

## Statement of reasons for determinations made pursuant to Management Controls 3.3.1 and 3.3.5 of the *Macquarie Harbour Marine Farming Development Plan October 2005*

I, Wes Ford, Director, Environment Protection Authority, acting under delegation of the Secretary of the Department of Primary Industries, Parks, Water and Environment, provide this statement of reasons for my determination, pursuant to Management Controls 3.3.1 and 3.3.5 of the *Macquarie Harbour Marine Farming Development Plan October 2005 (consolidated version incorporating Amendment No 1 Approved 28 May 2012)*, (the Plan), regarding the maximum permissible stocking density of finfish held within any fish cage and maximum permissible biomass of finfish that may be stocked within all areas covered by this plan during the period 1 June 2018 and 31 May 2020 for licenced finfish marine farming operations.

I further provide this statement of reasons for my determination pursuant to Management Control 3.3.5 of the plan for the apportionment of biomass between the leaseholders licenced for finfish marine farming operations within specified areas of this plan.

### Determination under Management Control 3.3.1

- 1 The maximum permissible stocking density of finfish held within any fish cage, within the entire area covered by this plan, is 15 kg/m<sup>3</sup>, which is extended for up to 40 per cent of the cages of the current harvest year class biomass of salmonid fish (inclusive of those cages already harvested) to a maximum of 17 kg/m<sup>3</sup> at any one time, as long as the average for the total number of nets being held on the applicable sites does not exceed 15 kg/m<sup>3</sup>.

#### Basis for decision

- 1.1 The maximum permissible stocking density is based on the stocking density agreed by the parties to the *Macquarie Harbour Area Management Agreement: Environmental Management Plan Version 1.0 (December 2012)*. This remains unchanged from the previous determination.

### Determination under Management Control 3.3.5

- 2 The maximum permissible biomass (tonnes per hectare) of finfish held in cages that may be stocked within the entire area covered by the *Macquarie Harbour Marine Farming Development Plan October 2005* for the period 1 June 2018 to 31 May 2020 is 10.26 tonnes per hectare.

#### Basis for decision

- 2.1 The maximum permissible biomass (tonnes per hectare) has been calculated based on a total finfish biomass (TB) of 9500 tonnes and total area licenced for the farming of finfish (TA) of 925.88 hectares. In accordance with Management Control 3.3.7 of the Plan, TB/TA must be no greater than 10.26 tonnes per hectare, where TB = total biomass in tonnes of finfish held by lessees or sub-lessees within the area of all leases within the Plan area at a single point in time, and TA = combined total lease area licensed for the farming of finfish held by lessees or sub-lessees within the Plan area at that same point in time.

- 2.2 The area of all leases (including Franklin Lease No. 266) within the Macquarie Harbour Marine Farm Development Plan Area has been included in the calculation of this maximum permissible biomass determination. The ability of each company to stock their respective leases, and therefore utilise their biomass allocation, will be dependent on the capacity of each lease to be operated in accordance with benthic compliance requirements and pre-stocking approval from the Director, EPA. On an individual lease basis, if management directions related to benthic condition result in the loss of lease area for farming, then a company may not be able to utilise their whole biomass allocation.
- 2.3 Based on the above, the apportionment of the maximum permissible biomass between lessees/sub-lessees operating in the Plan Area will be as per the table below:

<b>Lease area</b>	<b>Ha</b>	<b>%</b>	<b>Maximum Permissible Biomass (T/Ha)</b>	<b>Maximum Permissible Biomass (tonnes)</b>
Petuna	415.95	44.92	10.26	4267.9
Huon	229.96	24.84	10.26	2359.5
Tassal	279.97	30.24	10.26	2872.6
<b>Total</b>	<b>925.88</b>			<b>9500</b>

- 2.4 Additional biomass will not be allocated based on the use of waste capture systems. I am yet to determine whether the use of waste capture systems will be considered as a factor in allowing leases or pen bays to be stocked.
- 2.5 In my letter of 5 March 2018 to the companies outlining my draft biomass determination for the period 1 June 2018 until 31 May 2020 I proposed a rationale for moving to a decision-making framework that sets the biomass for a single year class. I proposed setting the biomass limit for the YC2017 and the YC2018 at 8,000 tonnes for each year class, with the peak period being November 2018 – January 2019 and November 2019 – January 2020 respectively. Under this determination, the total biomass in December 2018 (YC2017 and YC2018 combined) would have been be around 9,000 tonnes and could be slightly higher, at around 9,500 tonnes, in December 2019 (YC2018 and YC2019 combined), depending on fish growth and mortality.
- I have subsequently considered the feedback of companies and reviewed this proposed year-class approach in relation to the requirements of Management Control 3.3.5 of the Plan, and have determined it is necessary to clearly state the maximum permissible biomass as a number which encompasses the total tonnes of finfish held within the Plan area at a single point in time.
- I have therefore revised my draft determination of 5 March 2018 and am issuing a total biomass determination of 10.26 tonnes/hectare. In terms of total biomass within Macquarie Harbour, I expect that this number will be equivalent to the draft determination provided to companies for consideration in March.
- 2.6 No smolt input limit is set at this time. Each company should determine their smolt input based on their forward production planning with respect to maximum permissible biomass allocations and any other relevant factors such as fallow directions and benthic conditions at individual leases. The setting of smolt input limits for the Harbour may be considered at a future time based on the environmental performance of the Harbour and significant changes in stocking and growth plans implemented by the companies within the biomass limit.

- 2.7 This biomass determination of 10.26 tonnes/hectare (1 June 2018 – 31 May 2020) represents a reduction from the previous biomass determination in Macquarie Harbour (1 June 2017 to 31 May 2018) which was 13.0 tonnes/hectare (with supplementary 15.0 tonnes/hectare subject to implementation of a waste capture system approved by the Director, EPA). Peak finfish biomass in Macquarie Harbour for summer 2017/18 was in November with approximately 13,250 tonnes.

Based on peak biomass projections of approximately 7,700 tonnes for the 2017 year class fish for the summer of 2018/19 as provided to me by companies in January 2018, and company responses to my draft determination letter of 5 March 2018, I expect that this reduced biomass determination will be achievable given current 2017YC stocking levels and proposed 2018YC stocking plans.

My biomass determination for the period 1 June 2018 to 31 May 2020 is based on consideration of the current environmental status of the Harbour (outlined below), and my view that it is prudent to adopt an approach which reduces the biomass for a sufficient time to allow Harbour response to be monitored and interpreted meaningfully.

IMAS research (*FRDC 2016/067 Understanding oxygen dynamics and the importance for benthic recovery in Macquarie Harbour*) continues to provide important information on the Macquarie Harbour environment. The February 2018 progress report indicates that while the benthic community in the harbour was showing signs of recovery in May 2017, there was a return to very low oxygen levels in spring 2017 and a subsequent infaunal decline at lease sites in the October 2017 survey. Monitoring results suggest that until dissolved oxygen levels recover and stabilise over the longer term it will be difficult to see a sustained benthic recovery. However, the results at external sites do suggest that if dissolved oxygen recharge is sustained, there is a more abundant and species rich reservoir of fauna in shallower regions that may quickly recruit based on May 2017 observations.

A report from IMAS on the January 2018 benthic survey round is not yet available, however, preliminary results presented by IMAS via briefings to myself and the project Steering Committee have informed my decision-making regarding this biomass determination. Preliminary benthic infauna results from the January 2018 survey indicate that since May 2017 there has been a decline through October 2017 and January 2018 at lease sites which is likely to be indicative of the effects of the low bottom water dissolved oxygen concentrations. A reduction in species diversity and abundance since the October 2017 surveys was evident at some locations in January 2018.

Of ongoing concern are the bottom and mid-water dissolved oxygen levels in the Harbour. Monitoring over spring/summer 2017/2018 showed a recharge in dissolved oxygen in the bottom waters in November following the very low levels of early spring 2017. Subsequent improvement was also observed in the mid-water range, although to a lesser degree. Increases in dissolved oxygen levels also occurred over summer and again in late March 2018. However, as has been observed over previous years, improvements in oxygen levels in the water column have not generally been sustained, and the most recent oxygen increase is beginning to show signs of depletion. Over the longer term, sub-surface dissolved oxygen conditions in the Harbour remain low in comparison with historical levels, reflecting the need for sustained, broad-scale recovery of oxygen levels in the bottom and mid-waters of the Harbour.

The distribution of *Beggiatoa* and the potential for increased extent in the Harbour remains a concern. Nine out of ten leases were fully compliant (no *Beggiatoa* at 35m compliance sites) in May 2017 and September 2017, which was an improvement from six non-compliant leases in January 2017 and four non-compliant leases in September 2016. However the most recent monitoring from January 2018 resulted in four leases with at least 1 non-compliance at a 35m compliance point. Monitoring of benthic condition through regular compliance surveys in the Harbour remains a priority.

2.8 Consideration of this biomass determination has been made in accordance with my delegated authority in relation to environmental conditions in Macquarie Harbour. Decisions regarding stocking made in relation to biosecurity issues are a matter for the Secretary of the Department of Primary Industries, Parks, Water and the Environment, the Chief Veterinary Officer, and/or the Minister for Primary Industries and Water. Decisions on biomass limits made by the Director, EPA in relation to protection of the ecological health of the Harbour, do not limit the Secretary or the Minister from further directing the removal of stock from the Harbour in the case of biosecurity concerns.

## ATTACHMENT 1

### DETERMINATION

#### MAXIMUM PERMISSIBLE STOCKING DENSITY OF FINFISH THAT MAY BE HELD WITHIN ANY FISH CAGE WITHIN THE AREA OF LEASE NOS. 214, 219 AND 266 BEING AN AREA WITHIN THE AREA COVERED BY THE MACQUARIE HARBOUR MARINE FARMING DEVELOPMENT PLAN OCTOBER 2005

In accordance with Management Control 3.3.1 of the *Macquarie Harbour Marine Farming Development Plan October 2005* ("the Plan"), I have determined that within the total area covered by all of the following leases:

- marine farming Lease No. 214 (sub-lessee Tassal Operations Pty Ltd);
- marine farming Lease No. 219 (lessee Aquatas Pty Ltd);
- marine farming Lease No. 266 (lessee Tassal Operations Pty Ltd);

being an area within the area covered by the Plan, the maximum permissible stocking density of finfish held within any fish cage that may be stocked is as specified in column 2 of Table 1, in respect of the period specified in column 1 of that table.

**Table 1**

<b>Period</b>	<b>Maximum permissible stocking density (kg per m<sup>3</sup>) held within any fish cage within the area of leases 214, 219 and 266</b>
1 June 2018 to 31 May 2020	15 kg kg/m <sup>3</sup> which is extended for up to 40% of the cages of the current harvest year class biomass of salmonid fish (inclusive of those cages already harvested) to a maximum of 17 kg/m <sup>3</sup> at any one time, as long as the average for the total number of nets being held on the applicable sites does not exceed 15 kg/m <sup>3</sup> .

The date from which Tassal Operations Pty Ltd and Aquatas Pty Ltd must comply with my determination is 1 June 2018.

Dated: 28 May 2018



Wes Ford

**DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY**

## ATTACHMENT 2

### DETERMINATION

#### MAXIMUM PERMISSIBLE BIOMASS (TONNES PER HECTARE) OF FINFISH THAT MAY BE STOCKED WITHIN THE COMBINED AREA OF LEASE NOS. 214, 219 AND 266, BEING AN AREA WITHIN THE AREA COVERED BY THE MACQUARIE HARBOUR MARINE FARMING DEVELOPMENT PLAN OCTOBER 2005

In accordance with Management Control 3.3.5 of the *Macquarie Harbour Marine Farming Development Plan October 2005* ("the Plan"), I have determined that within the total area covered by all of the following leases:

- marine farming Lease No. 214 (sub-lessee Tassal Operations Pty Ltd);
- marine farming Lease No. 219 (lessee Aquatas Pty Ltd);
- marine farming Lease No. 266 (lessee Tassal Operations Pty Ltd);

being an area within the area covered by the Plan, the maximum permissible biomass of finfish that may be stocked is as specified in column 3 of Table 1 in respect of the period specified in column 1 of that table.

**Table 1**

<b>Period</b>	<b>Description of the category of salmonids that the maximum permissible biomass (tonnes per hectare) for the plan area applies to</b>	<b>Maximum permissible biomass (tonnes per hectare) that may be stocked within the combined area of Leases 214, 219 and 266</b>
1 June 2018 to 31 May 2020	2017, 2018 and 2019 year class salmonids	10.26

It is a requirement of this determination that when the biomass reaches 9 tonnes per hectare the company must submit biomass calculations and forward projections to the Director on a weekly basis.

The date from which Tassal Operations Pty Ltd and Aquatas Pty Ltd must comply with my determination is 1 June 2018.

Dated: 28 May 2018



Wes Ford

**DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY**

## ATTACHMENT 1

### DETERMINATION

#### MAXIMUM PERMISSIBLE STOCKING DENSITY OF FINFISH THAT MAY BE HELD WITHIN ANY FISH CAGE WITHIN THE AREA OF LEASE NOS. 216, 220 AND 267, BEING AN AREA WITHIN THE AREA COVERED BY THE MACQUARIE HARBOUR MARINE FARMING DEVELOPMENT PLAN OCTOBER 2005

In accordance with Management Control 3.3.1 of the *Macquarie Harbour Marine Farming Development Plan October 2005* ("the Plan"), I have determined that within the total area covered by all of the following leases:

- marine farming Lease No. 216 (sub-lessee Huon Aquaculture Company Pty Ltd);
- marine farming Lease No. 220 (lessee Southern Ocean Trout Pty Ltd);
- marine farming Lease No. 267 (lessee Southern Ocean Trout Pty Ltd);

being an area within the area covered by the Plan, the maximum permissible stocking density of finfish held within any fish cage that may be stocked is as specified in column 2 of Table 1, in respect of the period specified in column 1 of that table.

**Table 1**

<b>Period</b>	<b>Maximum permissible stocking density (kg per m<sup>3</sup>) held within any fish cage within the area of lease 216, 220 and 267</b>
1 June 2018 to 31 May 2020	15 kg kg/m <sup>3</sup> which is extended for up to 40% of the cages of the current harvest year class biomass of salmonid fish (inclusive of those cages already harvested) to a maximum of 17 kg/m <sup>3</sup> at any one time, as long as the average for the total number of nets being held on the applicable sites does not exceed 15 kg/m <sup>3</sup> .

The date from which Huon Aquaculture Company Pty Ltd and Southern Ocean Trout Pty Ltd must comply with my determination is 1 June 2018.

Dated: 28 May 2018



Wes Ford

**DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY**

## ATTACHMENT 2

### DETERMINATION

#### **MAXIMUM PERMISSIBLE BIOMASS (TONNES PER HECTARE) OF FINFISH THAT MAY BE STOCKED WITHIN THE COMBINED AREA OF LEASE NOS. 216, 220 AND 267, BEING AN AREA WITHIN THE AREA COVERED BY THE MACQUARIE HARBOUR MARINE FARMING DEVELOPMENT PLAN OCTOBER 2005**

In accordance with Management Control 3.3.5 of the *Macquarie Harbour Marine Farming Development Plan October 2005* ("the Plan"), I have determined that within the total area covered by all of the following leases:

- marine farming Lease No. 216 (sub-lessee Huon Aquaculture Company Pty Ltd);
- marine farming Lease No. 220 (lessee Southern Ocean Trout Pty Ltd);
- marine farming Lease No. 267 (lessee Southern Ocean Trout Pty Ltd);

being an area within the area covered by the Plan, the maximum permissible biomass of finfish that may be stocked is as specified in column 3 of Table 1 in respect of the period specified in column 1 of that table.

**Table 1**

<b>Period</b>	<b>Description of the category of salmonids that the maximum permissible biomass (tonnes per hectare) for the plan area applies to</b>	<b>Maximum permissible biomass (tonnes per hectare) that may be stocked within the combined area of Leases 216, 220 and 267</b>
1 June 2018 to 31 May 2020	2017, 2018 and 2019 year class salmonids	10.26

It is a requirement of this determination that when the biomass reaches 9 tonnes per hectare the company must submit biomass calculations and forward projections to the Director on a weekly basis.

The date from which Huon Aquaculture Company Pty Ltd and Southern Ocean Trout Pty Ltd must comply with my determination is 1 June 2018.

Dated: 28 May 2018



Wes Ford  
**DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY**

## ATTACHMENT 1

### DETERMINATION

#### MAXIMUM PERMISSIBLE STOCKING DENSITY OF FINFISH THAT MAY BE HELD WITHIN ANY FISH CAGE WITHIN THE AREA OF LEASE NOS. 133, 213, 215 AND 217, BEING AN AREA WITHIN THE AREA COVERED BY THE MACQUARIE HARBOUR MARINE FARMING DEVELOPMENT PLAN OCTOBER 2005

In accordance with Management Control 3.3.1 of the *Macquarie Harbour Marine Farming Development Plan October 2005* ("the Plan"), I have determined that within the total area covered by all of the following leases:

- marine farming Lease No. 133;
- marine farming Lease No. 213;
- marine farming Lease No. 215;
- marine farming Lease No. 217;

being an area within the area covered by the Plan, the maximum permissible stocking density of finfish held within any fish cage that may be stocked is as specified in column 2 of Table 1, in respect of the period specified in column 1 of that table.

**Table 1**

<b>Period</b>	<b>Maximum permissible stocking density (kg per m<sup>3</sup>) held within any fish cage within the area of lease 133, 213, 215 and 217</b>
1 June 2018 to 31 May 2020	15 kg/m <sup>3</sup> which is extended for up to 40% of the cages of the current harvest year class biomass of salmonid fish (inclusive of those cages already harvested) to a maximum of 17 kg/m <sup>3</sup> at any one time, as long as the average for the total number of nets being held on the applicable sites does not exceed 15 kg/m <sup>3</sup> .

The date from which Petuna Aquaculture must comply with my determination is 1 June 2018.

Dated: 28 May 2018



Wes Ford

**DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY**

## ATTACHMENT 2

### DETERMINATION

#### **MAXIMUM PERMISSIBLE BIOMASS (TONNES PER HECTARE) OF FINFISH THAT MAY BE STOCKED WITHIN THE COMBINED AREA OF LEASE NOS. 133, 213, 215 AND 217, BEING AN AREA WITHIN THE AREA COVERED BY THE MACQUARIE HARBOUR MARINE FARMING DEVELOPMENT PLAN OCTOBER 2005**

In accordance with Management Control 3.3.5 of the *Macquarie Harbour Marine Farming Development Plan October 2005* ("the Plan"), I have determined that within the total area covered by all of the following leases:

- marine farming Lease No. 133;
- marine farming Lease No. 213;
- marine farming Lease No. 215;
- marine farming Lease No. 217;

being an area within the area covered by the Plan, the maximum permissible biomass of finfish that may be stocked is as specified in column 3 of Table 1 in respect of the period specified in column 1 of that table.

**Table 1**

<b>Period</b>	<b>Description of the category of salmonids that the maximum permissible biomass (tonnes per hectare) for the plan area applies to</b>	<b>Maximum permissible biomass (tonnes per hectare) that may be stocked within the combined area of Leases 133, 213, 215 and 217</b>
1 June 2018 to 31 May 2020	2017, 2018 and 2019 year class salmonids	10.26

It is a requirement of this determination that when the biomass reaches 9 tonnes per hectare the company must submit biomass calculations and forward projections to the Director on a weekly basis.

The date from which Petuna Aquaculture Pty Ltd must comply with my determination is 1 June 2018.

Dated: 28 May 2018



Wes Ford  
**DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY**