedures for responding to emergencies caused by, resulting from or associated with the activity and that may cause environmental harm.
Environmental audit	has the meaning given in section 47 of the WMPC Act.
Environmental harm	(a) any harm to or adverse effect on the environment; or (b) any potential harm (including the risk of harm and future harm) to or potential adverse effect on the environment, of any degree or duration and includes environmental nuisance.

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Environmental nuisance	means: (a) an adverse effect on the amenity of an area that: (i) is caused by noise, smoke, dust, fumes or odour; and (ii) unreasonably interferes with or is likely to unreasonably interfere with the enjoyment of the area by persons who occupy a place within the area or are otherwise lawfully in the area; or (b) an unsightly or offensive condition caused by contaminants or waste.
Incident	includes: (a) an accident, emergency or malfunction; and (b) a deliberate action, whether or not that action was taken by the person conducting the activity in the course of which the incident occurred.
Land	includes water and air on, above or under land.
Listed waste	a waste included under Schedule 2 of the Regulations.
Litter	litter, garbage, rubbish, refuse or waste matter, and includes the body of a dead animal.
Maintain	kept in a manner that it does not present or cause a risk of environmental harm or a hazard to persons or property or, for the purposes of documents including plans, a process of reviewing and amending documentation to ensure it is relevant.
Material environmental harm	environmental harm that: (a) is not trivial or negligible in nature; (b) consists of an environmental nuisance of a high impact or on a wide scale; (c) results, or is likely to result, in not more than \$50,000 or the prescribed amount (whichever is greater) being spent in taking appropriate action to prevent or minimise the environmental harm or rehabilitate the environment; or (d) results in actual or potential loss or damage to the value of not more than \$50,000 or the prescribed amount (whichever is greater).
NATA	National Association of Testing Authorities, Australia.
Non-compliance	failure or refusal to comply, whether by act or omission, with obligations or requirements and includes any exceedance of a licence limit.
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.
NT EPA Online Vehicle Register	the vehicle register found at NT EPA Online.
Plant and equipment	all material items used in association with the activity, including (but not limited to) storage vessels and containers, pipe work and hosing, vehicles (including vessels), tools, and measuring equipment.
Point source discharge	means any discernible, confined or discrete conveyance from which contaminants or waste are or may be discharged.
Pollute	(a) emit, discharge, deposit, or disturb, directly or indirectly, a contaminant or waste; or (b) cause, permit, or fail to prevent, directly or indirectly, the emission, discharge, deposition, disturbance or escape of a contaminant or waste.

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Pollution	(a) a contaminant or waste that is emitted, discharged, deposited or disturbed or that escapes; or (b) a contaminant or waste, effect or phenomenon, that is present in the environment as a consequence of an emission, discharge, deposition, escape or disturbance or a contaminant or waste.
Premises	the premises identified in this licence which includes equipment, plant and structures, whether stationary or portable, and the land on which premises are situated.
Public entrance	access to the premises that is utilised by the public.
Putrescible waste	the component of the waste stream liable to become putrid. For example, organic matter that has the potential to decompose with the formation of malodorous substances, usually refers to vegetative, food and animal products.
Qualified person	a person registered under Section 68 of the WMPC Act.
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.</i>
Serious environmental harm	environmental harm that is more serious than material environmental harm and includes environmental harm that: (a) is irreversible or otherwise of a high impact or on a wide scale; (b) damages an aspect of the environment that is of a high conservation value, high cultural value or high community value or is of special significance; (c) results or is likely to result in more than \$50,000 or the prescribed amount (whichever is greater) being spent in taking appropriate action to prevent or minimise the environmental harm or rehabilitate the environment; or (d) results in actual or potential loss or damage to the value of more than \$50,000 or the prescribed amount (whichever is greater).
Solid inert waste	solid waste that has no active chemical or biological properties. These wastes do not undergo environmentally significant physical, chemical or biological transformation.
Stormwater	water flowing over ground surfaces, in natural streams and drains as a direct result of rainfall over a catchment and consists primarily of rainfall runoff.
Trigger values	assigned value for each indicator used to assess the risk to an environmental value, a value that initiates some type of pre-defined management action.
Waste	(a) a solid, a liquid or a gas; or (b) a mixture of such substances, that is or are left over, surplus or an unwanted by-product from any activity (whether or not the substance is of value) and includes a prescribed substance or class of substances.
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;

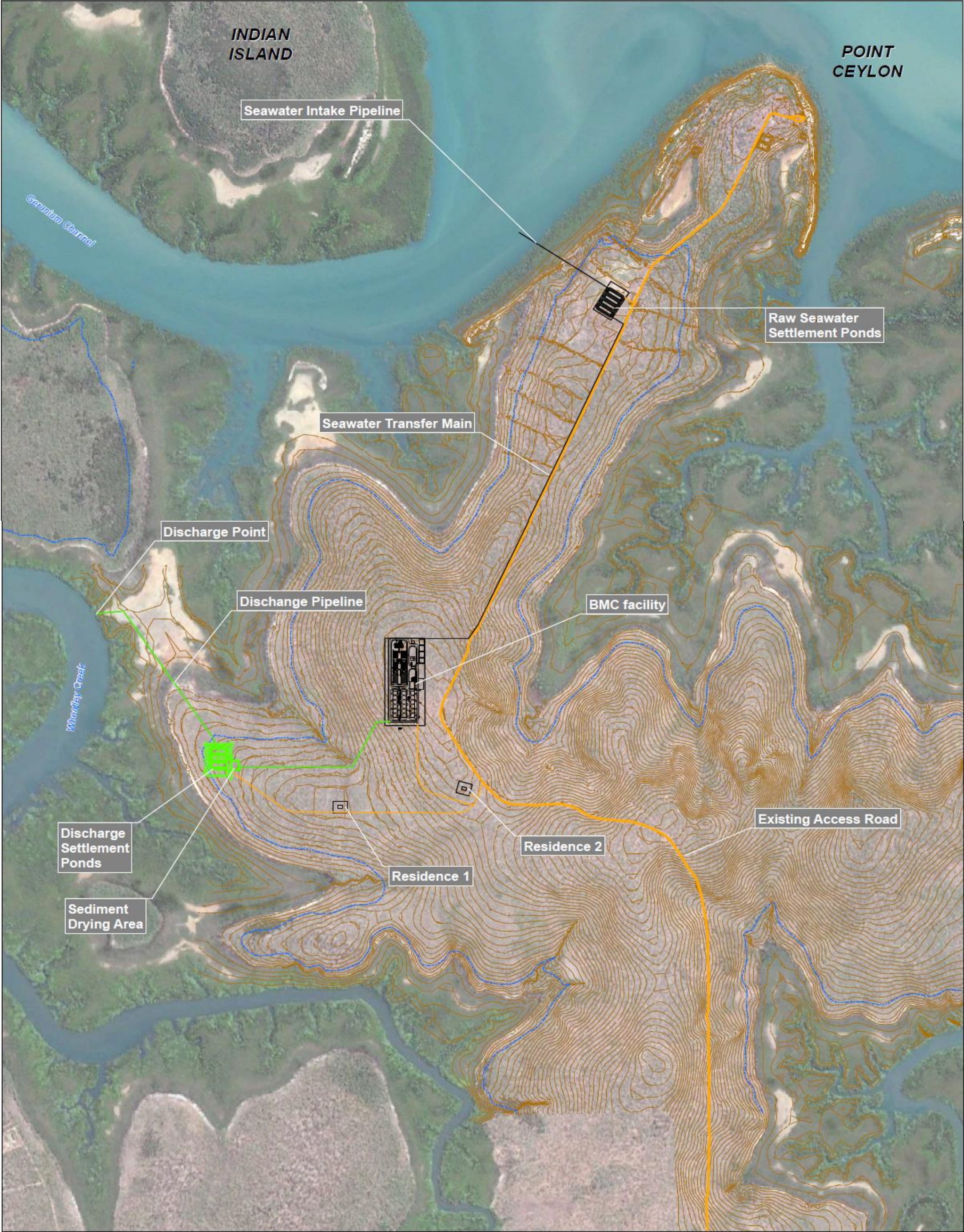
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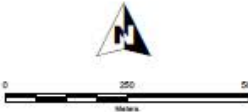
- (b) coastal waters of the Territory, within the meaning of the *Coastal Waters (Northern Territory Powers) Act 1980* of the Commonwealth; and
- (c) water containing an impurity.

WMPC Act

the Northern Territory *Waste Management and Pollution Control Act 1998*.

1. PROJECT LAYOUT



	Source:	Imagery: Google Earth 2011 Project Infrastructure Detail: Wallbridge Gilbert Aztec (WGA) 2019	 A3 Scale: 1:15,000 Coordinate System: GDA 1994 MGA Zone 52	Subject of this Application Contour	Figure 1 PROJECT LAYOUT
	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: Byrnes_EPA_App_Fig1_ProjectLayout_190208 Data: 6/22/2019			

ATTACHMENT C: AUTHORISED MONITORING LOCATIONS

Project Sea Dragon, Core Breeding Centre and Broodstock Maturation Centre
Supporting Report to the WQMMP

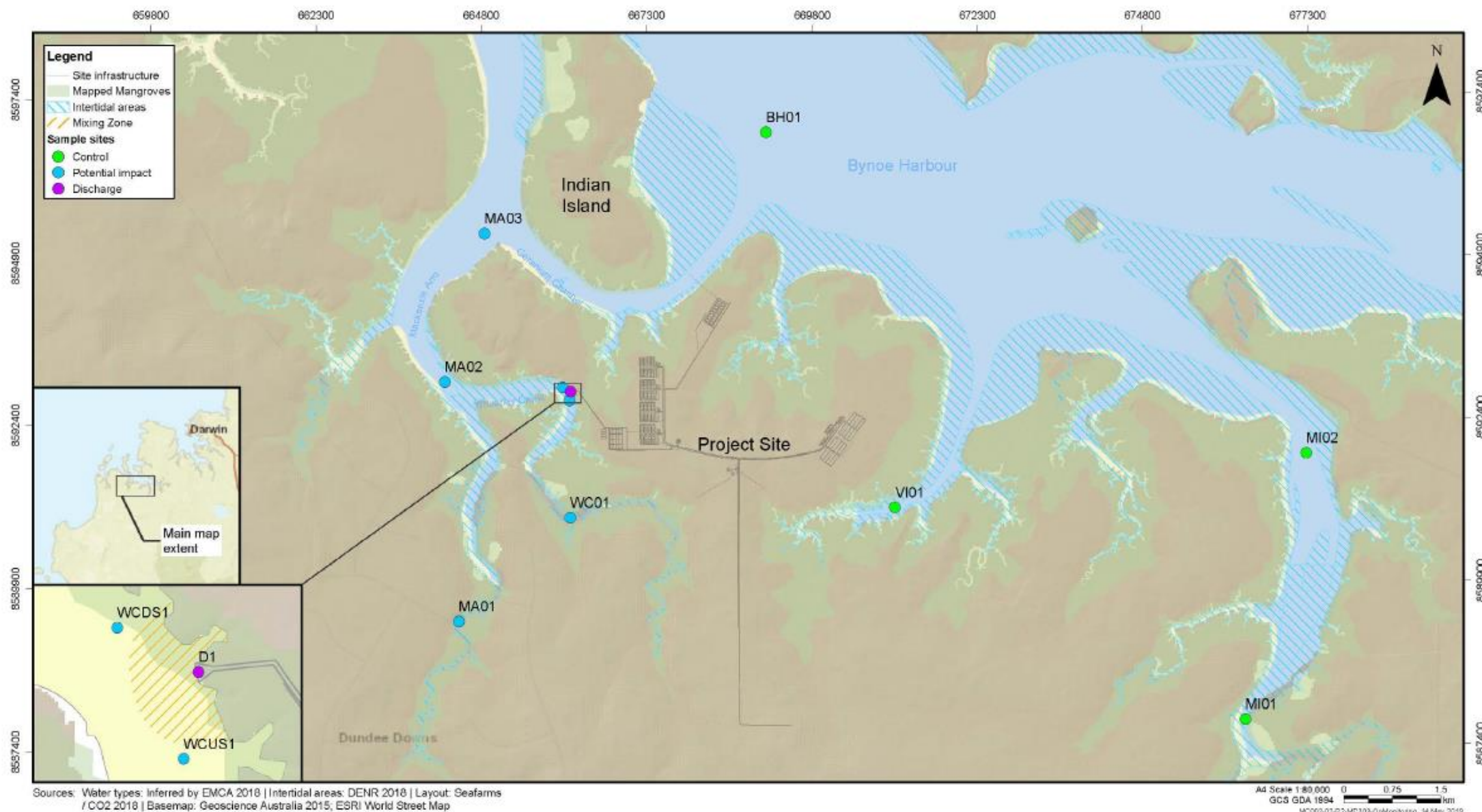


FIGURE 10-1 WATER QUALITY MONITORING SITES

Ref: EN02-MN4201, Revision: 1, 25-Feb-2020

Print date: 25-Feb-2020 | Note: printed copies are uncontrolled

ATTACHMENT A: DISCHARGE MONITORING PROGRAM

		Site Code	Description	Latitude	Longitude	Authorised Monitoring Points
						DP1 ¹
						Authorised Discharge Point
						-12.724254
						130.530041
Parameter	Unit	Monitoring Frequency	Discharge Limits ³			
			Median	Maximum		
Field Measurements						
Flow (Stage 1)	ML/day	C	-	3		
Flow (Stage 2)	ML/day	C	-	12.5		
Flow timing ¹	-	C	-	-		
pH	pH units	M	-	-		
Electrical Conductivity (EC)	µS/cm	M	-	-		
Dissolved Oxygen (DO)	% saturation	M	-	-		
Temperature (T)	°C	M	-	-		
Turbidity (NTU)	NTU	M	-	-		
Free Chlorine Residue (Cl ₂)	mg/L	M	-	0.1 ⁴		
Laboratory Parameters						
Total Suspended Solids (TSS)	mg/L	M	-	-		
Total Nitrogen (TN) ^{2,3}	mg/L	M	2.0	5.0		
Total Phosphorous (TP) ^{2,3}	mg/L	M	0.4	0.6		
Chlorophyll-a (Chl-α) ^{2,3}	µg/L	M	20	200		

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 Timing of authorised discharges commence from mid to high tide, staged over two discharge cycles per day.
	² Discharge flow limits at the outfall into Wheatley Creek as adopted in NTEPA Assessment Report 81 (Recommendation 4).
	³ The discharge limits for TN, TP, Chl-a, TSS are adopted from the numerical modelling for the receiving waters. These discharge limits apply to DP1 and are considered suitable to protect the existing values of the receiving waters through maintenance of existing water quality as per the AWQG. (Refer Table 9-1 WQMMP).
	⁴ A marine low reliability value for total residual chlorine of 0.003 mg/L is nominated in the AWQGs, although this relates to receiving waters rather than discharges. Given the available dilution in the receiving environment, a level of <0.1 mg/L (i.e. non-detectable in a standard test kit) is expected to be a suitable 'non-detect' level and is adopted for the purposes of the WQMMP.

Site Code	Source
DP1	Discharge Point 1 Receives Project discharges via a high-density polyethylene (HDPE) discharge pipeline connecting the CBC/BMC and settlement ponds to a discharge outfall structure at Wheatley Creek. The outfall structure extends the HDPE discharge pipe over the embankment to a constructed rock mattress on the low tide mark. The Stage 2 Project will establish a series of release control ponds to increase the holding area until discharge water is of a quality that can be released into Wheatley Creek.

ATTACHMENT B: ENVIRONMENTAL IMPACT MONITORING PROGRAM

Site Code Description Latitude Longitude		Authorised Monitoring Points											
		Wheatley Creek Sites			Mackenzie Arm Sites			Control Sites					
		WC01 ⁸	WCUS1 ⁸	WCDS1 ⁸	MA01 ⁸	MA02 ⁷	MA03 ⁷	BH01 ⁷	VI01 ⁸	MI01 ⁸	MI02 ⁷		
		Upstream	Upstream Mixing Zone	Downstream Mixing Zone	Upstream	Junction with Wheatley Creek	Downstream	Bynoe Harbour Main Channel	Vigilant Inlet Upper Estuary	Milne Inlet Upstream	Milne Inlet Upstream		
		-12.7417	-12.7255	-12.7236	-12.7558	-12.7229	-12.7022	-12.6882	-12.7403	-12.7696	-12.7327		
		130.5300	130.5299	130.5289	130.5142	130.5125	130.5180	130.5572	130.5752	130.6241	130.6326		
Parameter	Unit	Monitoring Frequency										Trigger Values ⁶	
												Mid-Estuary ⁷	Upper Estuary ⁸
Field Measurements													
pH ¹	pH units	MS	M	MS	MS	MS	MS	MS	MS	MS	MS	7.0-8.5	6.0-8.5
Dissolved Oxygen (DO)	% saturation	M	M	M	M	M	M	M	M	M	M	80-100	
Electrical Conductivity (EC)	µS/cm	M	M	M	M	M	M	M	M	M	M	-	-
Temperature (T)	°C	M	M	M	M	M	M	M	M	M	M	-	-
Turbidity (NTU)	NTU	M	M	M	M	M	M	M	M	M	M	3.9	8.1
Redox Potential ¹	mV	S	S	S	S	S	S	S	S	S	S	-	-
Laboratory Parameters													
Total Suspended Solids (TSS)	mg/L	M	M	M	M	M	M	M	M	M	M	20	
Total Nitrogen (TN) ¹	mg/L	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	0.27	0.3
Ammonia (NH ₃)	mg/L	M	M	M	M	M	M	M	M	M	M	0.02	
Nitrogen Oxides (NOx)	mg/L	M	M	M	M	M	M	M	M	M	M		
Nitrite (NO2)	mg/L	M	M	M	M	M	M	M	M	M	M	-	-
Nitrate (NO3)	mg/L	M	M	M	M	M	M	M	M	M	M	-	-
Total Kjeldahl Nitrogen (TKN)	mg/L	M	M	M	M	M	M	M	M	M	M	-	-
Total Phosphorous (TP) ¹	mg/L	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	0.05	0.06
Filterable Reactive Phosphorous (FRP)	mg/L	M	M	M	M	M	M	M	M	M	M	0.005	0.01
Chlorophyll-a (Chl-α)	µg/L	M	M	M	M	M	M	M	M	M	M	2	4
Total Organic Carbon (TOC) ¹	µg/L	S	S	S	S	S	S	S	S	S	S	-	-
Total Aluminium (AL) ¹ (Filtered 0.45µm)	µg/L	S	S	S	S	S	S	S	S	S	S	-	-
Ecological Monitoring ¹													
Sediment size ¹	-	S	S	S	S	S	S	S	S	S	S	-	-
Benthic Macro-invertebrates ²	-	A	A	A	A	A	A	A	A	A	A	-	-
Mangroves ³	-	Y2	Y2	Y2	Y2	Y2	Y2	Y2	Y2	Y2	Y2	-	-
Seagrass ⁴	-	A	A	A	A	A	A	A	A	A	A	-	-
Benthic Habitat ⁵	-	A	A	A	A	A	A	A	A	A	A	-	-

Key	
-	Not applicable.
A	Monitoring must be conducted on an annual basis following first commencement of operational discharges from authorised discharge point (DP1).
Y2	Monitoring must be conducted every two years 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)
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 .

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 *At least once prior to operational discharges commencing. Benthic macro-invertebrates, collected from the same sites as the sediment samples in the dry season. Seagrass and macroinvertebrates – methods comparable with DES (2018), with seagrass monitoring to target seagrass density and species present and macroinvertebrates for abundance and taxonomic richness.*

³ *Mangrove community composition and health at sites adjacent to EIMP monitoring sites Mangrove assessments will utilise multi-spectral imagery / NDVI metrics to assess extent, health and intactness, with ground truthing to confirm findings, comparable to DES (2018) – refer to Cardno (2013) and others as needed. Two (2) wet and two (2) dry satellite imagery analyses, with at least one ground-truthed prior to operational discharge commencing.*

⁴ *Observations for seagrass at species level, and incidental macroinvertebrate cover observations, to be made at the same locations. Seagrass assessment to be conducted using methods comparable with DES (2018) to target seagrass density and species present.*

⁵ *At least once prior to operational discharges commencing. Benthic macro-invertebrates, collected from the same sites as the sediment samples. Assess abundance and taxonomic richness.*

⁶ *Derived from the Darwin Harbour Water Quality Objectives (DWHQO) and interim site specific guideline values as defined in Table 5-1: Interim Receiving Water Quality Guideline Values (EN02-MN4201, WQMMP Revision: 1). For the purpose of this environment protection licence, the guideline values are referred to as trigger values. Monitoring location BH01 is representative of Mid-Estuary and VI01 Upper Estuary (Table 7-1)*

⁷ *Mid-Estuary trigger values apply to these monitoring locations.*

⁸ *Upper Estuary trigger values apply to these monitoring locations.*