

## **BACKGROUND BRIEFING PAPER**

### **Draft Amendment to the Macquarie Harbour Marine Farming Development Plan 2005**

#### **Process points**

- Huon Aquaculture Group, Petuna Aquaculture and TASSAL Operations have applied to add a new marine farming lease area in Macquarie Harbour that increases the available marine farming area from 564 hectares to 926 hectares (64%), right up to the boundary of the World Heritage Area
- The Environmental Impact Statement has been developed by the Companies and is now available to the public for comment. It is available at [www.dpipwe.tas.gov.au](http://www.dpipwe.tas.gov.au) (at 'Public Comments Invited')
- Representations must be received by **5pm on 22 December 2011**.
- Environment and community groups have a number of key concerns covering environmental, scientific and social issues

#### **Key issues**

##### **Baseline data**

- Current lack of baseline data for Macquarie Harbour - very few ecological studies to date.
- Not enough baseline information for a proper assessment of the potential impacts of the proposed expansion. Without adequate baseline data, it is not possible to understand the impacts of increased nutrient loads and reduced dissolved oxygen, which the EIS acknowledges will result from the proposed expansion. More information is required regarding:
  - flora and fauna (e.g presence of threatened species, benthic communities, marine vegetation [*Note: baseline study for marine vegetation commissioned for 2012... after assessment*]);
  - ecological conditions (e.g. nutrient levels, stratification, water quality);
  - modelling of water flows, particularly mid and deep water residence times.

*[Note: Clause 3.4.1 of the Macquarie Harbour Marine Farming Development Plan 2005 (MFDP) currently provides that sufficient baseline data may include video assessment, sediment particle size analysis, redox potential, sulphides, current flows and composition of the benthic community – the EIS falls short of providing this]*

- The EIS states that the Proponents will implement a "Fish Farm Environmental Monitoring Programme" to gather more information over time and adopt an "adaptive management" approach to amend practices as new information becomes available. This is NOT an appropriate approach – Panel needs to have sufficient information at the time of assessment to have a good understanding of potential impacts. Reliance on mitigation measures that involve modelling, monitoring impacts and adaptation<sup>1</sup> is concerning where there is limited baseline information to assess against.

##### **Ecological condition / Water quality**

- EIS acknowledges that proposed expansion will result in lower dissolved oxygen and higher nutrients (higher organic loading from food, faeces etc). This may lead to:
  - more anaerobic bacteria and off-gassing of hydrogen sulphide which can be toxic for farmed fish and the surrounding environment;
  - reduction of species biodiversity, as area becomes favourable for a single species to proliferate<sup>2</sup>.

*[Note: EIS prediction of only minimal impact outside lease areas does not address ecosystem as a whole and does not assess the cumulative impacts of a patchwork of sites throughout the Harbour upon the behavioural, feeding*

<sup>1</sup>Part 4 Proposed Amendment Description, 4.1.4 Waste Management, 4.1.4.1 Solid Waste. P107

<sup>2</sup>Part 6- Potential Effects and Their Management, 6.1.4 Substrates and Fauna, Organic Loading, P275

*and distribution of various species].*

- Dissolved Oxygen levels are significantly reduced in summer months, throughout the Harbour and in the TWWHA. Low dissolved oxygen is more severe at greater depths, yet only measured to 8m in the EIS<sup>3</sup>. Measurements at greater depths should be made to get a better idea of potential impacts on benthic communities.
- Nutrient and dissolved oxygen levels exceed the ANZECC estuarine water trigger limits. The EIS indicates that site specific limits may be appropriate, and that modelling and monitoring will be done to establish these limits – another example of inadequate data at the assessment phase.
- Clause 3.2.1 of the MFDP allows the Minister to place a plan-wide cap on nitrogen output to better regulate nutrient levels in the Harbour. Recommend that this be done (particularly during summer), but emphasise that more data needed to establish what the appropriate cap should be.

### **Flora and fauna**

- Macquarie Harbour is one of only two known habitats for the Maugean Skate (*Zearaja maugeana*). The species is listed as endangered under the *Threatened Species Protection Act 1995* and the *Environment Protection and Biodiversity Conservation Act 1999*.

[**Note:** EIS observation that the Maugean skate is generally found in shallower water, however recent netting shows distribution extends to at least 15m deep – restricting surveys to shallow water may have underestimated the population of the species in Macquarie Harbour and demonstrates lack of data regarding potential impacts]

Under the EPBC Act, impacts on an endangered species will be ‘significant’ if it results in a decrease in population size, reduces or fragments the habitat area, modifies quality habitat to the extent that the species is likely to decline or introduces a species that might cause the species to decline. Without more information about the range or tolerance of the Maugean skate, the Panel cannot be satisfied that the proposed expansion will not have a significant impact on the endangered skate.

- Concentration of recreational and commercial fishing outside the lease areas will increase fishing pressure on native species.
- Increased stocking densities and higher volumes of fish will increase the incidence of escapes, threatening biodiversity as native species compete with escaped salmon. Increased lease areas and higher stocking rates will also increase the risk of disease outbreak.
- The proposed expansion is likely to attract greater numbers of seals (and birds) to Macquarie Harbour, with flow-on impacts for native species predated upon by seals. Increased seal populations will also impact on kayakers and recreational fishers.

### **Tourism / Recreation**

- The area of Macquarie Harbour to be converted to fish farms is within the Southwest Conservation Area (**SWCA**) and adjoins the Tasmanian Wilderness World Heritage Area (**TWWHA**). This iconic area, which attracts over 100,000 tourists annually, is recognised for its wilderness setting, ecological values, heritage significance and varied recreational opportunities. The values for which the TWWHA was heritage listed include “the scale of the undisturbed landscape”.
- Closest lease area is approximately 400m from the boundary of the TWWHA [**Note:** that lease area was amended slightly in response to concerns raised by the wilderness cruises].
- The *TWWHA Management Plan 1999* currently prohibits marine farming within the TWWHA, on the basis that “aquaculture is incompatible with conservation of the natural and recreational values of WHA waterways”.<sup>4</sup> The Management Plan notes that the southeastern end of Macquarie Harbour is

<sup>3</sup>Appendix to Addendum, 2 ecological modelling results, 2.1 dissolved oxygen. 2.1.1 updated final model scenario - summer

<sup>4</sup>Chapter 7, TWWHA Management Plan 1999

“important for tourism and recreation as a natural setting for visits to the Gordon River, Sarah Island and the many small coves around its shores.”

Though the proposed expansion will not be within the TWWHA, it will be in close proximity and may compromise the conservation of natural and recreational values.

- The proposed expansion will adversely impact on the natural values of the area and detract from the wilderness values. For example:
  - The proposal involves a significant expansion of industrial marine farming activities - while there are currently several operational lease areas, Macquarie Harbour remains predominantly natural. The proposed expansion will significantly increase the volume of marine farming activity, including greater lease areas, more mooring points, cables and signage and higher boat traffic, resulting in a change in the dominant character of the Harbour.  
*[Note: The EIS indicates that the proposal will have a “low positive” visual impact on kayakers and recreational sailors<sup>5</sup>. This is based largely on the relocation of several lease areas further offshore, thereby improving visual amenity at shoreside camp sites. However, the assessment ignores the negative visual and amenity impacts on the water - kayakers and sailing activities are not confined to the shoreline, fails to consider additional impacts of noise, change of character, navigational issues]*
  - Tourist cruise operators have indicated that tourists are interested in fish farming operations and these contribute to the tourism experience. However, with the proposal marine farming may dominate the character of the Harbour, rather than being an ancillary aspect of the tours only.
  - Increased marine debris on the shores of the SWCA and TWWHA will detract from the undisturbed landscapes and wilderness values that characterise the reserve areas.
  - Odour, noise and lighting - given the lack of other noise generating activities in the area, particularly at night, noise emissions from the farming operations (e.g generators associated with pen lighting and venturation, barge movement) will change the experience for those camping, bushwalking or kayaking in the area.
- The significant expansion will also restrict public access within Macquarie Harbour, particularly for recreational fishing, yachting and kayaking. The marine farming expansion will complicate navigation within the Harbour and reduce the area available for recreational activities

### **Planning / Management controls**

- Panel now only makes recommendations to Minister – cannot reject draft amendment.
- Draft amendment proposes to allow Secretary to approve:
  - higher stocking densities; and
  - higher maximum biomass.
- The EIS recommends that the maximum density be initially increased from 15kg/m<sup>3</sup> (as permitted under clause 3.3.1 of the current MFDP<sup>6</sup>) to 17kg/m<sup>37</sup>. There is no justification given for allowing a higher density, and no assessment of the impact of higher stock density on fish health.
- No criteria are provided to support a decision regarding biomass. The proposed method of calculating compliance allocates an averages biomass across lease areas, rather than taking into account different requirements for different lease areas.
- It is important that decisions with ecological consequences be assessed by competent, independent experts. The Secretary should not have power to alter maximum densities without clear criteria, public

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<sup>5</sup> Appendix 9, EIS – Landscape and Visual Impact; p 485

<sup>6</sup> Macquarie Harbour Marine Farming Development Plan 2005. Pt 3 Environmental Controls relating to Carrying Capacities. P23.

<sup>7</sup> Part 4 Proposed Amendment Description, 4.4 Changes to management controls. P145

consultation and scientific review.

*[Note: You may like to express support for proposed amendment to require auditing of records (3.4.8), to allow Secretary to request monitoring at any time (3.4.9), and to require three year planning reports to be submitted annually (3.4.10), but emphasise that these measures do not replace the need for a comprehensive baseline data to assess potential impacts.]*

- The proposed “Aquaculture Hub” has not yet been approved. It is important that the assessment of the draft amendment not be used as an opportunity to direct the Planning Commission to amend the West Coast Planning Scheme to facilitate the Aquaculture Hub – that development must be subject to a rigorous planning assessment.