



Notification of decision:

VARIATION TO APPROVAL CONDITIONS

Guthalungra Aquaculture Facility, north of Bowen, Queensland (EPBC 2001/138)

This variation is made under section 143(1)(C)(i) of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

Person to whom the approval is granted Pacific Reef Fisheries Pty Ltd

Proposed action The proposal to develop and operate a prawn hatchery and aquaculture farm, comprising approximately 315 ha of pond developments (including treatment facilities) with an ocean outfall for wastewater discharge and associated facilities at Guthalungra, 40km north of the township of Bowen, North Queensland (EPBC 2001/138).

Variation to approval decision

Variation of conditions The variation is:

- Delete condition 2 of the approval decision dated 4 March 2010 and substitute with condition 2 as specified below;
- Delete condition 3 of the approval decision dated 4 March 2010 and substitute with condition 3 as specified below;
- Delete condition 4 of the approval decision dated 4 March 2010 and substitute with condition 4 as specified below;
- Delete condition 6 of the approval decision dated 4 March 2010 and substitute with condition 6 as specified below;
- Delete condition 11 of the approval decision dated 4 March 2010 and substitute with condition 11 as specified below;
- Add new conditions 20 and 21 as specified below;
- Include the definitions as specified below;

For ease of reference the consolidated conditions attached to the approval, inclusive of the amendments made as a result of this decision is attached.

Date of effect This variation has effect on the date the instrument is signed.

Person authorised to make decision

Name and position Tony Burke
Minister for Sustainability, Environment, Water, Population and Communities

Signature

Date of decision 2 . 11 2011

Variation of conditions attached to the approval

- 1) To ensure the protection of the Great Barrier Reef World Heritage values and listed threatened and migratory species, the person taking the action must develop, construct and operate the proposed action in accordance with these approval conditions.
- 2) Prior to commencement of construction, the person taking the action must prepare and submit for the Minister's approval, an Environmental Offset Strategy to manage the impacts of the action on the values of the Great Barrier Reef World Heritage Area. The Environmental Offset Strategy must address the matters listed below and state the environmental objectives, performance criteria, monitoring, reporting, funding, responsibility and timing of each of these matters.
The Environmental Offset Strategy must be designed to achieve annual no net-increase to nutrient loads entering Abbot Bay and must:
 - a) Identify offsets which will achieve annual no net-increase in nutrients and suspended solids entering Abbot Bay;
 - b) Provide evidence that the funding and measures outlined in condition 2(a) are independent and in addition to the Australian Government's Reef Rescue Plan;
 - c) Provide the results of detailed modelling to demonstrate that the measures identified in condition 2(a) will result in no net-increase in nutrient and sediment discharge into Abbot Bay. This must include baseline studies to determine existing background levels of nutrients and suspended solids being discharged into Abbot Bay. The model must be suitable for the range of expected hydrological events and flow conditions and be valid for the region and climate the offset is identified in. The Environmental Management Plan must also include a discussion of the results of the model, including calibration, and assessment of the validity of the model; and
 - d) The results of the modelling required at condition 2(c) must be independently reviewed by a suitably qualified independent expert to demonstrate the validity of the modelling and results.

Operation of the Guthalungra Aquaculture Facility cannot commence until the Environmental Offset Strategy is submitted and approved by the Minister. Once approved, the Environmental Offset Strategy must be implemented prior to the date of commencement of operation for the operational life of the Guthalungra Aquaculture Facility.

- 3) To protect the World Heritage values of the Great Barrier Reef World Heritage Area, the person taking the action must only release contaminants into Abbot Bay consistent with or below the following daily load limits:

Total suspended solids	6.59 kilogram per hectare
Total nitrogen	0.49 kilogram per hectare
Total phosphorus	0.05 kilogram per hectare

In the event that the load limits are exceeded, the person taking the action must suspend any stocking of further grow out ponds and notify the Minister in writing within 48 hours of exceeding the daily load limits. The notification must include the reasons for exceeding the daily load limits and the details of the suspension of stocking, mitigation measures to ensure further breaches do not occur. Recommencement of stocking of grow out ponds can only occur after the Minister has confirmed in writing that he/she is satisfied that sufficient measures have been put in place to ensure that load limits will not be exceeded in future.

- 4) To ensure the protection of the Great Barrier Reef World Heritage values and listed threatened and migratory species, the person taking the action must provide the Water Quality monitoring program for Abbot Bay and the Seagrass and coral monitoring program as required under the Queensland Coordinator General's Report dated 11 January 2008 (QCGR), to the Department for approval prior to finalisation and implementation of these programs. These plans must specify, amongst other things:

- a) The parameters to be monitored and the objectives;
- b) Location of static sampling points;
- c) The frequency of the monitoring;
- d) The responsibility for interpreting the monitored results;
- e) The threshold triggers and the response activities that will be implemented if a threshold is reached, including the requirement to reduce or cease operation until approval is obtained in writing from the Minister to recommence; and
- f) Reporting arrangements to the Department, management and external stakeholders including procedures for reporting non-compliance.

Water quality monitoring must be undertaken at the seawater intake point and the treated water discharge outlet as well as the static points outlined in Condition 36 of the QCGR. Parameters to be measured include TN, TP, TSS, pH, Dissolved Oxygen, Chlorophyll a, Ammonia N, Oxidised N, and Turbidity and monitoring must occur in accordance with the relevant methods described in Condition 36 of the QCGR.

Results of the monitoring programs are to be provided annually to the Department including data and its interpretation.

The action cannot commence operation until the Monitoring Programs are approved by the Minister and the approved Monitoring Programs must be implemented.

- 5) Prior to commencement of construction of the aquaculture facility, the design and operation of arrangements for the facility must be independently certified to be capable of meeting the load limits that will be calculated in accordance with condition 3. The person responsible for the certification must be suitably qualified and approved by the Department.
- 6) To protect the Great Barrier Reef World Heritage Area and habitat for listed threatened and migratory species the person taking the action can only construct and operate the facility in the following stages:
 - Stage 1 – no more than 91 hectares of ponds can be constructed and operated;
 - Stage 2 – no more than 112 hectares can be constructed and a maximum of 203 hectares of ponds can be operated; and
 - Stage 3 – no more than 56 hectares of ponds can be constructed and a maximum of 259 hectares of ponds can be operated.

The person taking the action can only commence construction and operation of each stage once they can demonstrate to the department that the immediately preceding stage has met the load limits described in condition 3 over a full production cycle and the department has provided written confirmation for the stage to proceed.

- 7) To ensure that protection of the values of the GBRWHA, the person taking the action must enter into a Deed of Agreement with the Great Barrier Reef Marine Park Authority (the Authority). The Deed must provide for a Bond in favour of the Authority for a sum which covers the person taking the action's liability for any damage to the Great Barrier Reef Marine Park caused by the action.
- 8) To ensure the protection of the Great Barrier Reef World Heritage values and listed threatened and migratory species, the person taking the action when removing pond sludge from the production or settlement ponds must store and/or dispose of it in a manner that does not cause the release of contaminants to any waters. Contaminated runoff from pond sludge storage areas must be retained within the catchment of the production or settlement ponds.
- 9) The person taking the action must ensure that all ponds, channels and containment structures used for the storage, use or treatment of aquaculture waters at or on the site must be constructed, installed and maintained:
 - a) So as to minimise the likelihood of any release of aquaculture water through the bed or banks of the ponds, channels or containment structures to any waters (including groundwater); and

- b) So as to minimise erosion and the release of sediment; and
 - c) So as to ensure the stability of the construction of ponds, channels or containment structures; and
 - d) In accordance with the Queensland Draft Construction and Operation Guidelines for Coastal Land-Based Aquaculture Containment Structures.
- 10) The person taking the action must not undertake construction activities potentially leading to soil erosion and runoff in the months November to April (inclusive).
 - 11) The person taking the action must undertake the action in accordance with the *Queensland Acid Sulfate Soil Technical Manual, Soil Management Guidelines* (version 3.8 or subsequent versions).
 - 12) Within 5 days of commencement of the action, the person taking the action must advise the Department in writing the actual date of commencement.
 - 13) By 1 July each year after the commencement of the action, the person taking the action must provide a report to the Department addressing compliance with the conditions of this approval over the previous 12 months. Annual reports must be provided until the Minister is satisfied that all conditions of the approval have been complied with
 - 14) Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.
 - 15) If the person taking the action wishes to carry out an activity otherwise than in accordance with the plans, reports or strategies referred to in these conditions the person taking the action must submit for the Minister's approval a revised version of any such plan, report or strategy. If the Minister approves such a revised plan, report or strategy, that plan, report or strategy must be implemented in place of the plan, report or strategy originally approved.
 - 16) If the Minister believes that it is necessary or desirable for the better protection of the relevant matter of national environmental significance to do so, the Minister may request that the person taking the action must make specified revisions to any plans, reports or strategy approved pursuant to these conditions and submit the revised plan, report or strategy for the Minister's approval. The person taking the action must comply with any such request. The revised approved plan, report or strategy must be implemented in place of the plan, report or strategy originally approved.
 - 17) The person taking the action must maintain accurate records of all activities associated with or relevant to the above conditions of the approval, including measures taken to implement the management plans required by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the *Environment Protection and Biodiversity Conservation Act 1999*, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.
 - 18) If ownership and/or management of the Guthalungra Aquaculture Facility are transferred to another party, the person taking the action must provide the Department with evidence that the other party has agreed to assume the management responsibility in accordance with the conditions of this approval.
 - 19) If, at any time after five years from the date of this approval, the Minister notified the person taking the action, in writing, that the Minister is not satisfied that there has been substantial commencement of the Guthalungra Aquaculture Facility, the action must not thereafter be commenced without the written agreement of the Minister.
 - 20) The person taking the action must prepare an annual Environmental Performance Report to the Minister and submit this to the Department within three (3) months of each

anniversary of the date of commencement of operation. The Environmental Performance Report must include the results of annual monitoring as required in condition 4. The report must include but not be limited to:

- a) Details of the annual and monthly quantities of total Phosphorus, Nitrogen and Suspended Solids (in kilograms per hectare and total kilograms) discharged during operations into the Great Barrier Reef World Heritage Area;
- b) Provide information on the annual variability in the quantity (maximum, minimum and average) of total phosphorus, nitrogen and suspended solids discharged into the Great Barrier Reef World Heritage Area during operation of the facility;
- c) Provide the results of monitoring and detailed modelling demonstrating the annual reduction (in total kilograms) of phosphorus, nitrogen and suspended solids from condition 2(a). The results must be independently reviewed by a suitably qualified independent expert;
- d) The results of an annual audit (the first audit is to commence within three (3) months of the anniversary of the date of commencement of operation) by a qualified independent third party to determine compliance with the requirements of the conditions of approval;
- e) An international and national published literature review relating to the treatment of effluents from aquaculture facilities. This literature review must also discuss the application of this technology with the aim of achieving a no net discharge of nutrients and suspended solids and related cost of the implementation of this technology for this proposed action; and
- f) The person taking the action must clearly demonstrate how they, based on the annual international and national literature review, have fulfilled their commitment to undertake continuous improvement by implementing the findings on all new technology for the treatment and management of effluent.

The environmental performance report must be published, maintained and be made publicly available on the person taking the action's website for the operational life of the action. The date of the first environmental performance report must be 15 months from the commencement of operations, with each subsequent report 12 months from the date of the previous environmental performance report.

- 21) The person taking the action must obtain and submit to the Minister, a copy of the permit approving the proposed action under the *Great Barrier Reef Marine Park Act 1975*. The Minister must receive a copy of the permit prior to the submission of any other plans/reports or documentation as required in condition 2.

Definitions

Annual Net reduction: a quantifiable lessening of contaminants which is greater than the annual discharge of contaminants from the facility over a 12 month period.

Approval conditions imposed by the Queensland Coordinator General – Include all the conditions (local and state) attached to the Coordinator General's report for the Guthalungra Aquaculture Project.

Baseline levels – quantitative analysis of water quality to establish background sediment concentration levels and water quality indicators within the receiving environment 12 months prior to discharge.

Commencement of Operations: – means the stocking of any of the new grow-out ponds that were not previously stocked.

Construction activities – Includes any preparatory works required to be undertaken including clearing vegetation, the erection of any onsite temporary structures and the use of heavy duty equipment for the purpose of breaking the ground for buildings or infrastructure.

The **Department** is the Commonwealth Government Department responsible for administering the *Environment Protection and Biodiversity Conservation Act 1999*.

Growing Season: – is the period from the first discharge to the grow-out ponds to the final drain down of the grow-out ponds.

Grow out ponds – a container where juvenile prawns are stocked for feeding and growing until they reach marketable size.

Load Limits: – is the load of contaminants (total nitrogen, total phosphorus and total suspended solids) averaged out over the growing season for the entire farm and adjusted in proportion to the area of ponds actually in operation. The load limit must be calculated by:

Load Limit = $(A \times B) / (C \times D)$ Where:

A: is the average value of the concentration (expressed as mg/L) for the parameter (total nitrogen, total phosphorus, total suspended solids) determined from 6 consecutive sampling events;

B: is the total volume of wastewater released over the growing season;

C: is the number of days in growing season; and

D: is the number of hectares in production during the growing season.

Minister – The Commonwealth Minister responsible for administering the *Environment Protection and Biodiversity Conservation Act 1999* or a delegate authorised in accordance with section 515 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Operations: – means the stocking of any of the grow-out ponds and all other activities, being parts of the action, that occur in a growing season at or after the time of that stocking (except activities in relation to particular new growing ponds that have not been stocked in that growing season, and activities consisting solely of the maintenance of the aquaculture facility).

Qualified independent third party: – An audit professional who performs an audit on the company or any other legal entity or organisation and who is independent of the entity being audited.

Seawater intake point – sampling point prior to treatment processing of sea drawn water.

Substantial commencement – defined as the construction and commencement of operation of Stage 1 as identified in Condition 6.

Suitably Qualified Independent Expert: – means an individual, independent of the person taking the action and/or employed in any subsidiary company of the person taking the action. This individual must have demonstrated expertise in monitoring and modelling the dynamics of nutrients and suspended solids in terrestrial environments in Queensland.

Treated water discharge outlet – sampling point immediately prior to ocean outfall.