Marine Aquaculture Research Lease
Providence Bay, Port Stephens NSW
Environmental Impact Statement
Summary Document

October 2012
OVERVIEW

NSW Department of Primary Industries (NSW DPI) proposes to develop a 20 hectare Research Lease in Providence Bay 4 km off Hawks Nest, NSW for a period of five years. Floating sea cages anchored to the seafloor would be used to research marine finfish aquaculture.

The proposal would allow the NSW Government to extend its successful marine hatchery research conducted at Port Stephens Fisheries Institute.

The research would assist to validate the commercial potential of a number of marine finfish species, trial the latest production technologies within the coastal waters of NSW and facilitate environmental monitoring. The principal objective of the proposed Research Lease is to contribute to the development of sustainable marine aquaculture in NSW.

The NSW Government recognises the need to look at opportunities for sustainable and viable aquaculture development that is built upon sound research. Aquaculture supports the regional economies of NSW and will be an increasingly important contributor to the future food security needs of the state.

The Department of Planning and Infrastructure issued Director-Generals Requirements to NSW DPI for the preparation of an Environmental Impact Statement (EIS) in March 2012.
The EIS must include: a description of the project; details of the existing environment; a risk assessment of potential environmental impacts; consultation undertaken; issues raised during consultation; and environmental management and monitoring measures to mitigate potential impacts.

**Mulloway (Argyrosomus japonicus)**

**Background**

Global demand for seafood is rapidly expanding and seafood consumption per capita is increasing. In 2008, 46% of the seafood consumed worldwide was produced by aquaculture (Food and Agriculture Organisation, 2010). In NSW the supply of locally caught fish is not expected to increase from current sustainable catch levels and already some 85% of fish purchased in NSW is imported.

Sustainable seafood production is a key focus of the NSW Government’s State Aquaculture Steering Committee to support future demands of food security for the state. The gap between capture fishery supply and the growing demand for seafood can only be supported by sustainable aquaculture.

Aquaculture is a relatively new food production sector in NSW with a history of research and development involvement by NSW DPI (formerly NSW Fisheries). Port Stephens Fisheries Institute has been working in marine finfish research since the early 1990s and Snapper sea cage farming research commenced in the inshore waters of Botany Bay in 1993. Successful hatchery and nursery research for Mulloway, Yellowtail Kingfish and other marine finfish also needs to be extended and validated in sea cages trials.

The proposed site for the Research Lease off Port Stephens is in close proximity to Port Stephens Fisheries Institute which has suitable fish rearing and land based infrastructure. The site also has suitable characteristics for cage based aquaculture (e.g. good water quality, sandy seafloor, adequate depth and moderate current flow), there is a history of finfish farming in the area and the infrastructure of Nelson Bay harbour provides logistical support. Port Stephens is a key location in NSW for aquaculture research and the commercial production of oysters, Barramundi, Silver Perch, freshwater crayfish and hatchery stock.
Approvals Pathway

Under the *State Environmental Planning Policy (State and Regional Development 2011)* the proposal is classified as State Significant Infrastructure (Clause 14 (1)(b) and Schedule 3 (1)(1)) and requires approval from the Minister for Planning and Infrastructure under Section 115W of the *Environmental and Planning Assessment Act 1979*. A lease will need to be granted under Section 163 of the *Fisheries Management Act 1994* and a permit is required under the *Marine Parks Act 1997*. The proposed lease is located in a Habitat Protection Zone of the Port Stephens Great Lakes Marine Park and aquaculture is a permissible activity within this zone.

Marine Park Zones and habitat types present within the Providence Bay region.

The Proposal

The proposed Research Lease would occupy an area of 20 hectares (approximately 370 x 530 m) within Providence Bay off Port Stephens. The main infrastructure will consist of an anchoring and bridle system to accommodate up to eight floating double collared sea cages. The cages may range in size (18-40 m diameter) depending on the quantity and size of the cultured fish. Other infrastructure development within the site would consist of navigation buoys on the corners of the lease area.
The basic components of the sea cage infrastructure. Note: bottom of net is about 10 m below sea level.

A picture of a double collar sea cage with two smaller fingerling cages contained within the existing aquaculture lease in Providence Bay. Insert - lease marker navigation buoy.

**Consultation**

NSW DPI began the consultation process for this project with relevant stakeholders in late 2011. The aim of informing stakeholders early in the project was to provide as much information as possible about the project and the aquaculture industry and to include in the EIS, issues of concern raised during consultation. Information was also provided via local media and with a *Question and Answer* page on the NSW DPI website (www.dpi.nsw.gov.au/fisheries). Meetings were held with government, environmental and
community groups, Indigenous leaders, recreational and commercial fishers, marine tour operators and local associations. Some 49 key contacts were made and 23 face to face meetings were held prior to lodging the EIS. The majority of stakeholders consulted supported the project and saw the opportunity for sustainable seafood production, employment and provision of local services.

**Risk Issues Identified**

As part of the EIS development process a total of 27 issues associated with the proposal were identified and categorised (see issues flow chart below). These issues were identified in either the construction stage or the operational stage of the proposed Research Lease.

Eleven issues were identified as representing a ‘negligible’ risk while 12 issues were assigned a ‘low’ risk ranking. No issues were identified as representing a ‘high’ or ‘extreme’ risk, but four were classified as ‘moderate’, including: impacts on marine habitats - water quality, nutrient concentrations and sedimentation; chemical use; disease and introduced pests; and impacts on migratory pathways, behavioural changes and predatory interactions. These classifications indicate that these issues require ongoing or further management and/or research. A draft Environmental Management Plan has been prepared to accompany the EIS to address and mitigate these issues.
Issues flow chart – potential environmental and socio-economic impacts of the proposed Research Lease.
Environmental Management and Proposed Mitigation Methods

A draft Environmental Management Plan will be lodged with the EIS to ensure that commitments relating to identified issues, subsequent assessment reports and any approval or licence conditions are fully implemented. The draft Environmental Management Plan consists of a series of management plans, monitoring programs and protocols that address the potential environmental impacts identified in the issues flow chart.

The key objective of the Environmental Management Plan is to ensure that the proposed Research Lease does not have a significant impact on the environment, surrounding communities or staff. The Environmental Management Plan will aim to ensure the following:

- Aquaculture best practices are employed;
- Marine fauna interactions are minimised;
- Water quality is maintained and nutrient inputs managed to avoid impact;
- The structural integrity and stability of the sea cage infrastructure is maintained;
- The occurrence of disease, pests and escapees is minimised and if these events do occur, prompt management and/or remedial action will be implemented;
- The safety of staff and surrounding communities is maintained;
- Waste is appropriately disposed of;
- Navigational safety is maintained; and
- The performance of the Research Lease is regularly evaluated by reviewing environmental management reports and monitoring records.

Conclusion

The EIS provides a thorough assessment of the issues associated with the proposed activity and proposes a number of measures to address the potential impacts of the Research Lease development and its activities. Through the employment of industry best practice and management strategies identified within the EIS it is concluded that the proposed research activity will not have a significant environmental impact.

Comment on the Proposal

The Director-General of the NSW Department of Planning and Infrastructure will exhibit the EIS for a minimum of 30 days and invite public comment. The environmental assessment is available for inspection during the exhibition period at the NSW Department of Planning and Infrastructure head office, Sydney; local Council offices as well as on the NSW Planning and Infrastructure and NSW DPI websites. You may make a written submission during the exhibition period regarding the project.
For further information

“Drop-in” information sessions will be held at:

Port Stephens Fisheries Institute
15 November 2012 from 10.00–2.00pm

Hawks Nest Community Hall
23 November 2012 from 3.00-6.30pm


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