# HUON AQUACULTURE COMPANY PTY LTD

## *MACQUARIE HARBOUR SUBMISSION TO EPA (MAY 2017)*

Note: Items highlighted in yellow is commercial in confidence information

**Version: Final as sent**

**Last updated: 23/5/17**

# 1 Executive Summary

This submission has been prepared in response to the Draft Biomass Determination **(Draft Determination)** and accompanying Statement of Reasons **(SoR)** provided by the Environmental Protection Authority Tasmania **(EPA)** Director (Wes Ford) to Huon Aquaculture Company Pty Ltd (**Huon**) and Southern Ocean Trout Pty Ltd dated on 5 May 2017 regarding salmonid aquaculture production in Macquarie Harbour **(MH)**.

In the Draft Determination the EPA Director sets out: a series of draft determinations or biomass levels in MH (primary and supplementary biomass limits), conditions relating to apportionment, and solid waste capture to apply for the period 1 June 2017 to 31 May 2018 and that determinations will be made pursuant to Management control 3.0.1 and 3.3.5 of the *Macquarie Harbour Maine Farm Development Plan 2005* (**the Plan**).

The Draft Determination invites Huon to make a submission regarding the Draft Determinations by 25 May 2017. In summary Huon's submissions, set out in greater detail in this document, are;

- The biomass limit for the whole of MH should be reduced to a level below 10,000T (the total industry biomass was 10,169 at the end of August 2016 when environmental conditions were already compromised).
- The determination of 12,000 tonnes biomass and up to 18,000 tonnes biomass is directly contrary to the environmental monitoring results and expert reports, including the recent draft IMAS report, which all indicate that the environmental conditions in the Harbour are deteriorating and that a reduction in the level of stock significantly below 12,000 tonnes is required. Peak biomass (highest level) last year (Jan-Dec) was 16,200 tonnes and the Draft Determination will allow up to 18,000 tonnes this year.
- The Draft Determination appears to be largely based on the preservation of the current stock levels and one operator's planned production and harvest schedule. This has the effect of elevating short term economic interests over the primary consideration- in the context of the medium and long term economic objective (including the protection of jobs) – of planning for a sustainable future for marine farming in the Harbour;
- The Draft Determination fails to comply with the Federal Minister's Decision (NCAPM) to ensure that the Harbour's environmental values are protected and which is causing or is likely to cause, environmental harm to the Harbour.
- The proposed "waste capture and recovery system" as a method to allow a significantly greater biomass in MH in 2017 (of a further 6,000Tonnes above the 12,000Tonne limit) is unproven and high risk, not only to the environment, but also to Huon's operations and other stakeholders more broadly, especially under the proposed unrealistically short timelines.
- The flow on impacts from the EPA's Draft Determination significantly increase the risks to fish health and biosecurity in MH in 2017. Huon notes the total absence of fish health and biosecurity considerations in the SoR.
- Huon has a longstanding concern about the decision-making process followed by the State Government with respect to MH.

This submission firstly addresses the importance of ensuring that the biomass limits in MH promote sustainable development in both short and long-term and secondly addresses the environmental, biosecurity, and fish health impacts of the Draft Determinations in the following sections of this document.

# 2 Draft Determinations

The Draft Determination has a stated aim of reducing "*the total peak biomass in the Harbour to 12,000 tonnes"* and the proposed determinations pursuant to Management Controls 3.3.5 and 3.0.1 are as follows:

1. The maximum permissible biomass for salmonids held in cages without approved waste collection systems for the total area of the leases operated by the companies is 13.0 tonnes per hectare for the period 1 June 2017 to 31 May 2018.
2. The maximum permissible additional biomass for 2016 year class salmonids held in cages with approved waste collection systems installed is an additional 15.0 tonnes per hectare.
3. The maximum permissible number of 2017 year class smolt is not to exceed the quantity of fish (allowing for normal mortality) that would achieve a biomass for the year class of 13.4 tonnes per hectare in the period 1 December 2018 to 31 January 2019 (Based on the assumption that a total biomass of 12,000 tonnes in December 2018 is made up of 90% 2017 year class fish and 10% 2018 year class fish, and with 805.89 hectares available the total biomass will be in the order of 14.9 tonnes per hectare.)
4. The calculation of the smolt intake for each company is to be based on the lease area available for stocking and authorised to grow fish at the time the smolt are introduced

The Draft Determination also contains further information in relation to the above points including;

1. The peak biomass for the 1 June 2017 to 31 May 2018 is comprised of two year classes, with 2016 year class being a significant proportion and allocation on a percentage of lease held or operated basis (respectively: Petuna 44.92%; Tassal 30.24% and Huon 24.84%) and equates to a total for both year classes of 13 tonnes per hectare.
2. The allocation of the 2017 year class will be based on an available lease area to grow salmonids of 805.89 hectares, with Tassal's Franklin lease not included in the calculation of the 2017 intake. This will give the effect that shareholding will be allocated as; 51.61% to Petuna, 28.53 to Huon; and 19.85% to Tassal. Based on the assumption that a total biomass of 12,000 tonnes in December 2018 is made up on 90% 2017 year class and 10% 2018 year class fish. The specific number of smolt authorised to go into MH will determined with each company when the proposed stocking plans are submitted.
3. Upon request, companies will be provided with a supplementary biomass allocation for the 2016 year class fish to allow 2016 year class fish in excess of the 12,000 tonne allocation to allow fish to be grown through to harvest size. This will only occur where an in-water solid waste collection system suspended under the fish cage, is approved and implemented by 1 September 2017. Waste collection systems will be required to collect waste from 1.5 tonnes of fish for every tonne of fish to be grown through that is in excess of the peak biomass allocation.
4. Companies to move to a single year class of fish per lease by January 2018.

The EPA Director specifies the following information requests to assist in making statutory determinations:

1. A revised stocking, feeding and harvesting plan for the 2016 year class fish that are to be part of the allocated peak biomass of 12,000 tonnes.
2. A proposed lease stocking plan, including number of smolt for 2017 year class smolt that will fit within the 12,000 tonnes peak biomass.

# 3. Environmental Conditions in MH

The four key areas of concern that have been consistently described by Huon, are:

1. Declining dissolved oxygen (**DO**) Levels at depth, but also near the surface in summer;
2. Souring of sediment ecology;
3. Potential for mass mortality of salmon as a result of oxygen depletion caused by rapid vertical mixing of surface and deeper waters; and
4. Biosecurity and fish health considerations (covered in the following section).

Huon's submissions to the EPA between 2014 to date are publically available from the Company's website and illustrate the Companies long-standing and on-going concern regarding management of MH. Specifically, Huon's submissions of; May 2017, April 2017, and Jan 2017 provide the full context to the comments provided below.

The EPA is familiar with Huon's views which are only reinforced by recent scientific reports and data that show on-going decline in environmental conditions in MH. Specifically;

- Sediment (benthic) Conditions
    - IMAS results from Jan/Feb 2017 sampling (Ross, April 2017 (yet to be released)) show that sediment conditions at the start of 2017 are significantly worse than at the start of 2016.
- Dissolved Oxygen Levels (DO)
    - DO levels reported in the Draft IMAS Report (Ross, April 2017 (yet to be released)) show that DO levels in mid-waters and deeper at the start of 2017 are as low (or lower) than at the start of 2016.

Therefore, in both cases the environment conditions are continuing to trend downwards and the harbour is primed for more significant and wide-scale impacts should similar environmental drivers and/or fish production ensue in 2017.

The EPA's Draft determination endorses a significantly higher biomass in 2017 (up to 18,000 tonnes) than in 2016 (peak biomass was around 17,000 tonnes).

The impact of uncaptured waste and the oxygen drawdown associated with the additional biomass must also be considered. This is discussed further in Section 5 and in Annexure 1.

# 4. Biosecurity and Fish Health and Welfare considerations

Huon notes that the EPA Director's SoR accompanying the Draft Determination did not consider the impact of the Draft Decisions on fish health and biosecurity.

The Macquarie Harbour Area Management Agreement (AMA) – Fish Health Management Plan was fundamentally based on the premise that "*Given the close proximity of all leases within MH, the health measures described in this Fish Health Management Plan have been developed as if just one company is growing fish in MH*."

Actions taken by one company could easily impact the operations of other companies.

There are a number of important fish health and biosecurity matters that must be taken into account by the EPA Director in making a Biomass Determination for MH. These include:

## Waste capture trial:

- Identification of risks and mitigation measures associated with the trialling and implementation of an untested waste capture and recovery system over a compressed timeframe
- Known risks:
  - Holding faecal waste materials (including pathogens) up in the water column close to fish populations;
  - Potential for re-suspension of faecal matter (including pathogens) into the water column during or after capture, or release of material into the water column during recovery operations;
  - Potential failure of capture systems, including engineering failures.

Huon is concerned about the untested nature of the proposed waste capture system and the compressed timeframe for a trial and full implementation which may not allow for sufficient testing or certainty of the method.

## Stocking density and potential mixing of year classes

- Tassal's proposal to transfer their 17 YC smolt to Leases 214 and 219 while still holding all their 16 YC fish and which have recently experienced active POMV infection;
  - Huon has been advised by Wes Ford verbally and Tassal (in their submission) that Tassal intend to transfer their 2017 YC smolt onto their leases 214 and 219 while still holding a large biomass (and increasing until start of harvest in December 2017) of 2016 YC fish.
  - This decision is inconsistent with the Tasmanian Salmonid Growers Association Biosecurity Program, the MH AMA and international biosecurity best practice which indicate mixing of year classes is to be avoided.
  - Risks associated with mixing of year classes are significantly increased in light of the recent active POMV infection in Tassal's 2016 YC on these leases
  - Active POMV (or other disease) infection on Tassal's leases would increase the risks associated with any re-suspension of wastes (containing pathogens) into the water-column

- Increased risk of POMV infection in 2017 YC fish for Huon as a result of neighbouring leases mixing year classes thereby undermining Huon's efforts to maintain year class separation and good fish health. The recent occurrence of POMV in Tassal's 16 YC fish already increases the risks of transferring POMV to newly introduced 17 YC smolt in the next few months. To increase this risk further by mixing Tassal 16 YC and 17 YC fish is poor practice.

- The fish health implications of Tassal's proposal to hold additional biomass on leases 214 and 219 also impacts the establishment and spread of disease (eg. POMV) in other ways such as increasing fish stress making fish more vulnerable to disease.

- The proposed waste capture system has the potential to affect DO levels within the net volume of the pen.
- The proposed waste capture system will not improve the DO levels in mid-waters across the harbour. The additional biomass farmed on leases 219 and 214 could see localised impacts on mid-water DO which can then be transferred to other areas in the harbour with water movement (e.g. tide).

The high stocking rate that will occur as a result of Tassal holding such a large biomass of fish on only two leases ie. 160 Ha (in the order of 50 T/Ha at peak stocking) will increase the risks associated with a number of well-known epidemiological drivers of disease establishment and spread as were identified and discussed in sections 4.7 and 4.8 of the Cawthron Report (Knight B, 2015).

In Huon's view there is scope to give greater consideration to "early harvest" which is a humane and safe method of reducing biomass. This is a practice that is already used in the industry and most notably by Huon in relation to management in Macquarie Harbour. Importantly, it is Huon's view and experience that all three companies operating in MH have the ability to "mix-in" smaller fish over time and sell them at marketable value. This would prevent the need for a high-risk trial of waste capture technology under tight time constraints and mitigates financial and job-security risk at local operations. Huon does not advocate a cull however, earlier and more rapid harvest to comply with the 12,000tonne limit is a much lower risk option to all waterway users.

# 5. Waste Capture to facilitate maintenance of excessive biomass in MH

Huon Aquaculture is supportive of innovation that improves efficiency and environmental outcomes and Huon is not averse to Tassal trialling ideas such as a "waste capture system", however the Company is very concerned that the location for the trial, the circumstances under which the trial is being undertaken and the proposed timelines are not realistic for achieving a successful outcome for what is an unproven and potentially high risk system. A key concern is that a substantial component of the risk associated with the EPA's Draft determination associated with a waste capture system will be borne by other salmon companies and other stakeholders more broadly.

To date no specific information on Tassal's proposed waste capture system has been provided to Huon which makes it difficult to comment. However, the concept of waste capture systems was first raised in the early nineties so is not new. Many have tried in the last 25 years since to develop such a system without success. There is little information available internationally because there are no successful systems in commercial operation and current limited overseas trials are experiencing significant challenges.

A more detailed explanation of Huon's concerns is in our response to the DRAFT EPA Guidelines for EMP Preparation in relation to "Salmonid Aquaculture Waste Capture Systems, Macquarie Harbour May 2017" (see Annexure 1).

Key risks include:

- The EPA is proposing to allow Tassal to farm at 28 T/Ha which is 15 T/Ha above what the EPA considers to be a sustainable biomass (ie. 13 T/Ha) on the basis that an unproven "waste capture system" will remove 100 % of the wastes emanating from the additional biomass of fish. However, it is known from the literature (Wang, 2012) that only a small proportion of fish wastes are contained within the particulate matter of fish faeces. By far the larger component of wastes i.e. non-particulate wastes does not settle and will not be captured. The impact of uncaptured waste and the oxygen drawdown associated with the additional biomass must also be considered.
- Key challenges experienced overseas include:
    - Effective capture of fish wastes
    - Fish health and biosecurity issues
    - Engineering issues eg. drag forces on mooring grids
    - Water quality impacts within pens
- It is particularly concerning to Huon that a substantial component of the risks are borne by other salmon companies, and Huon specifically, as well as stakeholders more broadly.

The EPA's proposal for Tassal to self-audit performance and implement appropriate reporting and issues resolution processes is unacceptable for several reasons:

- The potentially serious negative impacts on worker safety, fish health, environmental, social and financial matters that the proposal could have on neighbouring salmon companies which are in close proximity.
- The heightened community interest in the proposal and their risks as stakeholders.
- The considerable financial incentives for Tassal to maintain a higher biomass in the Harbour.

It is important to note that Huon will be ensuring compliance within the Draft EPA biomass of 12,000 Tonnes by early harvesting of the 16 year class. While there are direct financial impacts of this strategy on Huon, it recognises the seriousness of the issues involved and results in significantly lower risk to other salmon companies and stakeholders more broadly.

## 6. Impact on World Heritage Area (WHA)

As Macquarie Harbour is both World Heritage listed and home to a listed threatened species (the Maugean Skate), the 2012 expansion of marine farming activities was the subject of a decision by the Federal Minister for the Environment, who determined that further assessment was not required provided certain conditions were complied with. The conditions imposed by the Federal Minister require the Tasmanian State Government take measures to ensure that marine farming does not cause negative impacts on the World Heritage listed part of the Harbour or the habitat of the Maugean Skate.

The WHA Report (Environmental Protection Authority, 2017) acknowledges that there is clear deterioration in the environmental conditions within the WHA and that finfish aquaculture is likely to be a driver, although not exclusively, of the dissolved oxygen decline.

The Figure below (identified as Figure 2) has been provided by Professor Jamie Kirkpatrick (Head of Discipline of Geography and Spatial Sciences, University of Tasmania). The Figure shows that there is a strong correlation between increasing salmon farming production and declining DO levels in MH (pers. comm. May 2017).

The SoR that accompanied the Draft Determination states, *"The environmental health of Macquarie Harbour, in particular levels of DO in the bottom waters, is likely to represent a crucial factor in the future well-being of the Maugean Skate population. Low DO concentrations appear limiting for the skate and presumably their prey. Maugean Skate eggs may be deposited in depths greater than 20 metres, thereby exposed to low DO concentrations."* and *"Whilst it is clear that farming can affect the DO levels within and under cages, it is not currently clear to what extent individual farms contribute to the low DO water body (bodies) in the broader Harbour.*

The WHA Report (Environmental Protection Authority, 2017) also acknowledges that impacts from the Tassal Lease 266 extended into the WHA in early 2017.

The current Draft Determination allows for stocking rates of up to 28 T/Ha (including use of a waste capture system) and up to 50 T/Ha[1] for one operator (Tassal) using remaining available leases. The EPA Director also advised that peak biomass would be up to 18,000 tonnes.

There is a known correlation between salmon farming and oxygen drawdown and whilst the extent is not fully known, based on the current conditions, a biomass level of 18,000 tonnes is not consistent with a precautionary approach and waste capture does not mitigate the potential impacts on dissolved oxygen levels as a result of salmon farming.

It is Huon's view that the EPA are;

- not complying with the Federal Minister's conditions that require that they implement and enforce targeted management responses to ensure that the Harbour's environmental values are protected; and
- approving salmon stock levels (biomass) at much greater levels than the Harbour can sustain which is causing or is likely to cause, environmental harm to the Harbour.

## 7. Huon Aquaculture production planning information

Macquarie Harbour (MH) is an important part of Huon's total production which is demonstrated by its investment of over $50M since Huon commenced farming in the region. MH plays a vital role in ensuring;

1. continuous supply to market over a 12 month period of appropriate market size fish;
2. ability to grow and market rainbow trout; and
3. a discreet biosecure region to reduce agricultural and environmental risk.

Given the strategic importance of MH, Huon has, since 2014, consistently and repeatedly advocated for a conservative approach to management of the water-way to protect the long-term sustainability of MH as a growing region.

Huon provides the information below regarding its planned production based on a harbour-wide biomass limit of 12,000 tonnes in MH in this context and shows:

1. Monthly biomass, feed usage, estimated peak biomass and harvest period
2. No mixing of year class on leases
3. Proposed 17YC smolt entries (numbers subject to final hatchery counts and variances)

It is important to note that Huon is not constrained by inputs for 18YC however the Company is yet to determine 18YC inputs and is retaining strategic flexibility within the Company's planning until there is sufficient clarity and certainty on proposed management of MH by the EPA

[1] Letter from EPA Director, Wes Ford, to Huon Aquaculture 18/5/2017

# 8. Lease by lease management

Huon notes that it is the EPA Director's intention to move to a "lease by lease" management framework between now and 2018.

Huon also notes that Petuna and Tassal have stated their support publicly for a move to "lease by lease management."

It is important that any move to "lease by lease management" is guided by the Area Management Agreement for salmonid aquaculture in Macquarie Harbour between Huon, Petuna Aquaculture Pty Ltd and Tassal Operations Pty Ltd.

The Area Management Agreement was a condition of the expansion in 2012.

Section 6.8 deals with apportionment of biomass and is stated here.

*"Should any adjustments to the carrying capacity per ha or net stocking density limits occur, it is agreed they will be applied to each Party on an equal basis with each Party enjoying the same maximum tonnage per ha averaged over the Company's total leases operated in Macquarie Harbour and the same maximum stocking density limit. Each Party will then immediately act to ensure that the Party becomes compliant with the adjusted capacities and limits as soon as practically possible."*

In Huon's submission of 4 May 2017, the Company provided a proposed method for applying "lease by lease management" that meets the requirements of the AMA and current management controls. Petuna also provided a proposed methodology in their submission of 14 March 2017. The Company summarises its views in relation to "lease by lease management" below.

However, historical evidence demonstrates that all leases in MH have positive and negative attributes. Huon is not currently aware of any sound and rigorous scientific basis on which to apply biomass disproportionately, therefore Huon is of the view that it can only really be done on per hectare basis. Huon provides the following comments in support of this view:

- Evidence indicates that leases at the southern end of the harbour are prone to low DO and souring, however these impacts are not limited to these leases as evidenced by large masses of water with low DO and sediment non-compliance at both Huon and Petuna leases further toward the northern end of the harbour.

- In regard to sediment conditions, some of the differences seen between southern and northern leases could be driven as much by the level of stocking on those leases as any other factor. For example, it would appear that the Tassal Franklin lease (266) was far more heavily stocked per hectare than any other lease in the harbour, including the two Tassal leases in the northern end of the harbour. While Tassal's overall T/Ha allocation is 25.35 T/Ha this would not necessarily applied equally across all three Tassal leases. Whereas the Petuna leases have been stocked at the lowest tonnes per hectare (ie. 9.65 T/Ha) and yet still suffering sediment non-compliance and large scale mortality events. To suggest that the Petuna or Huon leases could sustain increased biomass is not self-evident from the results to date. In fact, results suggest they are already at an upper limit.

- In contrast leases at the northern end of the harbour are much more prone to rapid vertical mixing events where water with low DO comes to the surface with the potential of killing large numbers of fish within a very short period (ie. minutes or hours).

- The consequences of mass mortality events can have devastating consequences not only for the Industry but other stakeholders in the harbour such as tourism and local community. The EPA Director has twice written to Huon indicating that he believes mass mortality events are likely (refer Annexure2).

- Previously a lease at the northern end of the harbour operated by Southern Ocean Trout was closed down and relocated further south in the harbour because of unsuitable environmental conditions.

## 9. Decision making

As stated in Huon's submission to the EPA of April 2017, Huon is of the view that, to date, that there has not been an effective application of the precautionary principle and that there has been sufficient evidence since 2014 of a serious threat to the environment and on that basis greater steps should have been taken to minimise harbor-wide impacts and potential impacts on the WHA.

On face value, it appears that the Draft Determination is largely based on the preservation of the current stock levels and one operator's planned production and harvest schedule and the elevation of these short term economic interests will defeat what should have been the primary consideration in the context of the medium and long term economic objective – including the protection of jobs – of planning for a sustainable future for marine farming in the Harbour.

As indicated in Huon's previous submission in January 2017 decisions must have regard to the objectives of the *Marine Farm Planning Act 1995* **(MFP Act)** and the objectives of Resource Management Planning System **(RMPS)**.

In addition, in the context of MH, any decision making with respect to biomass limits and management controls for MH needs to take into consideration the Environmental Impact Statement (**EIS**) prepared to facilitate the expansion of salmon farming in MH and approved by the State Government in May 2012 and by the Commonwealth Environment Minister's decision under sections 75 and 77A of the *Environment Protection and Pollution Control Act* 1999 (**EPBC Act**) dated 12 October 2012 (**the Minister's Decision**).

The EIS at p381 states:

*"The ultimate aim of the adaptive management program is to monitor the gradual production increase over time and increase knowledge in relation to the sustainability and feasibility of the proposed amendment. Monitoring any potential adverse effects will be associated with the application of relevant mitigation measures based on the severity of the observed impacts."*

The Minister's Decision states that:

*"the proposed action is not a controlled action, provided it is undertaken with the manner described in the enclosed decision document. This means that, provided that the action is undertaken in that way, it does not require further assessment or approval under the EPBC Act before it can proceed."*

Huon's submission is that the statutory objectives and the EIS and Ministers Decision clearly set the context of sustainability being a primary consideration and for taking a precautionary approach. The Buxton Report (July 2015)[2] provides an explanation of the precautionary principle in the adaptive management context and is provided in the excerpt below.

Excerpt from Buxton Report (July 2015) (page 12)

***How is the Precautionary Principle used in the making of decisions relating to environmentally sustainable development in an adaptive management context?***

*The Precautionary Principle rose to prominence following its inclusion in the Rio Declaration on Environmental Development (Principle 15) which describes the precautionary approach and its use in the context of environmental conservation as, "[w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."*

*This description…is explicit that the risk must be one of serious or irreversible damage. Recent reviews of the precautionary principle confirm that identification of a threat, and determination that that threat is significant, should be key prerequisite steps in accepting the application of the Principle (Kearney et al. 2012).*

*In the application of the precautionary principle, public and private decisions should be guided by:*

- *Careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and*
- *An assessment of the risk-weighted consequences of various options.*

*A major characteristic of the precautionary principle is that it specifies that measures must be taken if there are threats of serious or irreversible environmental damage and these measures should be relaxed only if research demonstrates that they are not needed.*

*It is not consistent with the Principle to allow scientific uncertainty to negate the necessity to assess whether any particular action or event is a threat.*

[2] Buxton, C. 2015 Review of the Tasmanian Abalone Council report on risks to the abalone fishery from further expansion of the salmonid industry

In the current context, Huon submits that the upcoming decisions pertaining to the management of MH and in particular a harbour-wide biomass limit, must give sufficient regard to the application of the precautionary principle in an adaptive management context.

Specifically, decision making, as outlined by Buxton (July 2015) should be guided by;

- Careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and
- An assessment of the risk-weighted consequences of various options.

As outlined by Buxton 2015 (pg 13), the National Strategy for Sustainable Development is guided by a number of ecological and development principles which are re-stated below.

Ecological principles are:

- Decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations,
- Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation, and
- The global dimension of environmental impacts of actions and policies should be recognised and considered.

Developmental principles are:

- The need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised,
- The need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised, and
- Cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing, and incentive mechanisms, and decisions and actions should provide for broad community involvement on issues which affect them.

Buxton (2015) maintains that all principles and objectives need to be considered as a package. No objective or principle should predominate over the others. However, it is Huon's view that a "lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation" and that there is sufficient evidence for action to be swift and fair to prevent further deterioration of environmental conditions in MH in the next round of decision making.

It is Huon's view that there has been an overweighting of consideration of one proponent's employment and financial position. There are potentially wide-ranging and very significant negative impacts (economic, employment, reputational, environmental and social) both for the proponent and a range of other stakeholders that must be considered in the event that the proposal is not as effective as planned or fails after implementation.

It is important to note that the other two salmon companies in MH are managing their 16 year class biomass within the DRAFT EPA biomass limits by harvesting fish earlier. While there is a financial cost being incurred by these companies in early harvest, this is a low risk option available to the proponent.

Huon believes there has been insufficient consideration and investigation of an "early harvest" option that provides both safe and humane outcomes. This option is preferred as it also reduces risk to Huon as a fellow operator in MH.

Further, Huon is of the view that insufficient consideration has been given to the potential increased risks to its operations as a result of the Draft Determination insofar as there is no information in the Draft Determination or SoR that sets out what weighting or consideration was given to these risks and how the Draft Determination in anyway mitigates the increased risk to Huon's operations including potential stock losses, lost growth and employment uncertainty, as well as harbour-wide environmental impacts (such as reduced DO) that such a high biomass may have.

## 10. Legal options

On 19 May 2017, Huon Aquaculture representatives spoke with the Director of the Monitoring and Assurance Section of the Compliance and Enforcement Branch of the Federal Environment Department (Alex Taylor). During the conversation, the Director advised that he was unable to confirm if Huon was liable for WHA impacts.

Given Huon's longstanding concern about the failure of DPIPWE and the EPA to properly manage MH, Huon reserves its rights to pursue legal actions in both the Federal and State jurisdictions with respect to ensuring compliance with the Minister's decision and to obtain an appropriate biomass limit and equitable allocation for MH.

In addition, in relation to proposed waste capture options, it is Huon's strong view that given heightened community interest and to ensure there are robust, rigorous and independent processes applied to its assessment, that any proposal for waste capture to be used in MH should be assessed under section 27 of the *Environmental Management and Pollution Control Act 1994* **(EMPCA)**. In so doing, the community, and indeed Huon as a fellow waterway user who may be directly impacted by such an activity, would have the assurance that the proposed activity had been effectively assessed by the EPA Board.

Huon notes that whilst the EPA Director is making decisions regarding the environmental conditions in MH, they are being made under delegation from the Secretary of DPIPWE and are not made under EMPCA or with reference to the EPA Board. This calls into question the legitimacy and perceived independence of the decision making that is currently being undertaken under delegation. For that reason, Huon re-states its strong view that an assessment under Section 27 of EMPCA that is assessed by the EPA Board is the only assessment process that would allow the community and fellow waterway users the confidence to accept the use of proposed waste capture systems. This is of particular importance as the methodology, technology and other critical components on which an assessment will be made will be deemed "trade secrets" and therefore unavailable to either the public or other waterway users[3] that may be impacted by the activity.

[3] Letter from EPA Director, Wes Ford, to Huon Aquaculture 18/5/2017

# References

Environmental Protection Authority. (2017). *Macquarie Harbour Tasmanian Wilderness World Heritiage Area Environmental Status Report.* Tasmania: EPA.

Knight B, F. B. (2015). *Macquarie Harbour Environmental and Fish Health Monitoring Review.* Prepared for Department of Primary Industries, Parks, Water and Environment Tasmania. Cawthron Report.

Ross, J. & Macleod, C. (April 2017 (yet to be released)). *DRAFT Environmental Research in Macquarie Harbour, FRDC 2016/067: Understanding oxygen dynamics and the importance for benthic recovery in Macquarie Harbour.* Tasmania: Institute of Marine and Antarctic Studies, University of Tasmania.

Wang, W. L. (2012). *discharge of nutrient wastes from salmon farms: environmental effects, and potential for integrated multi-trophic aquaculture.* Norway: Trondheim Biological Station, Department of Biology, Norwegian University of Science and Technology.