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23-05-17

Mr Wes Ford
Director of EPA Tasmania
Department of Primary Industries,
Parks, Water & Environment
Level 7, 134 Macquarie Street
Hobart, TAS 7000

Dear Mr Ford,

Re: Response to the Environment Protection Authority's Draft statement of reasons for determination made pursuant to management controls 3.0.1 and 3.3.5 the Macquarie harbour marine farm development plan October 2005.

Thank you for giving Tassal the opportunity to provide a response to the Environmental Protection Authority's (EPA) 5 May 2017 letter, and accompanying draft statement and draft determinations. Tassal supports the EPA biomass decision, which seeks to balance the environmental, economic and social needs of the Strahan and wider Tasmanian Community. Tassal is committed to working with the EPA to comply with all regulatory requirements.

Tassal takes a long-term sustainable view of all its operations, including Macquarie Harbour – this allows us to invest in our infrastructure, environmental management, our employees and the communities in which we operate. This balanced platform formed the basis of Tassal's original submission and this response.

Tassal acknowledges and accepts the changes in the draft biomass allocations and maximum allowable limits:

- Maximum biomass without waste collection for the total areas of the leases operated by companies 1 June 2017 to 31 May 2018 is 13 tonnes per ha
- Maximum biomass for 2016 salmon input year (also known as the 2016 year class) held in cages with approved waste collection is an additional 15 tonnes per ha
- Maximum number of 2017 salmon input year (also known as the 2017 year class) smolt is not to exceed the quantity of fish that would achieve a biomass for the year class of 13.4 tonnes per ha in the period 1 December 2018 to 31 January 2019 (based on 12,000

total for harbour, 90% 2017 salmon input year and 10% 2018 salmon input year (also known as the 2018 year class) and with 805.89 ha available the total biomass will be 14.9 tonnes per ha

- Tassal will use 160 ha for the calculation of our 2017 smolt input i.e. lease 266's 120 ha will not be available to us unless it comes into compliance for restocking by 1 August 2017; this will result in our allocation being 19.85% or roughly 500K smolt for the 2017 salmon input year

Tassal has reviewed and updated production plans and will comply with the new EPA determinations.

The purpose of Tassal's response is to:

- Formally submit Tassal's waste capture and removal proposal (see attached EMP Appendix I)
- A revised stocking, feeding and harvesting plan for the 2016 salmon input year (see supporting data in Appendix II)
- Layout a stocking plan for the 2017 salmon input year (see Appendix III)

1. Tassal's Waste Capture and Removal Proposal

The proposal laid out in this response follows the EPA draft guidelines for EMP preparation in relation to Salmonid Aquaculture Waste Capture Systems, Macquarie Harbour May 2017. The proposal is **attached in Appendix I**, with commercial in confidence information redacted. A summary is provided below.

Tassal is proposing to implement waste capture systems (WCS) to capture and remove the solid faecal output from salmon. The waste capture systems if approved, will be implemented by 1 September 2017 on marine leases 219 and 214. For biomass above Tassal's apportioned 3,600MT, the WCS will be implemented as directed by the EPA. The implementation of the WCS will be targeted to the highest to lowest risk areas in relation to benthic non-compliances based on historic surveys and extensive environmental data. Included in this risk assessment is also the proximity to other leases and surrounding environments.

The WCS once implemented, may have beneficial fish health impacts as it will remove a known vector of disease and could reduce the total pathogen loading on sites. However, Tassal recognises the risk of pluming and suspended solids on fish stocks, and is working to optimise

the WCS to reduce these known risks. Removal of faeces if done in the correct manner can be positive for reducing background levels of pathogens.

The overall effects of the waste capture system to nutrient output, environmental health and fish health are positive and the system will be designed to be fit-for-purpose. Tassal has been working with external experts to ensure that the risks associated with the implementation of the WCS are minimal and well managed. A prototype will be trialled, and amendments will be made so the final process meets all the requirements of the EPA.

2. Stocking and Harvest Plan for 2016 and 2017 salmon input year

Tassal agrees and acknowledges the intent of the EPA determination, and has laid out a viable and sustainable production strategy for Macquarie Harbour with consideration to:

- Growing out of the 2016 salmon input year and stocking the 2017 salmon input year to balance environmental, social and economic aspects
- Franklin lease not being available for stocking
- Mitigating fish health risks to neighbouring farming leases and companies
- Planning for adequate recovery and fallow periods for subsequent salmon input years

3. The 2016 salmon input year

The 2016 salmon input year are currently stocked at Middle Harbour (214) and Gordon (219) leases. Stock in both leases are required to remain in their current locations until they are a harvestable weight.

An earlier harvest of the 2016 salmon input year is currently planned, but only can occur as fish start to reach a marketable size and can be humanely harvested. We anticipate that this will start in December 2017. Tassal plans to have WCS in place to service the 2016 salmon input year, and monthly standing biomasses in the production plan illustrated in Figure 1 assumes the implementation of a WCS.

- Middle Harbour Lease (214):
 - Harvesting will commence in December 2017
 - Approximately 33% of the stock on 214 will be harvested by the end of February 2018
 - The remaining volume on lease 214 will be harvested in March 2018

- Gordon Lease (219):
 - Harvesting will commence, after lease 214 harvest is completed, in March 2018
 - All remaining 2016 salmon input year fish at the Gordon lease will be harvested by May 2018

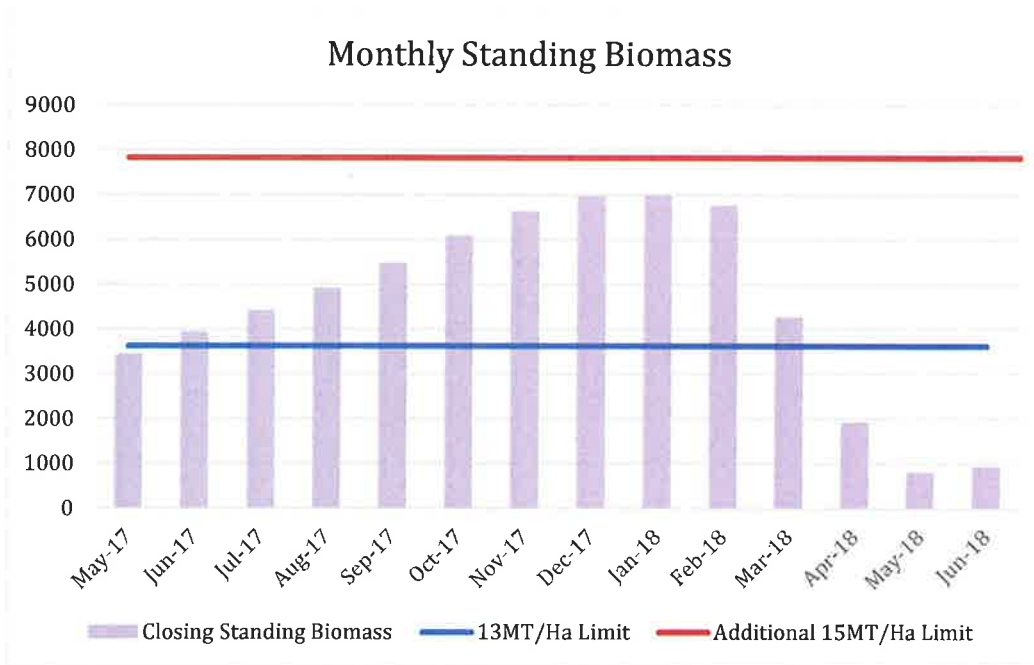


Figure 1: Graph illustrating the production plan to maintain under 15MT/Ha across a combination of both Middle Harbour and Gordon leases.

4. Tassal's 2017 salmon input year Stocking Plan

Pleasingly we have seen improvements in benthic conditions in Macquarie Harbour, as previously reported. The EPA and IMAS have received and are currently reviewing the underlying data from our survey results, including the May compliance survey. From our analysis, all Tassal leases within Macquarie Harbour should now be in compliance at all "out of lease" compliance points.

Operator	rec	No. of 35m compliance points surveyed for each lease (determined by the EPA)			No. of compliance points found to be non-compliant for Beggiatea		
		Sep. 2016	Jan. 2017	May 2017*	Sep. 2016	Jan. 2017	May 2017*
TASSAL	214	9	10	10	0	2	0
TASSAL	219	9	9	9	0	2	0
TASSAL	266	21	21	21	14 +3 survey points	20	0

Table 1: compliance history table (May survey results still pending review from EPA and in-house surveys are not included)

We have attached a revised stocking, feeding and harvesting plan for the 2016 salmon input year fish that are to be part of the allocated peak biomass of 12,000 tonnes. The supporting detail and data is attached in Appendix II and is classified as commercial in confidence.

We have attached a proposed lease stocking plan, including the number of smolt, for the 2017 salmon input year smolt that will fit within the 12,000 tonnes peak biomass. The supporting detail and data is attached in Appendix III and is classified as commercial in confidence.

Middle Harbour (lease 214) will be the only lease that is stocked with Tassal's upcoming 2017 salmon input year. To support the move to single year class per lease stocking, Tassal is planning to stock the 2017 year class into a new grid system, built adjacent to the current grid at Middle Harbour. This grid will hold the 2017 year class until pen bays in the original grid are cleared with a benthic pre-stocking survey. After clearance, the 2017 year class will be split down and stocked into the original Middle Harbour grid over a period of several months. Once splitting of pens is completed, fish will be grown out in these positions until March 2019.

This plan will require Tassal to double year class stock in Middle Harbour for a very short period while transitioning to single year class stocking and the Franklin lease recovers.

5. Year Class Stocking

Tassal supports single year class stocking in Macquarie Harbour. Once Tassal starts to harvest out the 2016 salmon input year (year class), efforts will be made to consolidate the 2016 salmon input year into one lease to limit numbers of fish in double year class stocked sites. As stated previously, Tassal is seeking to double year class stock in Middle Harbour for a very short period while transitioning to single year class stocking and until the Franklin lease recovers.

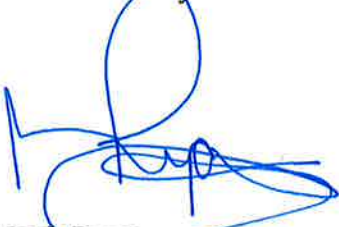
Tassal acknowledges that there are potential risks associated with multiple year class stocking that need to be actively managed. To mitigate risks Tassal employs the following strategies:

- **Entering high quality smolt:** Poor quality stock being entered in is the highest risk of disease as fish are inherently more susceptible. Quality must be assessed by each company to minimise the number of deformities and ensure that all smolt entering the harbour are vaccinated for *Yersinia ruckeri*; Aeromonad disease and Vibriosis.
- **Early detection of disease for early intervention:** Early detection of disease is necessary and it is important that each company has a surveillance program.
 - Tassal is committed to undertake fortnightly surveillance of 2017 salmon input year stock to collect observations of gross pathology; and samples for histopathology/microbiology and PCR
 - Targeting moribund individuals will increase the likelihood of detecting disease
 - Samples are to be submitted through the Tasmanian Salmonid Health Surveillance Program
- **Increased mortality extractions:** Increasing mortality extractions will reduce exposure time to potential disease vectors (mortalities). Mortality extractions in the 2016 (year class) salmon input year can be performed at least every second day; and for the 2017 (year class) salmon input year every day.
- **Biosecurity measures between year classes for internal operations:** Strict biosecurity measures need to be in place to limit disease vectors between the 2016 year class and the 2017 year class fish. The main biosecurity measures Tassal will practice includes:
 - Overall, ensuring stock stress is minimised during daily tasks and handling operations
 - Separation of equipment between year classes including seine nets; splitting barges; fish pumps

- If equipment is required to be used between year classes, then full disinfection is required prior to use
- Segregation of personnel working between year classes
- Segregation of vessels working between 16 year class and 17 year class
 - Ensuring all vessels are maintained in a hygienic and biosecure manner
- Mortalities are disposed of in a biosecure manner
- Mortality extraction vessel will only be used for the 2016 year class, and the 2017 year class will be dived daily for mortality removal
- Divers present the highest risk due to handling of mortality and PPE. If divers are required to be used on both year classes:
 - Works will be prioritised so that the divers enter 2017 year class fish first; and then 2016 year class fish second
 - Disinfection of PPE will occur between each pen
 - Full vessel disinfection will occur between the 2017 year class and the 2016 year class on and between leases
 - Mortalities will be removed from the dive boat daily to ensure there is no contamination
- The waste capture vessel will be used only for the 2016 year class of fish so there will not be any contamination

Should you have any queries with regards to this letter or the accompanying attachments, please do not hesitate to contact me.

Yours sincerely



Mark Ryan
Managing Director and CEO
Tassal Group Ltd