



Northern Territory Government

Office of Environment and Heritage

PART A

INFORMATION FOR THE PUBLIC

Public Environmental Report Guidelines

**Aussie Prawns Pty Ltd
Aquaculture Development
Section 1880 Hundred of Ayers**

January 2005

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1. Purpose

This section of the guidelines has been developed to assist members of the public and other interested parties in preparing comments on the Draft Guidelines for the preparation of a Public Environmental Report (PER) for the proposed Aussie Prawns Aquaculture Development at Section 1880 Hundred of Ayers.

The object of these Guidelines is to identify those matters that should be addressed in the PER. The Guidelines are based on the initial outline of the proposal in the Notice of Intent (NOI). The Guidelines, however, are not necessarily exhaustive. They should not be interpreted as excluding from consideration any matters which are currently unforeseen that emerge as important or significant from scientific studies or otherwise during the preparation of the PER and the public consultation process.

2. Exhibition Time

Once the PER has been submitted (based on the Final Guidelines) an opportunity for the public to comment on the PER will be available for a maximum period of 28 days.

3. Description of Proponent

The proponent is Aussie Prawns Pty Ltd.

4. Description of Proposal

What

The proponent intends to redevelop a disused aquaculture farm. The total area for the site is 287.8 hectares (ha) and it contains infrastructure from a previous aquaculture operation. There are currently 25.25 ha of disused ponds.

The redevelopment consists of the construction of 44 one hectare ponds absorbing the original pond footprint; extensions and improvements of intake channel; construction of new effluent discharge areas; and improvements to the freshwater dam, pumps and pump stations

Where

The site for the Aussie Prawns proposal is located at Section 1880 (Previously 1810), Hundred of Ayers, Channel Island Road, Weddell.

When

Development of this project will occur on completion of the approval process. The initial 14 x 1 ha production ponds are estimated at producing 5ton/ha of Black Tiger Prawns, *Penaeus monodon* from September 2005. The next 18 ha will be stocked in October 2005 and the final 12 ha in November 2005. Total production is expected to be 220 tons for the 2005-2006 season timeframe.

Project Details

The Process

Wild caught spawners will be brought into the maturation facility where they will spawn. Resultant larvae will be raised in the hatchery for 28 days prior to transfer to production ponds at a semi-intensive stocking density of 20-40 per square metre.

The ponds are filled with seawater, supplied via a seawater intake pumping station on Castnet Creek. The prawns are fed a manufactured feed and grow to commercial size (25-30 g) within four to six months.

Prawns are harvested through various methods, including traps, wing nets and codend nets over the drains. Following harvest, the prawns will be rinsed, chilled over ice, snap frozen and bagged for export.

Pond effluent is directed into effluent canals which discharge into sedimentation ponds. Retention time in these ponds is maximised in order to achieve optimal sedimentation of entrained solids, rich in nutrients.

The sedimentation ponds overflow into the mud flats and mangroves within the property. The effluent reaches the creek by means of sheet dispersion.

The following waste products will be produced by the proposal:

Air

During normal operations, power will be supplied by the grid, resulting in no on-site emissions. The emergency diesel generator will only be used during power outages during the wet season, approximately 40 hours.

The diesel generator will be able to supply power to keep 50% of the aerators going. This equates to a power supply of 394 kW (44 ponds at 12 hp).

Water

The water balance for the prawn ponds is provided in the table below.

Description	Quantity
Pond volume (44 ha x 1.5m deep)	660 ML
Daily exchange volume (exchange rate is 10%)	66 ML
Total exchange volume per crop (120 days only, first 30-40 days of growth cycle, no exchange is required)	66 ML/day x 120 days = 7,920 ML
Total exchange volume per year (2 crops):	15,840 ML
Harvest discharge volume per year (2 crops)	1,320 ML
Total discharge volume per year (2 crops)	17,160 ML

Target industry baseline benchmarks for nutrient content in the pond effluent water are:

- TN: 3 mg/L
- TP: 0.5 mg/L

During the growth cycle, maximum nutrient discharge volumes are thus:

	TN	TP
kg/ha/day	4.5	0.75
kg/day	198	33

The water balance for the hatchery is provided in the table below.

Description	Quantity
Tank volume (24 tanks @ 10,000 L)	0.24 ML
Daily exchange volume (exchange rate is 50%)	0.12 ML
Total exchange volume per run (20 days)	0.12 ML/day x 20 days = 2.4 ML
Total exchange volume per year (2 crops, 3 runs/crop):	14.4 ML
Harvest discharge volume per year (2 crops)	1.44 ML
Total discharge volume per year (2 crops)	15.84 ML

During operations of the hatchery, maximum nutrient discharge volumes are:

	TN	TP
kg/day	0.36	0.06

The hatchery discharge water flows into and mixes with the discharge water from the ponds and is treated in the effluent treatment ponds in the same manner. The volume and nutrient discharge from the hatchery is negligible when compared to those from the prawn ponds.

Landfill

Domestic garbage volumes will be limited, as it is not proposed to have workers accommodation on the site. Only the site manager will be living on the farm. All domestic waste will be taken to the City of Palmerston landfill.

Other waste that will require disposal are the bags in which the prawn feed is packed. The feed bags are made of paper and can be either recycled or taken to the local landfill. An estimated 13 200 paper bags will be used for a full production run.

Noise

Expected noise sources are pumps, aerators, emergency generators and vehicles.

Infrastructure/Transportation/Storage

The following infrastructure will be constructed:

- Feed storage shed;
- Maturation and hatchery facilities;
- Packing shed;
- Administration building;
- Workshop;
- 44x1 ha production ponds
- Pump house and jetty;
- 3 second lift pump stations;
- Extension to existing intake channel;
- Discharge station;
- 2 sedimentation ponds;
- 2 effluent discharge treatment areas; and
- Formal spillway and pump station on existing freshwater dam.

The use of chemicals will be limited to the List of Approved Aquaculture Chemicals issued by the National Aquaculture Council. These chemicals will be stored in proper chemical storage cabinets and used in accordance with the manufacturers' instructions.

Expected waste volumes are small, in the order of a few 200 litre drums per year. Empty containers will be removed by a licensed contractor on an as needs basis.

5. Administration Details

The Project Officer is Ms Lisa Bradley from the Office of Environment and Heritage, Department of Infrastructure, Planning and Environment (DIPE). The contact telephone number is (08) 8924 4022 and facsimile number (08) 89244 4053, e-mail: lisa.bradley@nt.gov.au.

Copies of the Final Guidelines will be posted on the DIPE website www.ipe.nt.gov.au/enviro.

Copies of the PER will be available to the public for purchase from the proponent.
Comments on the PER should be forwarded to the nominated Project Officer.