



---

**PARLIAMENT OF TASMANIA**

---

**LEGISLATIVE COUNCIL  
GOVERNMENT ADMINISTRATION COMMITTEE "A"**

**REPORT**

**ON**

**FINFISH FARMING IN TASMANIA**

**Members of the Committee**

Hon Ruth Forrest MLC (Chair)

Hon Sarah Lovell MLC

Hon Nick Duigan MLC

Hon Meg Webb MLC

Hon Mike Gaffney MLC

**TABLE OF CONTENTS**

INTRODUCTION .....3

APPENDIX A – REPORT OF THE SUB-COMMITTEE INQUIRING INTO FIN FISH FARMING  
IN TASMANIA.....5

# INTRODUCTION

1. At a meeting of the Legislative Council Government Administration Committee “A” on Tuesday 19 September 2019, it was resolved that an inquiry be established to inquire into and report upon the planning, assessment, operation and regulation of finfish farming in Tasmania, with particular reference to:
  - a. *The implementation of the Sustainable Industry Growth Plan for the Salmon Industry and its impact on commercial finfish farming operations and local communities, including:*
    - a) *data collection and publication;*
    - b) *progress in the development of an industry wide biosecurity plan;*
  - b. *Application of the Marine Farming Planning Act 1995 relating to:*
    - a) *preparation and approval process for marine farming development plans, including modifications and amendments to marine farming development plans;*
    - b) *allocation of leases, applications for and granting of leases;*
    - c) *management of finfish farming operations with respect to the prevention of environmental harm;*
  - c. *Any other matter incidental thereto.*
2. On 26 November 2019, the Committee resolved to discharge Hon Sarah Lovell MLC at her request. In accordance with Sessional Order 5 (30), a Sub-Committee was formed to continue the inquiry under the existing terms of reference.
3. The Membership of the Sub-Committee is:
  - Hon Meg Webb MLC (Inquiry Chair);
  - Hon Rob Valentine MLC (Inquiry Deputy Chair);
  - Hon Mike Gaffney MLC;
  - Hon Ruth Forrest MLC (until 23 March 2021); and

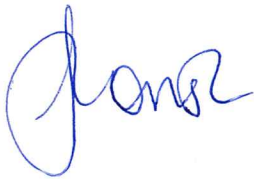
- Hon Kerry Finch MLC (until 21 July 2020).

4. The Committee notes:

- a. The Sub-Committee received 225 submissions. Public and private hearings were held in Hobart on 11, 12, 17, 21 February, in Burnie on 24 February, and via videoconference on 1 April 2020. 29 witnesses gave verbal evidence to the Sub-Committee at these hearings.
- b. Members of the Sub-Committee undertook a range of site visits related to the fin fish industry and communities where fin fish farming occurs during the course of the Inquiry.
- c. The work of the inquiry was paused due to the COVID-19 pandemic for a period of approximately 4 months between April and August 2020.
- d. Due to the operational strictures placed on the Sub-Committee resulting from the COVID-19 pandemic, it was considered appropriate to report on progress made prior to the interruption and the inquiry tabled an Interim Report dated 9 April 2020.
- e. The Sub-Committee resumed public hearings in September 2020. The inquiry received verbal evidence from a further 11 witnesses (between 8 September and 30 November 2020).
- f. At the conclusion of the public hearings phase of the inquiry, the Sub-Committee commenced deliberations on its Final Report.
- g. The Sub-Committee was interrupted by the prorogation of Parliament on 20 March 2021 due to the State election.
- h. The Sub-Committee was re-established on 6 July 2021 and continued deliberating on and finalising its Final Report.
- i. The Sub-Committee was again interrupted by the prorogation of Parliament in April 2022 following the resignation of Premier Gutwein.
- j. The Sub-Committee was re-established in May 2022.
- k. The Sub-Committee Inquiry has established a dedicated webpage at [https://www.parliament.tas.gov.au/Ctee/council/GovAdminA\\_Fin.html](https://www.parliament.tas.gov.au/Ctee/council/GovAdminA_Fin.html). All

submissions and transcripts (where evidence is made publicly available) are included on the Committee webpage.

5. The Committee intends that the Report be considered in its entirety as a Final Report of the Inquiry undertaken by the Sub-Committee.
6. The Committee acknowledges the work undertaken by Sub-Committee members and the Committee secretariat.
7. The Committee resolved that Appendix A – the Report of the Sub-Committee inquiring into Fin Fish Farming in Tasmania be received and incorporated into this Report for Tabling in Parliament.

A handwritten signature in blue ink, appearing to read 'Ruth Forrest', is positioned above the typed name.

**Hon Ruth Forrest MLC**  
**Committee Chair**  
**19 May 2022**

# APPENDIX A



2022

---

## Parliament of Tasmania

---

### LEGISLATIVE COUNCIL GOVERNMENT ADMINISTRATION COMMITTEE "A"

# SUB-COMMITTEE REPORT

ON

## FIN FISH FARMING IN TASMANIA

**Members of the Sub-Committee Inquiry:**

**Hon Meg Webb MLC (Chair)**

**Hon Rob Valentine MLC (Deputy Chair)**

**Hon Mike Gaffney MLC**

**Hon Kerry Finch MLC (until 21 July 2020)**

**Hon Ruth Forrest MLC (until 23 March 2021)**

# TABLE OF CONTENTS

CHAIR'S FOREWORD	2
EXECUTIVE SUMMARY	5
FINDINGS	10
RECOMMENDATIONS	27
ABBREVIATIONS	35
INTRODUCTION	37
BACKGROUND TO THE INQUIRY	41
EVIDENCE	51
TERM OF REFERENCE 1	52
TERM OF REFERENCE 2	100
TERM OF REFERENCE 3	205

APPENDIX A:	SUBMISSIONS RECEIVED
APPENDIX B:	ANALYSIS OF INDUSTRY WEBSITES PROVIDED BY NEIGHBOURS OF FISH FARMS (NOFF)
APPENDIX C:	DISPUTE BETWEEN MARINE FARMING PLANNING REVIEW PANEL (MFPRP) AND PROFESSOR BARBARA NOWAK AND MS LOUISE CHERRIE
APPENDIX D:	PROCESS FLOW CHARTS
APPENDIX E:	SUMMARY OF ISSUES FROM TEMPLATE BASED SUBMISSIONS
APPENDIX F:	MARINE DEBRIS REPORTED TO MAST
APPENDIX G:	DPIPWE QUESTION ON NOTICE REPOSE DATED 9/2/2022

# CHAIR'S FOREWORD

I am pleased to present this Fin Fish Farming in Tasmania Inquiry Report on behalf of the Sub-Committee of Government Administration Committee "A".

I would like to thank all participants in the Inquiry who provided their time, information, thoughts, expertise and passion for this topic.

The fin fish farming industry (the Industry) is unique in terms of farmed food production in Tasmania as its operations are conducted largely in and around our public waterways. What started as a small, boutique and low-tech industry has grown and developed into a substantial presence, with significant innovation and technological development.

Challenges have arisen alongside that growth, as the State Government has been an enthusiastic promoter and supporter of the Industry. The efforts to effectively regulate the Industry and keep pace with the protection and stewardship of shared public waterways has been a challenge. The experience in Macquarie Harbour has previously prompted regulatory reform of the industry.

Representations to the Inquiry indicated very different views were held by Government, industry and community stakeholders on the impacts of the Industry on our state.

Evidence received by the Inquiry demonstrated a general community disquiet and discontent at the lack of opportunity for community input regarding the place of the Industry in our state's shared environment, local communities and economic profile. While Government progresses plans for expansion of fin fish farming, it is apparent community confidence in the regulation of the industry is reducing.

It is clear that if Tasmania is to embrace and benefit most from a thriving industry, all actions taken in regard to its regulation should aim to proactively improve public confidence and build the social licence of fin fish farming. Key to achieving this will be ensuring transparency and accountability are at the forefront of Government efforts.

Evidence indicates the community would appreciate knowing comprehensive consideration has been given to social, cultural, recreational and natural values and is at the heart of planning, regulation, promotion and growth of the Industry in this state.

A high level of concern was evident in many submissions in relation to environmental harm caused by the Industry, the proposed expansion of the Industry and the adequacy of the current regulatory framework.

Acknowledging the length of this report, I point readers to the Executive Summary for an overview of key matters synthesised from submissions. I also offer the following as highlights of constructive opportunities observed by the Inquiry:

- There is support for a sustainable industry in Tasmania if areas for expansion and growth targets are transparently developed and evidence-based.



- There appears some common ground in regard to a pause on further expansion of the Industry, in the form of new farming areas or increased stocking limits, until consultation and planning has occurred.
- The online data portal will be integral to delivering public confidence in the Industry, however the portal requires improvement and expansion in scope and functionality, through consultation with all stakeholders.
- Legislative reform is needed to improve regulation and establish further mechanisms of transparency, accountable decision-making and community participation.
- Increased resourcing of the EPA would enable comprehensive independent monitoring, investigation, enforcement and reporting relevant to the Industry, and contribute significantly to improved public confidence.
- Learning from other jurisdictions, there is an opportunity for greater financial return to Tasmania from the Industry.
- The Industry has demonstrated a willingness to adapt and innovate to reduce environmental harm, acknowledges the need for continual improvement to be sustainable and states its readiness to work within the regulatory framework set by government.

Noting the evidence received, the success of future government policy and actions relating to the Industry will rest not just on what is done, but on how it is undertaken. Public confidence would be strengthened through processes that engage and accept input from the community, build relationships with stakeholders and transparently apply science and evidence.

The Sub-Committee believes this Inquiry Report will be of assistance in mapping out options for positive progress and improving the prospects of a social licence for this industry.

\*\*\*

The Sub-Committee acknowledges this Inquiry has been lengthy. There were three periods of pause in the work of the Inquiry; the first in 2020 due to the COVID-19 pandemic; the second in 2021 due to the prorogation of Parliament as a result of the State election; and the third due to the prorogation of Parliament in April 2022, following Premier Gutwein's resignation.

As the Inquiry must present findings and make recommendations only on the evidence received, there will be instances in this report where the reader will need to be aware of changes that have subsequently come to pass. Of particular note, we draw the reader's attention to the following developments in Government policy, Departmental circumstances, legislative reform and industry ownership:

- an announced review of the Salmon Industry Growth Plan;

- an announced 12-month moratorium on increases to leased farming areas from September 2021;
- a change of name from the Department of Primary Industries, Parks, Water and Environment (DPIPWE) to Department of Natural Resources and Environment Tasmania (NRE Tas);
- an announced intention to increase the independence of the EPA Tasmania as a statutory authority;
- the sale of Petuna Aquaculture to Sealord Group; and
- the sale of Huon Aquaculture to JBS.

The Sub-Committee would like to thank former members of the Inquiry, the Hon Kerry Finch MLC and the Hon Ruth Forrest MLC for their contribution.

Thanks are also extended to the Parliamentary Research Service for providing background information, and especially to the secretariat staff who provided invaluable and patient support to the Inquiry, in particular Ms Jenny Mannering, Committee Secretary, and Ms Allison Waddington, Committee Secretariat.



**Hon Meg Webb MLC**

**Inquiry Chair**

**12 May 2022**

# EXECUTIVE SUMMARY

An Executive Summary is presented here in consideration of the substantial length of this report. Key matters from each Term of Reference are mentioned briefly in this Summary and readers are encouraged to go to the full content of the report for a comprehensive presentation of all matters considered and evidence relating to all findings and recommendations.

## Term of Reference 1

1. *The implementation of the Sustainable Industry Growth Plan for the Salmon Industry and its impact on commercial finfish farming operations and local communities, including:*

*a) data collection and publication;*

*b) progress in the development of an industry wide biosecurity plan;*

- In relation to the **Salmon Industry Growth Plan**, released in 2017, questions were raised over the lack of comprehensive consultation, especially with non-industry stakeholders, and the lack of a transparent evidence base for the areas identified for industry expansion and growth target of \$2 billion.
- The Sub-Committee recommends a revised Salmon Industry Growth Plan and growth target be developed as part of an overarching Marine Plan for Tasmania, through a marine spatial planning process and comprehensive stakeholder consultation.
- Until a revised Salmon Industry Growth Plan is finalised, the Sub-Committee recommends no further expansion of the Tasmanian fin fish farming industry.
- It is recommended that a plan is also developed, in consultation with industry, scientific and community stakeholders, to reduce inshore fin fish farming sites, with priority given to ceasing operations in sensitive, sheltered and biodiverse areas.
- The independence, credibility and public release of **data and information** relating to the Industry is important to deliver transparency and accountability, and improve public confidence in the industry and its effective regulation.
- Improving and expanding the scope of the online data portal is recommended to present Industry-related data and information to a degree that meets or exceeds better practice in other jurisdictions.
- **Biosecurity** is fundamental to the success of the Industry in Tasmania. The development of an industry-wide Biosecurity Plan is yet to be finalised, however industry operators have been proactive in introducing biosecurity measures on a voluntary basis.

- The Sub-Committee recommends expansion of the Industry be postponed until the Biosecurity Plan has been completed and the regulations to give it effect are implemented and applied to all existing leases.

## Term of Reference 2

2. *Application of the Marine Farming Planning Act 1995 relating to:*
    - a) *preparation and approval process for marine farming development plans, including modifications and amendments to marine farming development plans;*
    - b) *allocation of leases, applications for and granting of leases;*
    - c) *management of finfish farming operations with respect to the prevention of environmental harm;*
- The Sub-Committee considers it timely to review the **Marine Farming Planning Act 1995** as the legislative basis for the regulation of the Industry, noting particular concerns with the current Act in regards to decision-making accountability, opportunity for community input, transparency and publication of information, access to appeal rights and recognition of social, recreational, cultural and natural values.
  - Concerns were raised relating to a perceived lack of independence in the **EPA**, a lack of transparency in relation to Water Quality Objectives and inadequate resourcing of the EPA.
  - Increasing the independence of the EPA as a statutory body is recommended, and an increase in resourcing is required to enable it to undertake comprehensive monitoring, investigation, enforcement and reporting activities relevant to the Industry.
  - Issues were raised relating to the **allocation of leases**, opportunities for a tender process, the length of lease periods, the reassessment or review of leases and the intersection of lease periods with the mandated 10-year reviews of Marine Farming Development Plans.
  - There is an opportunity to legislate lease allocation processes to be government-led rather than proponent-led and include a transparent tender process by which to gain greatest benefit for the Tasmanian community.
  - Concerns were raised relating to the current process granting **Environmental Licences**, including a lack of opportunity for public involvement or appeal and a lack of transparent criteria for decision-making.
  - The Sub-Committee recommends environmental licence conditions for all existing fin fish farms be reviewed and include defined limits of total biomass, dissolved nitrogen and other key nutrients. Similarly, any new environmental licences should include the same.

- The Sub-Committee notes that while the Industry has grown significantly, there are concerns that returns to the State Government and Tasmanian community are insufficient, relative to social and environmental impact, and some jurisdictions set **fees and levies** to provide a comparatively greater return.
- To ensure appropriate returns to the Tasmanian community, the Sub-Committee recommends an independent review of fees and levies for the Industry. Consideration should also be given to applying environmental bonds to ensure sufficient funds for any remedial work.
- Concerns regarding **environmental harm** were identified, including visual amenity, noise, light, marine debris, ecosystem and habitat modification, impacts on wildlife, nutrient loading, water quality and cumulative environmental impacts.
- The Sub-Committee notes the Industry regards measures taken to minimise environmental harm are highly regulated through federal and state legislation, supported by industry policies and practises, and validated by third party accreditation.
- Public confidence in prevention of industry environmental harm would be strengthened through improved public reporting of compliance and actions taken on non-compliance. The Sub-Committee recommends the online data portal provide improved public reporting of the environmental management of Industry activities.
- The Sub-Committee notes **penalties** for breach of environmental regulations are set at lower levels than in some jurisdictions. A review of penalties and scope of liability in regulation is recommended to reflect the potential serious environmental consequences and strengthen the deterrent effect.
- The Sub-Committee notes the EPA is developing an **Environmental Standard** to provide a consistent, more rigorous and comprehensive approach to environmental management of the Industry. Once implemented, the Standard should provide greater public confidence in the environmental management and accountability of the Industry.
- Concerns were raised that the current monitoring and reporting framework is not sufficient to support an effective **adaptive management approach** in regulation of the Industry. Public confidence in an adaptive management approach would be increased with independent collection and greater transparency of data.
- Clarification is required in the *Marine Farming Planning Act 1995* on the appropriate application of both the precautionary and adaptive management approaches.
- A framework for an adaptive management approach could be legislated and implemented, including a requirement for validated models, performance monitoring, clear triggers for management, regular review and transparent reporting.

### Term of Reference 3

#### 3. *Any other matter incidental thereto.*

- Appreciation was expressed for **benefits to local communities** provided by the Industry, including employment, economic activity and support to local clubs/associations/schools. Further evidence raised concerns the Industry 'purchases' social licence through contributions made locally.
- Competing claims were made regarding the **economic value and employment contribution** made by the Industry. The Sub-Committee considers it would be valuable to clarify through an independent assessment both local and state-wide economic benefits provided.
- The issue of **marine debris** was a matter of significant concern, including safety risks, environmental impact and potential for debris to increase with rapid expansion of the industry.
- It is acknowledged that not all marine debris is produced by fin fish farming operations, and that extreme weather and high energy offshore sites present an ongoing challenge.
- While the Zero Tolerance approach to marine debris in the Salmon Industry Growth Plan has not been comprehensively implemented, an Industry voluntary code was put in place, including the development of a marine debris hotline and Debris Tracker app.
- It is recommended an Industry marine debris policy be developed, implemented, monitored, enforced and reported on publicly. It is timely to review penalties associated with Industry marine debris.
- **Seal management**, including the use of deterrent devices, was raised as a matter of ongoing concern. The practice of seal relocation has been phased out since 2017, however the Seal Management Framework allows for special permits to capture, hold and relocate seals in certain circumstances.
- The Sub-Committee recommends there be a review of the Seal Management Framework, including the efficacy and safety of all seal management devices, and require transparent public reporting of seal deterrent usage and special permits granted in relation to seals.
- **Noise and light** generated by the Industry has caused significant distress and has a negative impact on the health and well-being of some community members. The Sub-Committee recommends a central point of contact for information, complaints, and feedback in relation to noise and light.
- While decibel levels may be set in regulation, the impact of noise can also be related to tone, frequency, regularity and time of occurrence which are not regulated. Matters relating to noise could be codified in the Environmental Standard.

- In response to noise complaints, the EPA stated it does little monitoring of Industry generated noise. The Sub-Committee recommends an increase in funding for the EPA to effectively monitor and enforce site-specific regulated limits.
- **Other matters** under Term of Reference 3 included research and development; antibiotic use; heavy metal contamination; fish escapes; jellyfish blooms; and impacts on Tasmania's clean green image, tourism and brand, native fish, birds and the abalone industry.

# FINDINGS

## TERM OF REFERENCE 1

### IMPLEMENTATION OF THE SUSTAINABLE INDUSTRY GROWTH PLAN

1. The Department carried out what it considered to be a comprehensive consultation process in the development of the Salmon Industry Growth Plan.
2. A number of community and non-industry stakeholders felt there was inadequate opportunity for their involvement and input in the development of the Salmon Industry Growth Plan.
3. Fin fish companies indicated they had limited involvement in the development of the Salmon Industry Growth Plan.
4. While evidence was received that scientific data and information was used in the development of the Salmon Industry Growth Plan, the extent of that evidence base is unclear in regard to scientific, environmental, economic, social and recreational factors.
5. The EPA's involvement in the development of the Salmon Industry Growth Plan was limited to comment on environmental standards to manage and regulate the industry.
6. The Salmon Industry Growth Plan does not include fresh water use, smolt production, wellboats and downstream processing.
7. The Department understands the \$2 billion growth target in the Salmon Industry Growth Plan to be aspirational and a policy decision by Government.
8. The Government's \$2 billion growth target was based on progress made towards the previous target of \$1 billion and from discussions with the fin fish farming industry regarding likely growth opportunities.
9. The Department regards the Government's \$2 billion fin fish farming industry growth target as sustainable.
10. The Department's public consultation material relating to the Salmon Industry Growth Plan did not provide a rationale for the growth target of \$2 billion.
11. The EPA had no role in assessing or advising on the Government's \$2 billion fin fish farming industry growth target.



12. CSIRO was not involved in providing information for the Government's \$2 billion fin fish farming industry growth target.
13. Inconsistent views were presented between fin fish farming operators and also the Department as to the role the industry played in setting the \$2 billion growth target.
14. Non-industry and community stakeholders were unclear as to how the Government's \$2 billion fin fish farming industry growth target was set.
15. There is support for a fin fish farming industry growth target that is transparently developed, sustainable and evidence-based.
16. The Department regards the Salmon Industry Growth Plan, including the Grow/No-Grow Map, as a strategy document and is not designed to be definitive on future growth areas.
17. The Salmon Industry Growth Plan Grow/No-Grow Map gave rise to community concern due to the perception it was a definitive planning document.
18. A comprehensive marine spatial planning process was not undertaken to identify areas suitable for sustainable industry growth.
19. There is no legislative basis for comprehensive marine spatial planning, including the identification and planning of future industry growth areas.
20. Submissions received by the Inquiry expressed support for a pause on expansion of the fin fish farming industry until such time that issues and concerns raised are addressed.

## **A: DATA COLLECTION AND PUBLICATION**

21. Data collection, analysis and publication assist in the understanding of waterway health and are important for sustainable development and management of marine resources.
22. Data and information relating to the fin fish farming industry is collected by industry, the EPA, DPIPWE, independent consultants and scientific research institutions.
23. Data, information and associated reports relating to the fin fish farming industry may be either regulated, voluntary or independent and are published on a number of sites.
24. The publicly available data and information relating to companies and individual fish farm operations lack consistency.

25. Monitoring of the fin fish farming industry via cross-institutional, peer reviewed, multi-year projects contributes to long-term data sets, and provides an evidence base to support decision-makers and regulators.
26. Concerns were raised that monitoring, collection and publication of data is not sufficiently comprehensive, transparent and/or independent from industry.
27. Independent collection, analysis, interpretation and publication of data is regarded as integral to building and maintaining public confidence in the fin fish farming industry.
28. Currently, published data on the fin fish farming industry is not always presented on company or government websites in clear connection with the relevant regulatory requirement.
29. Publicly available data and information relating to Marine Farming Development Plans/leases is not consistent across older and more recent leases.
30. Data and information on salmon biomass, pollutant loads and localised impacts in relation to the fin fish farming industry is not always publicly available.
31. Public requests for information on biomass, pollutant loads and localised impacts have been denied on the basis of commercial-in-confidence, or diverted through Right to Information processes.
32. There is an expectation of timely public release of information relating to the fin fish farming industry, including fish escapes, disease, mortalities, effluent, antibiotic use, seabed changes, and marine debris from operations.
33. Some large-scale industries, for example waste disposal and sewage treatment plants, are required to produce a publicly available Annual Environmental Report which includes information on operations, pollutant loads and their management, plans for future improvements and monitoring results.
34. The EPA intends to redevelop its website to make information on the fin fish farming industry more available.
35. It is reported that other aquaculture farming regions outside Australia stipulate and regulate the publication of industry data to a greater degree than occurs in Tasmania.
36. A key commitment of the Salmon Industry Growth Plan was increased transparency and accessibility of environmental data and information through the development of a portal.

37. Scientific consultants to industry supported a portal hosted independently by IMAS.
38. The online data portal originally proposed in the Salmon Industry Growth Plan and its one-year review, was to be independently hosted by the Institute for Marine and Antarctic Studies (IMAS), however it was subsequently decided DPIPWE would host the portal.
39. Government consulted with industry in regard to the portal and the data it should contain, however community and non-industry stakeholders were not consulted.
40. The portal was originally planned to provide access to all environmental data and as much production information as possible (excluding commercial-in-confidence information), however the DPIPWE-hosted portal focuses solely on regulatory compliance data.
41. Some stakeholders consider the portal has not fulfilled the original commitment in the Salmon Industry Growth Plan.
42. DPIPWE regards the portal to have met the requirement committed to in the Salmon Industry Growth Plan.
43. DPIPWE acknowledges that the portal can be improved, including the dataset it contains and the display and consistency of the data.

## **B: PROGRESS IN THE DEVELOPMENT OF AN INDUSTRY WIDE BIOSECURITY PLAN**

44. The global fin fish farming industry has been affected by a range of infectious diseases, many still absent in Australia.
45. Tasmania has experienced disease outbreaks, including in Macquarie Harbour and Storm Bay.
46. International research and experience indicate that multiple fin fish farming operators in a single body of water can increase biosecurity risk.
47. Industry biosecurity arrangements have largely been managed on a voluntary basis between government and industry in the absence of a mandated biosecurity plan.
48. The 2018 Global Salmon Symposium provided recommendations relevant to improved biosecurity practises in Tasmania.
49. The *Biosecurity Act 2019* provides for the development of a Biosecurity Plan for the industry, enabled by regulations under that Act.

50. It was intended for the Biosecurity Plan to be in operation by the end of 2021.
51. Non-industry stakeholders have not been involved with the development of an industry wide biosecurity plan.
52. Concerns were raised over the absence of biosecurity regulations in relation to antibiotic use, disease outbreaks, mass fish kills and escape incidents in the fin fish farming industry.
53. All Marine Farming Development Plans include management conditions related to controls on waste, including mortalities.
54. Fin fish farming operators are required to report to the EPA and DPIPWE suspected or known incidents of disease or mortality affecting more than 0.25% of fish per day for three consecutive days in any individual cage.
55. The EPA is responsible for managing mass mortality events in the fin fish farming industry and does so on a case by case basis.
56. Biosecurity concerns were raised in relation to the approval of three separate fin fish farming operators in close proximity in Storm Bay.

## **TERM OF REFERENCE 2**

### **A: PREPARATION AND APPROVAL PROCESS FOR MARINE FARMING DEVELOPMENT PLANS, INCLUDING MODIFICATIONS AND AMENDMENTS TO MARINE FARMING DEVELOPMENT PLANS**

57. Marine-based fin fish farming is principally planned, regulated and managed under the *Marine Farming Planning Act 1995*, the *Living Marine Resources Management Act 1995*, and the *Environmental Management and Pollution Control Act 1994*.
58. Land-based fin fish farming facility approvals are subject to the *Land Use Planning and Approvals Act 1993*, with local councils as the Planning Authority.
59. Under the *Marine Farming Planning Act 1995*, the Planning Authority for marine farming is the Secretary of DPIPWE, however the Minister has ultimate decision-making discretion in relation to draft Marine Farming Development Plans/Amendment Plans and is not required to follow recommendations of the Marine Farming Planning Review Panel.
60. There is a conflict between the Minister's role in the promotion and development of the fin fish farming industry and the Minister's statutory

responsibility for the regulation of the industry under the *Marine Farming Planning Act 1995*.

61. Concerns were raised there is no statutory requirement in the *Marine Farming Planning Act 1995* for the Minister to make decisions based on scientific evidence.
62. The *Marine Farming Planning Act 1995* approval process requires the proponent to provide a draft Environmental Impact Statement according to guidelines prepared by DPIPWE and reviewed by the Marine Farming Planning Review Panel and the Director, EPA; the process includes a requirement for community engagement.
63. The *Marine Farming Planning Act 1995* provides no framework to balance economic, social and environmental considerations.
64. It is not clear how impacts, including on residents, tourism and recreation activities, are weighted in the marine farm planning process.
65. Concerns were raised that the legislation lacks clear and specific criteria to guide decision-making by the Marine Farming Planning Review Panel, the Minister, EPA Board or the Director, EPA.
66. Concerns were raised there are no legislative criteria relating to environmental outcomes, such as requirements for caps on biomass or nitrogen in either marine farming development plans or environmental licences.
67. Concerns were raised that legislation does not require the consideration of integrated and cumulative impacts of marine farming on the marine environment and communities.
68. It is reported that other jurisdictions with intensive fin fish farming, such as Scotland, New Zealand and Norway, have adopted a more integrated approach to marine farming planning.
69. The Marine Farming Planning Review Panel is a statutory body established under Section 8 of the *Marine Farming Planning Act 1995*, the primary function of which is to consider draft Marine Farming Development Plans or draft Marine Farming Development Amendment Plans and make recommendations to the Minister.
70. The Marine Farming Planning Review Panel must perform its functions and exercise its powers in accordance with any directions given by the Minister.
71. The Marine Farming Planning Review Panel is an advisory body, not a decision-making body, and under current legislation is not empowered to

refuse/reject a draft Marine Farming Development Plan or draft Marine Farming Development Amendment Plan.

72. The Marine Farming Planning Review Panel can require the planning authority to modify a draft Marine Farming Development Plan or draft Marine Farming Development Amendment Plan until it is deemed acceptable to be recommended to the Minister for approval.
73. The legislated number of Marine Farming Planning Review Panel members is nine, a quorum is five, which means a decision could be carried by a minimum of three members as a majority of a quorum of five.
74. Concerns were raised that the Marine Farming Planning Review Panel is neither fully independent nor broadly representative.
75. Concerns were raised with regard to the lack of statutory requirement for the Panel to include members with qualifications in marine ecology, hydrology, law, conservation management and a community representative.
76. There is a perception the Marine Farming Planning Review Panel has a close relationship to the Industry, which is viewed as being advantageous to the Industry.
77. Two additional members were selected to strengthen the expertise of the Marine Farming Planning Review Panel during the assessment of the Storm Bay proposals.
78. The two additional Marine Farming Planning Review Panel members engaged during the assessment of the Storm Bay proposals resigned due to the lack of statutory authority for the Panel to refuse an application and concerns regarding the rigour of the application assessment process.
79. The Marine Farming Planning Review Panel defended its decisions in relation to Storm Bay, its diligence in following legislated process and rejected assertions of an inappropriate relationship with industry.
80. The marine farming planning and approval process has limited opportunity for public consultation and engagement.
81. Assertions were made that public representations and concerns raised with the Marine Farming Planning Review Panel were not reflected in final Marine Farming Development Plans or Environmental Licenses.
82. Marine Farming Planning Review Panel hearings are not required to be recorded nor made available to the public.
83. The right of appeal is viewed as an important component of the Tasmanian Resource Management and Planning System, however is seen as

inadequate in relation to planning and approval processes for fin fish farming.

84. Concerns were raised that the EPA is not independent of government.
85. The role of Director, EPA is not legislatively required to report to the Minister or the EPA Board.
86. The Director, EPA and EPA Board are to have statutory regard to any State Policy under the *State Policies and Projects Act 1993*.
87. The EPA Board and Director, EPA are bound to apply Water Quality Objectives in decision-making under the *Environmental Management and Pollution Control Act 1994*, including the assessment of environmental licences for fin fish farms.
88. Since the commencement of the State Policy on Water Quality Management 1997 there are no published state-wide Water Quality Objectives for either marine or fresh water.
89. Water Quality Objectives are developed by the EPA Board or the Director, EPA on a 'case by case' basis for the purposes of assessing environmental licences for particular activities or areas.
90. Concerns were raised that, as Water Quality Objectives applied to environmental licences are not publicly available, it is not clear whether assessments are based on the best available scientific evidence and able to withstand scrutiny.
91. Concerns were raised that the EPA is not adequately resourced to carry out all of its regulatory responsibilities with respect to fin fish farming.
92. The EPA's capacity to undertake long term noise and water quality monitoring programs is inadequate and constrained by a lack of staffing and resources.
93. The Director, EPA reports recovering from the industry close to 100 per cent of direct management cost for current regulatory activities related to fin fish farming.
94. Marine Farming Development Plans are subject to a 10-year review, however this is not a comprehensive reassessment of the plan and is not required to include an opportunity for the public or scientific community to provide input.
95. If a 10-year Marine Farming Development Plan review identifies that an area is no longer suitable for fin fish farming, any alteration of the terms or length of leases for fin fish farms in the Plan area can require government to pay compensation to the lease holder.

96. Concerns were raised that the current 30-year leases granted under a Marine Farming Development Plan are too long in light of changes to environmental circumstances and/or detrimental environmental impact.

## **B. ALLOCATION OF LEASES, APPLICATIONS FOR AND GRANTING OF LEASES**

97. The *Marine Farming Planning Act 1995* allows either a proponent-led process or government-led process for the allocation of leases, each with different requirements.
98. For a government-led lease allocation process under the *Marine Farming Planning Act 1995*, the Minister must seek advice of the Board of Advice and Reference and may also seek advice from any other relevant person, before making a decision.
99. For a proponent-led lease allocation process under the *Marine Farming Planning Act 1995*, the Minister may seek the advice of the Board of Advice and Reference and may also seek advice from any other relevant person before making a decision.
100. The *Marine Farming Planning Act 1995* includes the Board of Advice and Reference as an independent source of advice to the Minister in the process of allocating leases, however since 11 July 2015 the BAR has been stood down administratively.
101. There have been no government-led lease allocation processes since the Board of Advice and Reference has been stood down administratively.
102. Under the *Marine Farming Planning Act 1995*, the lease allocation process could involve some form of open tender; or the process may be limited to existing participants or specific existing lease holders.
103. Under the *Marine Farming Planning Act 1995*, a proponent who undertakes the marine farming development planning process has first option on a lease if the Marine Farming Development Plan is approved.
104. The *Marine Farming Planning Act 1995* provides for marine farming leases to be issued for a maximum of thirty years.
105. In some international jurisdictions, marine farming site selection is government-led and lease allocation is facilitated through an auction process to deliver greatest benefit to local communities.
106. Under the *Marine Farming Planning Act 1995*, leases which have been inactive for a period of less than 10 years, can be restocked and used without environmental reassessment.



107. Since 2016, the EPA has been responsible for issuing environmental licences for fin fish farms. The EPA is also responsible for monitoring and enforcing the conditions of environmental and marine farming licences and the management controls of Marine Farming Development Plans.
108. Issuing of environmental licences by the Director, EPA does not include a public consultation process, there is no prescribed criteria on which the decision is to be made, and there are no appeal rights on the decision by the applicant, third parties or the public.
109. The Director, EPA's assessment of environmental licence applications is not required to be made public.
110. Under certain criteria, the Director, EPA may refer an application for an environmental licence to the EPA Board for assessment and determination, which includes opportunity for public participation and third party or proponent appeal rights.
111. An application for an environmental licence cannot be referred to the EPA Board within 2 years of the relevant Marine Farming Development Plan being approved, and therefore is determined by the Director, EPA.
112. No environmental licence applications for fin fish farms have been referred by the Director, EPA for assessment by the EPA Board.
113. Fees for marine farming leases are specified in the *Marine Farming Planning Regulations 2016* and are based on fee units that are re-determined on an annual basis.
114. Levies provide funding for fin fish farming compliance and monitoring staff in DPIPWE and the EPA, research projects and industry planning.
115. There was no evidence presented regarding the structuring of fees and levies in the Tasmanian fin fish farming industry, nor detail on the purpose, benefits and intended outcomes in the setting of fees and levies.
116. While fin fish farming has grown significantly, concerns were raised that returns to the State Government and Tasmanian community are insufficient, relative to the social and environmental impact of the industry.
117. In some international jurisdictions, fish farming fees and levies are set to provide a comparatively greater return to government and communities.

## **C. MANAGEMENT OF FINFISH FARMING OPERATIONS WITH RESPECT TO THE PREVENTION OF ENVIRONMENTAL HARM**

118. Concerns regarding environmental harm were identified in submissions made to the Inquiry, including visual amenity, noise, light, marine debris, ecosystem and habitat modification, impacts on wildlife, nutrient loading, water quality and cumulative environmental impacts.
119. Concerns were raised that the current regulatory regime is not adequate to manage the environmental impacts of the fin fish farming industry, and that regulation has failed to keep pace with the expansion of the industry.
120. Concerns were raised that expansion of fin fish farming has caused an increase in nutrient loading in the State's waterways, impacting on water quality and resulting in environmental harm.
121. There is no requirement that biomass or nitrogen limits be set on leases, and there is a lack of criteria for EPA discretion in imposing such limits.
122. Public confidence in effective prevention of environmental harm in the fin fish farming industry would be strengthened through improved public reporting of compliance and actions taken on non-compliance.
123. Concerns were raised regarding the environmental impacts of wellboats in the fin fish farming industry, and the lack of clarity in relation to the regulatory arrangements governing wellboats.
124. Concerns were raised in relation to the use of fresh water resources by the fin fish farming industry, the lack of a comprehensive audit or review of those resources used and the apparent absence of a clear and equitable water strategy for the State.
125. Penalties for breach of environmental regulations in Tasmania are set at lower levels than in some jurisdictions.
126. Concerns were raised that penalties applied to the fin fish farming industry for breach of environmental regulations are not adequate to act as a genuine deterrent.
127. Concerns were raised regarding the difficulty of applying the various enforcement tools relating to breaches of environmental regulations by the fin fish farming industry.
128. Legislation provides for a "special penalty" relating to the amount of dissolved nitrogen produced or emitted, however no current environmental licence imposes an enforceable cap on nitrogen.

129. To date, the planning, regulation, management and expansion of the fin fish farming industry has occurred in the absence of an environmental standard.
130. The EPA is developing an Environmental Standard to provide consistency in the management of environmental issues in the fin fish farming industry.
131. Concerns were raised that the community and some stakeholder groups were excluded from the development of the Environmental Standard for the fin fish farming industry.
132. It was anticipated that Environmental Licences would be amended to reflect the Environmental Standard by the end of 2021.
133. A precautionary approach is specified in the *Environmental Management and Pollution Control Act 1994* as one of the Schedule 1 Part 2 objectives and as a principle involved in applying the Resource Management and Planning System.
134. The Department regards an adaptive management approach in the regulation of the fin fish farming industry to be consistent with Tasmania's Resource Management and Planning System and ecologically sustainable development principles.
135. Adaptive management is the approach which underpins the regulation of the fin fish farming industry however it is not specified or defined in the *Environmental Management and Pollution Control Act 1994* or the *Marine Farming Planning Act 1995*.
136. Concerns were raised that the current monitoring and reporting framework is not sufficient to support an effective adaptive management approach in the regulation of the fin fish farming industry.
137. Public confidence in an adaptive management approach for the fin fish farming industry would be increased with the independent collection and greater sharing of data.
138. Each body of water in Tasmania is unique and each would require specific licence conditions, limits, monitoring and reporting requirements in order to effectively implement an adaptive management approach in the fin fish farming industry.
139. Concerns were raised regarding the reliance on an adaptive management approach in the approval of the fin fish farming Storm Bay expansion, in the absence of biogeochemical modelling, a biosecurity plan, a regulatory standard and no mapping of natural values to be protected.

140. Concerns were raised that the application of an adaptive management approach may be compromised in situations where measures required to address environmental harm are in conflict with fin fish farming industry's financial investment.
141. While the Industry expressed support for both precautionary and adaptive management approaches, some noted the need to preserve certainty in lease renewal for investment purposes.
142. The fin fish farming industry regards measures taken to minimise environmental harm to be highly regulated through federal and state legislation, supported by industry policies and practices and validated by third party accreditation.
143. The fin fish farming industry regards its collection and publication of data to be comprehensive.
144. The fin fish farming industry acknowledges the need for continual improvement to be sustainable and demonstrates a willingness to adapt its operations to minimise environmental harm.

### **TERM OF REFERENCE 3**

#### **Recognition of community amenity in the *Marine Farming Planning Act 1995***

145. A number of submissions called for community amenity to be recognised in the *Marine Farming Planning Act 1995*.

#### **Community Impacts of the Fin Fish Farming Industry**

146. There is an appreciation for the fin fish farming industry and associated benefits it provides to local communities, including employment, economic activity, and support to local clubs/associations/schools.
147. There is a perception and concern from some community members that the fin fish farming industry 'purchases' social licence through contributions to local clubs/associations/schools.
148. Individual community members reported experiencing social exclusion as a result of their non-affiliation with the fin fish farming industry.
149. There are questions raised regarding the direct economic returns generated by the fin fish farming industry to both local communities and to the Tasmanian economy.

150. There are competing claims regarding the current and future employment numbers attributed to the Tasmanian fin fish farming industry.

### **Marine Debris**

151. Concerns related to marine debris associated with the fin fish farming industry included the safety risks, the environmental impact and the potential for marine debris to increase with rapid expansion of the industry.
152. Extreme weather and high energy offshore sites present an ongoing challenge to ensure all equipment and waste remain secured on fin fish farms.
153. It is acknowledged that not all marine debris is produced by fin fish farming operations.
154. The Salmon Industry Growth Plan identified a Zero Tolerance approach to marine debris, employing best practise tracking technology for equipment and simple/practical ways to identify debris from marine farms.
155. The fin fish farming industry, via the Tasmanian Salmonid Growers' Association, developed a voluntary Code of Practice in relation to marine debris, but was unable to confirm how its effectiveness would be measured.
156. Fin fish farming operators identify and reduce marine debris through the use of tracking technology, colour-coding, marking of equipment, staff education, rope recycling stations, collection bins and shoreline clean-ups.
157. DPIPWE maintain a centralised marine farming equipment register to assist with identification of marine debris.
158. An industry-developed marine debris hotline and Debris Tracker app facilitates reporting of marine debris by members of the public and coordination of its retrieval by the fin fish farming industry.
159. Concerns were expressed in relation to the Debris Tracker app: including lack of input from the community into its development, the appropriateness of its operation by industry and no requirement to report the data collected, either publicly or to Government.
160. There is a lack of public information and promotion of mechanisms for reporting marine debris.
161. Concerns were expressed regarding the lack of effective implementation and enforcement of the Government's marine debris Zero Tolerance approach.

162. Marine debris infringement notices can only be issued where ownership of debris can be identified leading to a limited number of infringement notices being issued.
163. Marine debris infringement notices are not publicly reported and the penalties are regarded by some as insufficient to act as an appropriate deterrent.
164. There is a lack of comprehensive data collection and publicly available reporting on all aspects of marine debris management.

## Noise

165. Concerns were raised regarding noise from fin fish operations and its impact on community amenity, health and well-being.
166. Noise generated by certain fin fish operations causes significant distress and has a negative impact on the health and well-being of some community members.
167. In relation to noise, the fin fish farming industry is required to operate within the regulatory framework legislated by Government, monitored and enforced by the EPA.
168. While decibel levels are set in regulation, the impact of noise may also be related to its tone, frequency, regularity and time of occurrence which are not regulated.
169. The EPA reports it does little monitoring of noise generated by fin fish farming operations in response to complaints and would require additional resources to increase its monitoring function.
170. There are various avenues for making fin fish farming noise complaints, however there is no central collation or public reporting of those complaints.
171. In response to complaints, fin fish farming operators report they have made efforts to reduce noise through adjustments to operations and improvements to equipment.
172. The EPA regards matters relating to noise could be further codified in the Environmental Standard currently being developed.

## Lights

173. Concerns were raised regarding lights from fin fish farming operations and its impact on community well-being, wildlife and property values.

174. In response to complaints regarding lights, fin fish farming operators report they have made efforts to address the issues.
175. The EPA identified that lighting is difficult to regulate and it is not clear whether lights will be included in the Environmental Standard currently being developed.

## **Seals**

176. A Seal Management Framework outlines how seals are managed and identifies permitted deterrent strategies.
177. Fin fish farming operators are required to provide monthly reports on seal deaths and seal deterrent usage, however only information on seal deaths is published on the data portal.
178. Concerns were raised that current permitted seal deterrent measures have caused harm to seals and trials are underway to test other safe and effective options.
179. While the fin fish farming industry continues to improve the use of barrier technology, e.g. fortress pens and nets, to prevent seals from entering pens, concerns were raised that this technology is not mandated industry-wide.
180. The practice of seal relocation in the fin fish farming industry has been phased out since 2017, however the Seal Management Framework allows for special permits to be issued to capture, hold and relocate seals in certain circumstances.

## **Tasmanian Brand**

181. Concern was expressed that the fin fish farming industry impacts negatively on Tasmania's clean green image, tourism and brand.

## **Research and Development**

182. There is a commitment in the Salmon Industry Growth Plan to encourage research and development in the fin fish farming industry.
183. The fin fish farming industry invests in research, development and innovation, both for improved commercial returns and for improved scientific understanding and environmental outcomes.
184. Concerns were raised regarding the independence of research due to the relationship between industry, funding sources and research bodies.

### **Antibiotic use**

- 185. Concern was expressed regarding antibiotic use in the fin fish farming industry.
- 186. Feed companies BioMar and Aquafeed stated antibiotics are not added to the fin fish feed they produce.
- 187. The three fin fish farming operators stated their use of antibiotics is limited and is regulated by and reported to Government.

### **Heavy Metal Pollution**

- 188. Concern was expressed regarding the resuspension of heavy metal contamination in the Derwent Estuary as a result of nutrient load generated by the fin fish farming industry.

### **Fish Escapes**

- 189. Industry noted that fish escapes do occur, typically when a fish containment net becomes compromised or torn due to a storm event or infrastructure malfunction.
- 190. Regulations require lessees to report to the Manager, Marine Farming Branch any significant incident of fish escapes (>500 fish) within 24 hours of becoming aware of the escape.
- 191. Concerns were raised regarding the estimation, timely reporting and disclosure of fish escapes.
- 192. There was competing evidence regarding the impact of fish escapes on native species.

### **Jellyfish Blooms**

- 193. There are competing claims regarding the relationship between fin fish farming and jellyfish blooms, in particular the impact on ecosystem stability and industry viability.

### **Abalone Industry**

- 194. The Tasmanian abalone industry believes that fin fish farms located near abalone reef habitats are a threat to its viability in those locations, and further research and regulation is required.



# RECOMMENDATIONS

The Sub-Committee makes the following recommendations.

## **TERM OF REFERENCE 1**

### **Recommendation 1**

A revised Salmon Industry Growth Plan be developed as one aspect of an overarching Marine Plan for Tasmania, through a process that:

- includes comprehensive stakeholder consultation;
- is informed by assessment of environmental, social and recreational values; and
- has a transparent evidence base.

### **Recommendation 2**

Ensure a revised Salmon Industry Growth Plan specifies potential fin fish farming areas identified through a process of marine spatial planning, and sets an industry growth target for these areas which is transparently developed, sustainable and evidence-based.

### **Recommendation 3**

Develop a plan, in consultation with industry, scientific and community stakeholders, to reduce inshore fin fish farming sites, with priority given to ceasing operations in sensitive, sheltered and biodiverse areas.

### **Recommendation 4**

There be no further expansion of the fin fish farming industry in the form of new farming areas or increased stocking limits until the revised Salmon Industry Growth Plan is finalised (refer to Recommendation 1).

### **Recommendation 5**

Require through legislation/regulation government disclosure of data and information on the operations of the fin fish farming industry to a degree that meets or exceeds better practice in other jurisdictions.

### **Recommendation 6**

Review the basis on which fin fish farming industry data or information may be withheld from the public under a claim of commercial confidentiality.

### **Recommendation 7**

Review the online data portal in partnership with all key stakeholders, including community, industry and research.

### **Recommendation 8**

Expand the scope of the data in the online portal and ensure it is presented in a format that connects directly to regulatory requirements and is comparable over time and between industry stakeholders, including references to when and by whom it was collected.

### **Recommendation 9**

Legislate/regulate that fin fish farming operators produce and make publicly available Annual Environmental Reports.

### **Recommendation 10**

Further expansion of the fin fish farming industry be postponed until the Biosecurity Plan has been completed and regulations are implemented and applied to all current farming operations.

## **TERM OF REFERENCE 2**

### **Recommendation 11**

Review of the *Marine Farming Planning Act 1995*, including:

- purpose and objectives of the Act;
- alignment with other legislated planning instruments;
- role of the Planning Authority and powers of the Minister;
- membership, general functions and powers of the Marine Farming Planning Review Panel;
- stakeholder and public consultation;
- criteria for and discretion in decision-making;
- public release of information;
- access to appeal rights and merits review;
- lease allocation process; and
- recognition of community amenity.

### **Recommendation 12**

Require marine farming development plan and lease applications to demonstrate they relate to areas identified for fin fish farming in a revised Salmon Industry Growth Plan through a comprehensive marine spatial planning process.

### **Recommendation 13**

The marine farming development plan and lease application process to include a comprehensive assessment of the impact on social, recreational, cultural and natural values.

### **Recommendation 14**

Establish prescribed criteria on which the Minister can reject the recommendation of the Marine Farming Planning Review Panel in regard to marine farming development plans or amendments to Marine Farming Development Plans.

### **Recommendation 15**

Require decisions made by the Minister contrary to the Marine Farming Planning Review Panel's recommendation in regard to Marine Farming Development Plans/Amendments, to be tabled in Parliament and include a statement of reasons.

**Recommendation 16**

Require Environmental Impact Statements within marine farming development plan applications to be made publicly available, including the independent modelling, data and evidence on which they are based.

**Recommendation 17**

Establish a framework, with criteria, for the consideration and weighting of economic, social and environmental factors in the assessment and approval of marine farming development plans.

**Recommendation 18**

Require consideration of cumulative environmental and social impacts of marine farming in the assessment of marine farming development plans.

**Recommendation 19**

Require Marine Farming Development Plans to specify biomass and nitrogen limits, and any proposal to increase the biomass or nitrogen limits be considered an amendment to the plan.

**Recommendation 20**

As part of a review of the *Marine Farming Planning Act 1995*, commission an independent examination of the membership and governance requirements of the Marine Farming Planning Review Panel, including assessment of representation, qualifications and expertise in Panel membership.

**Recommendation 21**

Publish the relevant credentials, skills and experience of Marine Farming Planning Review Panel members and their tenure on the Panel.

**Recommendation 22**

Require a statement of reasons to be published in relation to decisions/recommendations of the Marine Farming Planning Review Panel.

**Recommendation 23**

Review opportunities for the Marine Farming Review Panel public hearings to be documented and made publicly available.

**Recommendation 24**

As part of a review of the *Marine Farming Planning Act 1995*, expand access to merits review and appeal rights, including standing and grounds for appeal, in relation to the assessment of marine farming development plans and amendments marine farming development plans, consistent with other legislated State planning instruments.

**Recommendation 25**

As a matter of priority, develop, publish and apply state-wide Water Quality Objectives as per the State Policy on Water Quality Management 1997 and as required under the *Environmental Management and Pollution Control Act 1994*.

**Recommendation 26**

That state-wide monitoring of water quality against published Water Quality Objectives be undertaken and reported annually to Parliament.

**Recommendation 27**

In the absence of state-wide Water Quality Objectives, publish all water quality objectives developed by the EPA Board or the Director, EPA for assessment of individual environmental licences for fin fish farming operations.

**Recommendation 28**

Increase the independence of the EPA as a statutory authority.

**Recommendation 29**

Increase resourcing of the EPA to ensure it can fully undertake its regulatory roles and responsibilities in relation to the fin fish farming industry.

**Recommendation 30**

All 10-year Marine Farming Development Plan reviews be comprehensive and include input from the public and scientific community.

**Recommendation 31**

Ensure the terms of new marine farming leases allow for the alteration of conditions or length of lease if indicated by the 10-year review of the relevant Marine Farming Development Plan.

**Recommendation 32**

Legislate that all marine farming lease allocations are government-led and include a transparent competitive tender process.

**Recommendation 33**

Develop environmental, social and economic criteria to be applied in the marine farming lease tender process.

**Recommendation 34**

Align the length of new or renewing leases to the relevant Marine Farming Development Plan review period, with renewing leases subject to comprehensive reassessment.

**Recommendation 35**

Review and determine the appropriate time period that triggers a reassessment of unstocked leases.

**Recommendation 36**

Review and, where necessary, adjust the environmental licence conditions for all existing fin fish farms, including setting defined limits of total biomass, dissolved nitrogen and other key nutrients.

**Recommendation 37**

Require all new marine farming environmental licences to include defined limits of total biomass, dissolved nitrogen and other key nutrients.

**Recommendation 38**

Require applications and variations for marine farming environmental licences to be assessed by the EPA Board, consistent with other Level 2 activities under the *Environmental Management and Pollution Control Act 1994*.

**Recommendation 39**

Legislate criteria for the assessment of marine farming environmental licences by the Director, EPA and EPA Board and require those assessments that are approved to be made public.

**Recommendation 40**

To ensure appropriate returns to the Tasmanian community, commission an independent review of fee and levy structures for fin fish farming, including:

- lease value and its reassessment over time;
- setting of lease fees;
- rates of levies required to fully fund regulatory monitoring, compliance and enforcement activities; and
- local government rates, as relevant to the industry.

**Recommendation 41**

Ensure any review of fee and levy structures for fin fish farming includes public consultation and examination of other jurisdictions.

**Recommendation 42**

Apply environmental bonds to the fin fish farming industry to ensure sufficient funds for any remedial work required due to the operations of the industry.

**Recommendation 43**

Conduct a comprehensive audit of freshwater requirements for the fin fish farming industry to inform the development of a policy/strategy on the allocation and management of these resources.

#### **Recommendation 44**

Conduct an independent review of the impacts of current fin fish operations on inland waterways, including drinking water supplies and remediation costs borne by TasWater/State Government.

#### **Recommendation 45**

Require all new freshwater fin fish hatcheries/smolt production facilities to utilise Recirculating Aquaculture Systems.

#### **Recommendation 46**

Publicly release monitoring data relating to the operation of freshwater fin fish operations.

#### **Recommendation 47**

Through the data portal, provide improved public reporting of the environmental management of fin fish farming activities, including:

- the baseline environmental data underpinning Marine Farming Development Plans and amendments;
- fin fish farming licences, leases and associated management plans;
- individual lease monitoring data in regard to impact on benthic flora and fauna, water quality, marine life and threatened species; and
- details of compliance and enforcement activities.

#### **Recommendation 48**

Review the penalties and scope of liability in regulation of fin fish farming to reflect the serious environmental consequences that can arise from breaching regulations and to strengthen their deterrent effect.

#### **Recommendation 49**

The EPA to develop and publish an enforcement policy relating to fin fish farming, including clear guidelines which set scientifically-based performance indicators and a scale of actions.

#### **Recommendation 50**

The *Marine Farming Planning Act 1995* and the *Environmental Management and Pollution Control Act 1994* be amended to enable third parties to take legal action for environmental harm caused by breach of licence conditions.

#### **Recommendation 51**

Clarify the application of a precautionary approach in the *Marine Farming Planning Act 1995*, including in the approval of Marine Farming Development Plans.

#### **Recommendation 52**

Clarify the application of an adaptive management approach to regulation of fin fish farming in the *Marine Farming Planning Act 1995*.

### **Recommendation 53**

Develop a framework for an adaptive management approach for the fin fish farming industry, which includes validated models, performance monitoring, clear triggers for management, regular review and transparent reporting. Until such a framework is adopted, ensure the precautionary principle is individually applied to fin fish farming operations.

## **TERM OF REFERENCE 3**

### **Recommendation 54**

Undertake and publicly release an assessment of the economic benefit provided by the fin fish farming industry to local communities in which industry operations are based and to the state overall.

### **Recommendation 55**

Develop a fin fish farming industry marine debris policy, in consultation with the community and other stakeholders, that can be effectively implemented, monitored, enforced and reported on publicly.

### **Recommendation 56**

The Government to assume responsibility for operating the marine debris hotline and Marine Debris Tracker app, including related promotion and public education.

### **Recommendation 57**

Review penalties associated with fin fish farming industry marine debris to appropriately reflect the potential environmental and safety risks, and provide an effective incentive for behaviour change.

### **Recommendation 58**

Establish a central point of contact for information, complaints, and feedback in relation to noise associated with the fin fish farming industry.

### **Recommendation 59**

Increase the funding of the EPA to ensure it has the capacity to undertake comprehensive monitoring, assessment and enforcement of noise impact and noise complaints in relation to fin fish operations.

### **Recommendation 60**

Set and enforce site-specific regulated limits in relation to noise generated by fin fish operations and include, where relevant, decibel level, tone, frequency, regularity and time of occurrence.

### **Recommendation 61**

Establish a central point of contact for information, complaints, and feedback in relation to light associated with the fin fish farming industry.

**Recommendation 62**

Consider the inclusion of the regulation of light in the Environmental Standard and setting site-specific conditions on the use of lights in fin fish farming operations.

**Recommendation 63**

Increase the funding of the EPA to ensure it has the capacity to undertake assessment of complaints regarding the use of lights in fin fish farming operations.

**Recommendation 64**

Commission a review of the Seal Management Framework, including the efficacy and safety of all 'seal management' devices and processes allowed under that framework.

**Recommendation 65**

Publicly report seal deterrent usage by fin fish farming operators, including special permits granted for the capture, holding and relocation of seals.

**Recommendation 66**

Conduct a review of the fin fish farming industry impact on and relationship with the Tasmanian tourism industry to inform the revised Salmon Industry Growth Plan (refer to Recommendation 1).

**Recommendation 67**

Ensure continued research and monitoring is undertaken in the Derwent Estuary with regard to heavy metal resuspension associated with fin fish farming, including the identification of any public health risks relating to heavy metal contamination.

**Recommendation 68**

Ensure biosecurity planning for the fin fish farming industry includes consideration of jellyfish blooms as a potential risk.



# ABBREVIATIONS

<b>AER</b>	Annual environmental reports
<b>AGD</b>	Amoebic Gill Disease
<b>BAR</b>	Board of Advice and Reference
<b>BEMP</b>	Broad-scale Environmental Monitoring Program
<b>DEP</b>	Derwent Estuary Program
<b>DPIPWE</b>	Department of Primary Industries, Parks, Water and Environment
<b>EDO</b>	Environmental Defenders Office
<b>EIS</b>	Environmental Impact Statement
<b>EL</b>	Environmental License
<b>EMPCA</b>	<i>Environmental Management and Pollution Control Act 1994</i>
<b>EPA</b>	Environment Protection Authority
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
<b>ESD</b>	Ecologically Sustainable Development
<b>ET</b>	Environment Tasmania
<b>FRDC</b>	Fisheries Research and Development Corporation
<b>GSS</b>	Global Salmon Symposium
<b>GSP</b>	Gross State Product
<b>IMAS</b>	Institute for Marine and Antarctic Studies
<b>LIST</b>	Land Information System Tasmania
<b>LMRMA</b>	<i>Living Marine Resources Management Act 1995</i>
<b>LUPAA</b>	<i>Land Use Planning and Approvals Act 1993</i>
<b>MAST</b>	Marine and Safety Tasmania
<b>MFDP</b>	Marine Farm Development Plan
<b>MFPA</b>	<i>Marine Farming Development Act 1995</i>
<b>MFPRP</b>	Marine Farming Planning Review Panel
<b>MST</b>	Marine Solutions Tasmania
<b>NCA</b>	<i>Nature Conservation Act 2002</i>
<b>NGO</b>	Non-government organisation
<b>NOFF</b>	Neighbours of Fish Farms
<b>NRE Tas</b>	Department of Natural Resources and Environment Tasmania

<b>POMV</b>	Pilchard Orthomyxovirus
<b>SEMP</b>	South East Marine Protection
<b>SEPA</b>	Scottish regulatory agency
<b>SERNAPESCA</b>	The National Fisheries and Aquaculture Service, Chile
<b>SFFP</b>	Shooters, Fishers and Farmers Party (Tas)
<b>SIGP</b>	Sustainable Industry Growth Plan
<b>SMRCA</b>	Sustainable Marine Research Collaboration Agreement
<b>TAC</b>	Tasmanian Abalone Council
<b>TAMP</b>	Tasmanian Alliance for Marine Protection
<b>TARFish</b>	Tasmanian Association for Recreational Fishing
<b>TCT</b>	Tasmanian Conservation Trust
<b>TPMP</b>	Tasman Peninsula Marine Protection
<b>TPDNO</b>	Total Permissible Dissolved Nitrogen Output
<b>TSGA</b>	Tasmanian Salmonid Growers Association
<b>TSPA</b>	<i>Threatened Species Protection Act 1995</i>
<b>TSIC</b>	Tasmanian Seafood Industry Council
<b>WHS</b>	Workplace Health and Safety
<b>WQO</b>	Water Quality Objectives
<b>WWF</b>	World Wildlife Fund (now known as WWF)

# INTRODUCTION

1. At a meeting of the Legislative Council Government Administration Committee “A” on Tuesday 19 September 2019, it was resolved that an inquiry be established to inquire into and report upon the planning, assessment, operation and regulation of finfish farming in Tasmania, with particular reference to:
  1. *The implementation of the Sustainable Industry Growth Plan for the Salmon Industry and its impact on commercial finfish farming operations and local communities, including:*
    - c) *data collection and publication;*
    - d) *progress in the development of an industry wide biosecurity plan;*
  2. *Application of the Marine Farming Planning Act 1995 relating to:*
    - d) *preparation and approval process for marine farming development plans, including modifications and amendments to marine farming development plans;*
    - e) *allocation of leases, applications for and granting of leases;*
    - f) *management of finfish farming operations with respect to the prevention of environmental harm;*
  3. *Any other matter incidental thereto.*
2. On 26 November 2019, the Committee resolved to discharge Hon Sarah Lovell MLC at her request. In accordance with Sessional Order 5 (30), a Sub-Committee was formed to continue the Inquiry under the existing terms of reference.
3. The Membership of the Sub-Committee is:
  - Hon Meg Webb MLC (Inquiry Chair);
  - Hon Rob Valentine MLC (Inquiry Deputy Chair from July 2021);
  - Hon Mike Gaffney MLC;
  - Hon Kerry Finch MLC (resigned on 21 July 2020); and
  - Hon Ruth Forrest MLC (Former Deputy Chair, resigned in March 2021).
4. The Sub-Committee received 225 submissions which are published on the Inquiry webpage (Appendix A).
5. Public and private hearings were held in Hobart on 11, 12, 17, 21 February, in Burnie on 24 February, and via videoconference on 1 April 2020.
6. The following 29 witnesses gave verbal evidence to the Sub-Committee at these hearings:
  - Environmental Defenders Office (EDO);
  - Tasmanian Conservation Trust Inc (TCT);

- Institute for Marine and Antarctic Studies (IMAS);
  - Bruny Sustainable Aquaculture;
  - Neighbours of Fish Farming (NOFF);
  - Tasmanian Alliance for Marine Protection (TAMP);
  - Tasman Peninsula Marine Protection (TPMP);
  - Chris Wells;
  - Geoffrey Swan;
  - Department of Primary Industries, Parks, Water and Environment (DPIPWE);
  - Christine Coughanowr;
  - The Australia Institute;
  - Seafood and Maritime Training (SMT);
  - Tasmanian Greens and Senator Whish-Wilson;
  - BioMar Pty Ltd;
  - Environment Protection Authority (EPA);
  - WWF Australia;
  - Environment Tasmania (ET);
  - Bob Brown Foundation;
  - Professor Barbara Nowak and Louise Cherrie;
  - Huon Aquaculture Company Pty Ltd;
  - Dr Lisa-ann Gerschwin;
  - Tasmanian Salmonid Growers Association (TSGA)
  - Petuna Aquaculture;
  - Mark Bishop;
  - Matthew Morgan;
  - Craig Garland;
  - CSIRO; and
  - Dr Shea Cameron.
7. The Hon Meg Webb MLC attended a site visit of the Petuna operations at the Cressy Hatchery and Rowella fish farm facility on 27 February 2020. All other Members of the Sub-Committee have previously attended tours of Petuna's operations.
  8. The Hon Meg Webb MLC and Hon Rob Valentine MLC attended a site visit at Tassal's operations at the hatcheries in Ranelagh, processing facility in Huonville and their headquarters in Hobart on 5 February 2020. All other Members of the Sub-Committee have previously attended tours of Tassal's operations.

9. The Sub-Committee accepted an offer from Huon Aquaculture to attend a site visit of their facilities on 2 April 2020. This visit was postponed due to the COVID-19 pandemic.
10. Due to the operational strictures placed on the Sub-Committee resulting from the COVID-19 pandemic, the activity of the Inquiry was paused for a period of approximately 4 months between April and August 2020.
11. It was considered appropriate to report on progress made prior to the interruption, and the Inquiry prepared an Interim Report dated 9 April 2020 outlining progress made prior to the interruption.
12. The Inquiry resumed activity on 17 August 2020 when it accepted an invitation made by community group Tasman Peninsula Marine Protection to attend a site visit on the Tasman Peninsula. Hon Mike Gaffney MLC attended a site visit at the BioMar facility on 1 September 2020. Hon Mike Gaffney MLC, Hon Rob Valentine MLC and Hon Meg Webb MLC attended a tour of Tassal's marine facilities on 10 September 2020. Hon Mike Gaffney MLC, Hon Rob Valentine MLC and Hon Meg Webb MLC attended a site tour of the Channel/Bruny Island on 16 October 2020 at the invitation of community group Neighbours of Fish Farming.
13. On 8 and 9 September 2020 the Inquiry resumed public hearings. Public hearings were also held on 20 October and 30 November 2020.
14. The following groups and individuals gave evidence to the Inquiry at these post-COVID hearings:
  - Marine and Safety Tasmania;
  - Marine Farming Planning Review Panel;
  - Aquafeed;
  - Huon Resource Development Corporation;
  - EPA (second appearance);
  - Fisheries Research and Development Corporation;
  - TARFish;
  - Marine Solutions Tasmania;
  - Dr Dom O'Brien;
  - DPIPWE (second appearance); and
  - Tassal Group.
15. The Government did not provide a submission to the Inquiry and while the Minister chose not to appear to provide verbal evidence, he offered to take written questions.
16. At the conclusion of the public hearings program, the Inquiry commenced deliberations on its Final Report.
17. On 20 March 2021, the Inquiry was again interrupted for approximately 4 months by the prorogation of Parliament as a result of an early Tasmanian election.

18. The Inquiry was re-established on 6 July 2021 with the following membership:
  - Hon Meg Webb MLC (Inquiry Chair);
  - Hon Rob Valentine MLC (Deputy Chair); and
  - Hon Mike Gaffney MLC.
19. The Inquiry resumed deliberations on its final report in July 2021.
20. On 5 April 2022, the Inquiry was again interrupted by the prorogation of Parliament following the resignation of Premier Gutwein.
21. All submissions and transcripts of hearings (where evidence is made publicly available) are included on the Inquiry webpage.
22. This Report provides a summary of the key findings contained in evidence presented during the Sub-Committee through the written submissions and verbal evidence provided to the Sub-Committee during the public hearings.
23. This Report should be considered in its entirety as the Final Report of the Inquiry.

# BACKGROUND TO FINFISH INDUSTRY

Commercial farming of finfish commenced in Tasmania in the 1980s. The industry includes trout and other salmonids but is most well-known for Atlantic salmon. It has become the most valuable primary industry in the state, with a farm gate value of \$838 million in 2017-18.<sup>1</sup> Its rapid expansion has been aided by the use of proven European approaches, a high level of government involvement, and favourable environmental conditions.

There are currently 16 licenced salmonid freshwater farms (hatcheries) and 47 licenced salmonid marine farming leases in Tasmania, operating across seven marine farming development plan areas. **Figure 1** illustrates the current finfish farming areas. Three vertically integrated companies (farming fish from eggs to harvest) now dominate the industry: Tassal, Huon Aquaculture and Petuna.

**Figure 1: Current finfish farming areas**



Source: DPIPWE, [Tasmanian Salmon Farming Data Portal](#), accessed 23 June 2020.

<sup>1</sup> DPIPWE, [Tasmanian Agri-Food Scorecard 2017-18](#).

The key legislation regulating the industry includes the *Marine Farming Planning Act 1995*, *Living Marine Resources Management Act 1995*, and the *Finfish Farming Environmental Regulation Act 2017*. The Tasmanian Government uses an adaptive management approach to regulation.

The following summary of key milestones, adapted from a chronological history of fin fish farming in Tasmania prepared by the Tasmanian Parliamentary Research Services in February 2020, provides a summary of, but does not constitute a commentary on, key events in the history of finfish farming in Tasmania.

**Table 1: Key Milestone (Adapted from the Chronology of Fin Fish farming in Tasmania prepared by the Tasmanian Parliamentary Research Service)<sup>2</sup>**

1864	The first salmonids are introduced into Tasmania. Attempts to acclimatise Atlantic salmon fail.
1964	The first fresh water trout farm is established at Bridport. A second farm at Russell Falls is established in 1974.
1977	The Tasmanian Fisheries Development Authority is established. The authority runs until 1985 when it is disbanded and replaced by the Department of Sea Fisheries.
1980s	A recirculating quarantine hatchery is constructed at the fisheries research laboratory in Taroona (southern Tasmania).  The first successful sea water trial of trout takes place at Nubeena (Tasman Peninsula). Rainbow trout hatched in fresh water are transferred to sea water for grow out.
1982	A fishing industry development plan is released by the Fisheries Development Authority.
1984	Atlantic salmon ova are introduced to the state from a hatchery in New South Wales. Ova were first imported from Nova Scotia, Canada.  Tassal is founded, initially operating as a subsidiary company under Noraqua Australia Pty Ltd.
1985	(May) The <i>Salt-Water Salmonid Culture Act 1985</i> establishes the Atlantic salmon industry as a joint venture between the Tasmanian Government, Norwegian subsidiary Noraqua, and Tasmanian salmon growers. Early activities include the establishment of a hatchery at Plenty in the upper Derwent valley; a model sea farm at Port Esperance (south); and a commercial fishery to be run by Tassal. Annual salmonid production is envisaged to reach around 2,500 tonnes within the first eight years.  Salmon Enterprises of Tasmania Pty Ltd (SALTAS) is established to produce and distribute smolt. Under the <i>Salt-Water Salmonid Culture Act 1985</i> ,

---

<sup>2</sup> **DISCLAIMER:** Every care has been taken in preparing this document but it cannot be guaranteed error free, so the original documents should be checked before using the information. Views expressed in this paper are those of the author/s and do not necessarily reflect those of the Parliamentary Research Service and are not to be attributed to the Parliamentary Library.



SALTAS has a monopoly on producing Atlantic salmon smolt up until 1995. SALTAS is jointly owned by the Tasmanian Government and industry and plays a key role in early research and development. Two SALTAS hatcheries continue to operate to the present day.

(June) The first transfer of Atlantic salmon to sea occurs at Sykes Cove, Bruny Island.

The Tasmanian Aquaculture and Fisheries Institute at the University of Tasmania (now the Institute for Marine and Antarctic Studies) begins to develop research to support the aquaculture industry, in cooperation with the Tasmanian Government and organisations.

1986 The first commercial harvest of Atlantic salmon in Tasmania takes place at Dover (south).

Tassal is listed as a public company and becomes Tassal Limited.

Huon Aquaculture is founded. Huon initially farms under contract, becoming a standalone brand in 2005.

1987 Finfish farming commences in Macquarie Harbour.

The Tasmanian Government purchases 1.5 million shares in Tassal.

Aquatas is founded.

1988 A moratorium is placed on the granting of new licences and marine farm leases, pending the formulation of marine farming development plans.

1990 A Code of Practice for Marine Finfish Farming in Tasmania is released by the Department of Primary Industry.

Petuna (originally a fishing company) diversifies into aquaculture.

1992 The National Strategy for Ecologically Sustainable Development is endorsed by COAG. The strategy provides the agreed policy for aquaculture development.

1993 Another moratorium is placed on the granting of new licences and marine farm leases.

The Tasmanian Salmonid Health Surveillance Program commences as a joint Government and industry initiative.

1994 Canada initiates a challenge to Australia's restrictions on the import of fresh (untreated) salmon in the World Trade Organization (WTO). The ban on Canadian and US salmon has been in place since 1975, and the move triggers a lengthy dispute process. Tasmanian stakeholders react strongly, citing concerns about the possible disease risks which would threaten the state's 'disease free' status.

1995 The *Living Marine Resources Management Act 1995* and *Marine Farming Planning Act 1995* establish a comprehensive regulatory framework for aquaculture in Tasmania (replacing the *Fisheries Act 1959*). The new

legislation follows a long period of review and consultation commencing in the 1980s.

Marine farming development plans are introduced. The plans prescribe the extent and type of marine farming allowed in specified zones, and the management controls that apply. Leases may be granted within the zones, up to the maximum leasable area set by the plan.

The Marine Farming Planning Review Panel is established to oversee the preparation, amendment and review of marine farming development plans.

1995/6 Atlantic salmon becomes the highest valued commercial fishery in Tasmania, and the second highest valued aquaculture industry in Australia. Annual output is valued at around \$63 million.

The WTO holds 'numerous meetings and exchanges' with the Tasmanian Government and industry representatives about Canada's challenge to the ban on fresh salmon imports.

1996 (October) Marine farming development plans for Tasman Peninsula and Norfolk Bay (south east) and D'Entrecasteaux Channel and Huon River and Port Esperance (south) are approved.

Note: Tasman Peninsula and Norfolk Bay is replaced with a new plan in 2005 and again in 2018.

D'Entrecasteaux Channel and Huon River and Port Esperance are replaced with a new plan in 2002 and again with a new combined plan for D'Entrecasteaux Channel and Huon River in 2019.

1996-97 The *Marine Farming Planning Regulations 1996*, *Marine Farming Planning Amendment Regulations 1997* and *Marine Farming Planning Amendment Regulations (No. 2) 1997* establish fees and charges in relation to marine farming.

1998 (October) The marine farming development plan for Macquarie Harbour (west coast) is approved. Note: The plan is replaced with a new plan in 2005 and is modified again in 2016.

Marine farming development plans for Great Oyster Bay and Mercury Passage (east coast) and Storm Bay off Trumpeter Bay North Bruny Island (south east) are approved. Note: Great Oyster Bay and Mercury Passage is modified in 2010 and 2017. Storm Bay off Trumpeter Bay is replaced with a new plan in 2018.

The Tasmanian Government sets a goal to double Tasmania's primary industry outputs within ten years. Aquaculture development is a key element of the expansion.

Opponents to fish farm expansions, including the Tasmanian Greens, call for a moratorium on development until third party appeal rights on marine farms are introduced.

The WTO rules in Canada's favour in the salmon import dispute, despite arguments by Australia that the imports pose a threat to the local salmon industry and trout fisheries because of diseases.

1999 (February) After Australia loses an appeal against the WTO decision, the WTO rules that Australia must make its case to justify the continuation of a ban on fresh salmon by 6 July 1999, or lift the ban. The Tasmanian Government launches a joint campaign with the fishing industry and recreational fishers to oppose Canadian imports.

Tasmanian MPs, industry representatives, anglers and residents rally against the decision to allow Canadian salmon imports into Australia.

(June) A bipartisan delegation (including the Minister for Primary Industries, Water and Environment and a spokesperson for the Opposition) takes Tasmania's concerns about Canadian salmon imports to the Australian Government.

(19 July) The Australian Quarantine and Inspection Service (AQIS) amends quarantine measures and partially overturns the ban on the import of fresh salmon from Canada. The decision allows imports of salmon products if certain conditions are met. Canada challenges the new measures and lodges a further complaint with the WTO about Australia's restrictions.

(August) The Senate launches an inquiry into the importation of salmon products, in response to the AQIS decision and potential deficiencies in its risk analysis process. The Senate Committee makes 15 recommendations for change and notes that it is 'extremely concerned that any disease incursion could damage the 'clean and green' image which is such a significant factor in our agricultural exports and which allows Australian producers to set premium prices for their products, especially salmon.'<sup>3</sup>

2000 (May) The WTO rules in Canada's favour over its second challenge to Australia's import restrictions, and the two countries reach an agreement to allow the import of a wider range of salmon products if quarantine measures are met. The Tasmanian Government defies the agreement and imposes its own ban on all salmon imports into the state (except from New Zealand). Despite initial threats of High Court action by the federal Minister for Trade and retaliatory trade sanctions by Canada, Tasmania's ban is eventually accepted.

(June) The *Living Marine Resources Management Amendment Act 2000* makes changes to marine farming licences. The changes ensure that applicants for marine farming licences may hold a number of leases under the *Marine Farming Planning Act 1995*, and that marine farm licences holders are exempt from needing to hold a fish processing licence.

(July) The marine farming development plan for the Tamar Estuary (north) is approved. Note: The plan is replaced with a new plan in 2019.

---

<sup>3</sup> M Forshaw (Senator for NSW), 'Rural and Regional Affairs and Transport Legislation Committee Report [tabling speech]', Senate, *Debates*, 5 June 2000.

- 2001 (September) The *Marine Farming Planning Amendment Act 2001* implements the recommendations of a policy review conducted in 1999, to address a number of administrative issues identified since the commencement of the *Marine Farming Planning Act 1995*.
- 2002 (June) The *Marine Farming Planning Amendment Regulations 2002* amend the *Marine Farming Planning Regulations 1996*, by prescribing a charge for processing a request to vary a lease area and converting fees and charges from monetary units to fee units.
- (June) Tassal goes into receivership with debts of \$33 million, shaking confidence in the industry.
- 2003 (February) In a move to 'rationalise' the industry, Tassal acquires Nortas and becomes Australia's largest salmon company.
- (October) Melbourne-based Mariner Corporate Finance buys Tassal for \$44 million and it becomes Tassal Group Limited.
- 2004 A selective breeding program for Atlantic salmon commences, through a partnership between SALTAS and CSIRO. The program 'operates in an all-female commercial production system, uses DNA pedigree assignment and has resistance to an external gill parasite [amoebic gill disease] as a primary breeding objective'. The program produces the first genetically selected families in 2008.
- 2005 (February) Tassal acquires Aquatas, making it the second biggest private employer in Tasmania.
- 2006 (October) The *Marine Farming Planning Regulations 2006* commence.
- 2007 (April) The *Living Marine Resources Management (Miscellaneous Amendments) Act 2007* and the *Marine Farming Planning Amendment Act 2007* make further amendments in relation to marine farming licences. This follows a review conducted in 2001 and 2002 (report tabled June 2005). The changes include clarifying provisions in relation to marine farming licences as a means for responding urgently to changing circumstances.
- 2009 (March) The Broadscale Environmental Monitoring Program (BEMP) in the Huon Estuary and D'Entrecasteaux Channel begins.
- The salmon industry sets a target to double to a \$1 billion a year industry by 2030. The target is supported by the Tasmanian Government.
- 2011 The *Marine Farming Planning Amendment Act 2011* changes the processes and decision-making requirements for approval of amendments to marine farming development plans and allocation of marine farming leases.
- 2012 Expansion of salmon farming in Macquarie Harbour commences. An amendment to the marine farming development plan for the area provides for an additional 360 hectares of leasable water to be shared between the companies operating in the harbour (Tassal, Huon Aquaculture and Petuna). The salmon industry aims to increase production from 8,000 to 30,000 tonnes.

The Federal Minister for the Environment decides that approval for the Macquarie Harbour expansion is not required under the *Environment Protection and Biodiversity Conservation Act 1999* (as long as specified requirements are met). An interim biomass cap is set at 15,490 tonnes, which is just over 50 per cent of the modelled maximum sustainable biomass.

(December) An Area Management Agreement is signed by the companies operating in Macquarie Harbour (Tassal, Huon Aquaculture and Petuna). The agreement is designed to ensure protection of the World Heritage Area and endangered Maugean Skate. Schedules 1, 3 and 4 cover fish health, environmental management and data collection.

2013 A trend of declining dissolved oxygen levels in Macquarie Harbour is identified.

2014 (February) The Macquarie Harbour Dissolved Oxygen Working Group is established by the Tasmanian Salmonid Growers Association (TSGA) to investigate the decline in dissolved oxygen levels. Investigations confirm 'a clear downward trend in the dissolved oxygen levels' of deep waters in Macquarie Harbour from 2009. However, the group's confidential draft report (August 2014) also 'identifies a number of knowledge gaps and data limitations that preclude definitive attribution of the recent DO decline'.

(September) The TSGA establishes a Biosecurity Program.

Huon Aquaculture closes its shallowest inshore sites in the Huon River and establishes new sites in deeper, 'offshore' waters in Storm Bay.

2015 (February) The Macquarie Harbour Status Report is completed by DPIPWE to provide an update on water quality, sediment and fish health in the context of historic and current production levels in the Macquarie Harbour marine farming development plan.

(24 March) The Senate commences an inquiry into regulation of the finfish aquaculture industry in Tasmania. The inquiry is initiated by the Australian Greens following a leaked email dated September 2014 and tabled in the Tasmanian Parliament in March 2015. The email was sent to the Tasmanian Government by Huon Aquaculture and Petuna, alleging that Tassal was about to breach the biomass cap in Macquarie Harbour and criticising the Government's regulation of the industry.

The federal inquiry is opposed by the Tasmanian Liberal Party and Tasmanian Labor Party. The inquiry reports on 21 August 2015, concluding that monitoring of the industry is 'robust and comprehensive'. The Australian Greens submit a dissenting report.

(May) Severe weather triggers a mass fish kill in Macquarie Harbour, prompting calls for more scrutiny of the industry.

(August) An environmental and fish health monitoring review of Macquarie Harbour is released ('the Cawthron report'). The report was commissioned by the Tasmanian Government to assess the data presented in the February 2015 Macquarie Harbour Status Report and provide additional advice. The

overarching recommendation in the report is that DPIPWE consider undertaking a comprehensive synthesis of monitoring results and related data, to provide a strong base for improving monitoring and understanding changes in the harbour. The report also notes there are 'inherent risks in farming in Macquarie Harbour' and advises caution for further expansion.

DPIPWE responds to the review in September 2015.

(October) The Tasmanian Government increases the biomass cap for Macquarie Harbour to 20,020 tonnes.

(October) The Experimental Aquaculture Facility opens in Tarooma. The facility operates as a partnership between IMAS, the Tasmanian and Australian Governments, Huon Aquaculture and aqua feed producer Skretting.

2016 (April) The Macquarie Harbour Status Report Update is released by DPIPWE, providing updated data.

(July) The Environment Protection Authority (EPA) assumes responsibility for day-to-day environmental management of the salmon industry. This includes both freshwater hatcheries and marine farms.

(September) The *Marine Farming Planning Amendment Act 2016* and *Marine Farming Planning Regulations 2016* strengthen enforcement mechanisms relating to breaches of the Act.

(October) The ABC's Four Corners investigation 'Big Fish' goes to air. The program is critical of the expanding salmon industry, highlighting community concerns.

(November) The EPA orders Tassal to destock its Franklin lease in Macquarie Harbour (by April 2017), after several non-compliance issues (*Beggiatoa* spp.<sup>4</sup>) were identified during a survey. The lease is closest to the Wilderness World Heritage Area border. (Restocking of the lease is approved in July 2018).

2017 (January) IMAS completes a report for the EPA and DPIPWE titled *Environmental Research in Macquarie Harbour: Interim synopsis of benthic and water column conditions*. The report finds that dissolved oxygen levels 'are now extremely low throughout the Harbour, but most notably in the southern part of the Harbour. All of the independent data sets (industry, EPA, Sense-T, Parks, IMAS and CSIRO) are providing the same picture; DO levels in bottom waters are now worryingly low'.

(January) The EPA reduces the biomass cap for Macquarie Harbour to 14,000 tonnes (from 14 February to 30 April 2017).

(February) Huon Aquaculture commences legal action against the Tasmanian Government and the EPA in the Supreme Court and against

---

<sup>4</sup> '*Beggiatoa* spp. is a naturally occurring organism, present in circumstances of low dissolved oxygen where it breaks down (feeds on) decaying plant and animal material. The presence of *Beggiatoa* spp. can therefore be used as an indicator of a low oxygen environment.' Source: EPA, *Macquarie Harbour Tasmanian Wilderness World Heritage Area Environmental Status Report*, May 2017, p. 12.

DPIPWE and the EPA in the Federal Court, opposing management decisions in relation to Macquarie Harbour. Tassal and Petuna join the action in support of the EPA.

(May) The Macquarie Harbour Tasmanian Wilderness World Heritage Area Environmental Status Report is released by the EPA. Key findings include that 'there is evidence of deterioration in the environmental condition in Macquarie Harbour broadly, and also within the [Tasmanian Wilderness World Heritage Area] region'. The most likely cause is identified as dissolved oxygen decline due to increased finfish farming.

(May) The EPA further reduces the biomass cap for Macquarie Harbour to 12,000 tonnes for 2017-18. Tassal is approved to trial a waste capture system and permitted to exceed the biomass cap for its 2016 year class.

(November) The marine farming development plan for Storm Bay North (southern Tasmania) is approved.

(December) The *Sustainable Industry Growth Plan for the Salmon Industry* is released by DPIPWE, following a draft plan and public consultation period in August-September 2017. The plan sets out the Tasmanian Government's vision for the industry and notes that the industry target of becoming a \$1 billion a year industry by 2030 'now appears conservative'. The plan includes maps of areas for potential expansion, as well as 'no grow' zones.

The *Finfish Farming Environmental Regulation Act 2017*, *Marine Farming Planning Amendment Regulations 2017* and *Marine Farming Planning Amendment (Infringement Notices) Regulations 2017* bring further regulatory changes, reflecting the new role of the EPA.

The changes include the establishment of an environmental licence for salmonid aquaculture, and provision for declaring finfish marine farming exclusion zones (see the salmonid aquaculture environmental regulatory changes position paper by DPIPWE).

Finfish farming commences in Okehampton Bay (east coast).

2018 (May) The EPA further reduces the biomass cap for Macquarie Harbour to 9,500 tonnes for the period 1 June 2018 to 31 May 2020.

(July) The Tasmanian Government's 'zero tolerance' policy for marine debris from fish farms comes into effect.

(July) Huon Aquaculture loses a legal challenge against the Commonwealth, Tassal and Petuna in the Federal Court (commenced June 2017), in relation to fish numbers in Macquarie Harbour. Huon alleged that Tassal was in breach of the biomass cap imposed in May 2017.

(November) Two members of the Marine Farming Planning Review Panel resign citing concerns about the panel's processes, particularly in relation to the expansion of salmon farming in Storm Bay.

The fin fish farming industry (the industry) revises its 2030 target from \$1 billion to \$2 billion.

2019 (February) A *one year review of the Sustainable Industry Growth Plan for the Salmon Industry* is released by DPIPWE. The review explicitly supports the industry's revised target of being a \$2 billion industry by 2030.

(September) The Tasmanian Salmon Farming Data Portal goes live. The portal, managed by DPIPWE, provides public data on regulation of the industry.

(September) The Legislative Council commences an inquiry into finfish farming in Tasmania, examining planning, assessment, operation and regulation of the industry.<sup>5</sup>

2020 (May) The EPA maintains the biomass cap for Macquarie Harbour at 9,500 tonnes for the period 1 June 2020 to 31 May 2022.

(November) The State Budget commits funding for marine spatial planning 'to identify potential sustainable growth areas for new offshore finfish marine farms'.<sup>6</sup>

[Please note, further milestones since November 2020 are covered in the Chair's Foreword].

---

<sup>5</sup> The Legislative Council Inquiry is delayed by the COVID-19 emergency.

<sup>6</sup> G Barnett (Minister for Primary Industries and Water), 'Fish Farming – Reports of Expansion', House of Assembly, *Report of Debates*, 18 November 2020.



# EVIDENCE

## TERM OF REFERENCE 1

**THE IMPLEMENTATION OF THE SUSTAINABLE INDUSTRY GROWTH PLAN FOR THE SALMON INDUSTRY AND ITS IMPACT ON COMMERCIAL FINFISH FARMING OPERATIONS AND LOCAL COMMUNITIES, INCLUDING:**

**A. DATA COLLECTION AND PUBLICATION;**

**B. PROGRESS IN THE DEVELOPMENT OF AN INDUSTRY WIDE BIOSECURITY PLAN.**

The DPIPWE submission outlined the target of the Sustainable Industry Growth Plan (the SIGP or the Salmon Plan) released in 2017 by the Tasmanian Government for the salmon industry. The SIGP:

*Sets out how the Government will support the industry to achieve a revised target of becoming a \$2 billion a year industry by 2030.*

*The Salmon Plan details the Government's vision and priorities for the industry and provides the community with surety on the way forward under the current policy framework. The Government's vision for the Salmon Plan is for the industry to:*

- continue to deliver increased tangible benefits to Tasmania through sustainable growth - delivering more and better jobs and economic growth (especially in the regions) and acting as a driver of productivity and innovation in the State's economy;*
- remain an industry Tasmanians are proud of and have confidence in, by increasing transparency and industry accountability for environmental management and by the introduction of a clear and robust mechanism for expansion; and*
- be the most environmentally sustainable salmon industry in the world by continuing to improve environmental performance through industry driven innovation, coupled with appropriate environmental monitoring and regulation.*

*Since the Salmon Plan was developed in 2017, there has been considerable progress made against initiatives contained in the Salmon Plan, particularly in areas of biosecurity, transparency, environmental regulation and the reduction of marine debris.<sup>7</sup>*

A number of questions and concerns were raised in submissions and hearings in relation to the development and implementation of the SIGP.

According to independent scientist Christine Coughanowr's submission, the implementation of the SIGP has been problematic from a number of perspectives:

*First and foremost, the Plan was not developed in consultation with the community, with commercial fisheries, or even with the scientific community. The SIGP appeared*

<sup>7</sup> DPIPWE, 2019, *Submission #221*, pp. 5-6.

*as a draft for comment in August/Sept 2017 and there is no description in the plan about how it was drafted, or even the rationale for the proposed expansion target of \$2 billion by 2030. Consultation occurred afterwards, not as part of the process, and many of the valid concerns raised were proposed to be addressed through regulatory change, improved science and information, and/or adaptive management. Unfortunately, this has not yet eventuated.*

*There is no evidence that the SIGP was based on scientific, environmental or socio-economic investigations. In particular - what was the basis for the grow and no-grow areas? What was the basis for the expansion targets and timelines, and why are they considered to be sustainable? Were any other considerations included, such as the value and location of prime recreational and commercial fishing areas and potential impacts on areas of high biodiversity? Furthermore, the growth plan does not address the full scope of sustainable salmon growth. This must include the freshwater end (water use, smolt production), wellboats, and downstream processing. The plan also requires an unbiased/independent review of employment estimates, as this appears to be a key motivation for growth from the government's perspective. However major expansion involves significant levels of automation, and it is unclear if this has been included in the rosy employment figures.<sup>8</sup>*

According to the Environment Tasmania submission, the SIGP was released without sufficient consultation and no data relating to areas identified for salmon farming:

*This plan was released without sufficient public consultation and no reference to scientific data establishing why areas had been identified as appropriate for salmon farming. To informed stakeholders, it appeared very much as though the planning process was heavily politicised and led exclusively by industry. For the plan to have any credibility it needs to be driven by a professional stakeholder consultation process and informed by independently generated data establishing an area's suitability for finfish operations. This data needs to include natural, cultural and heritage values, and independently produced modelling of the impact of the proposed peak biomass on the seafloor, marine life, water quality and other water users.<sup>9</sup>*

The Sub-Committee heard evidence from a range of community groups and individuals who indicated concerns with the development of the SIGP.<sup>10</sup>

Margaret Taylor, in her submission, noted:

*The document "Sustainable Industry Growth Plan for the Salmon Industry" suggests controls to ensure sustainability in the Industry but does not insist on research and consultation to determine the impact of salmon farming operations on the local ecosystem and local communities before farms are established. Thus the Industry*

---

<sup>8</sup> Christine Coughanowr, 2019, *Submission #67*, p. 2.

<sup>9</sup> Environment Tasmania, 2019, *Submission #12*, p. 1.

<sup>10</sup> For example: *Submissions #11, 23, 29, 50, 65, 73, 77.*

*has been encouraged to expand with no real care taken to preserve the biosecurity of the State.*<sup>11</sup>

A One Year Review<sup>12</sup> of the implementation of the SIGP was conducted in 2018. It provides details on all the work to date and outlines initiatives that will be delivered in the coming years to support environmentally responsible, sustainable growth.<sup>13</sup>

## **Development of the Salmon Industry Growth Plan (SIGP)**

Tim Baker, Acting Secretary DPIPWE, was asked during a public hearing about the development of the SIGP in 2017, and stakeholder involvement in the drafting of the plan:

**Mr BAKER** - *I would describe it as that there were three broad areas of consultation undertaken. First, a number of key stakeholders were directly contacted; they included the three salmon companies, relevant stakeholder groups like the recreational fishers, the abalone council, the rock lobster peak group and TARFish - they were all brought together and there was an initial discussion with them directly.*

*Second, a series of workshops was held. I am happy to table the document. We held workshops with a range of other stakeholders; here is the list and I am happy to table that list today. That includes entities like Australian Maritime College, Institute for Marine and Antarctic, William Adams, Total Rubber - basically all the people who were in the end-to-end supply chain and then any other interested parties.*

...

*We held workshops to which we invited a range of people and we talked about what should be in the plan ... We then did a public consultation where anyone was entitled to provide feedback, so that is where we had the individual feedback. Some stakeholders whom we spoke to in the first instance also provided submissions.*

...

**CHAIR** - *Was the scientific community involved in those workshops or in the direct stakeholders' workshops?*

**Mr BAKER** - *They were involved in the workshops and they had an opportunity along with everyone else to provide feedback. The other point is, in coming up with the plan, DPIPWE has a broad range of scientific information that it used to determine where fin-fishing could take place and where it could not. All of that was pulled together and put in the draft....*

---

<sup>11</sup> Margaret Taylor, 2019, *Submission #50*, p. 1.

<sup>12</sup> <https://dPIPWE.tas.gov.au/Documents/Salmon%20Plan%20-%20One%20Year%20Review.pdf>

<sup>13</sup> DPIPWE, 2019, *Submission #221*, p. 8.

*In total, 69 feedback forms were completed and 28 submissions were received. Twenty-eight submissions were mainly from interested organisations, including two of the main salmon farming companies and one of the small leaseholders and peak bodies in the wild and recreational fishers, as well as tourism. There was a handful from several environmental organisations.<sup>14</sup>*

On 17 March 2021, the Inquiry wrote to the Secretary DPIPWE requesting an overview of stakeholder involvement in the development of the Salmon Industry Growth Plan. The 'Summary Report of Public Consultation: Draft Sustainable Industry Growth Plan for the Salmon Industry' was provided on 15 April 2021, and is available on the Inquiry webpage.

Wes Ford, Director EPA, was asked in a public hearing about the EPAs involvement in the development of the SIGP:

**Mr FORD** - *As the plan was being developed, which was clearly post the 2016 process, I was consulted on a range of environmental matters that I thought were relevant from the planning process. I had input into the sorts of commentary about ultimately having some environmental standards to regulate the industry. That was really about the extent of my input. It was limited to around what it would mean from an environmental management point of view.*

**CHAIR** - *In terms of the review that occurred after the first year, were you part of that or did the EPA provide some form of input?*

**Mr FORD** - *We provided some input into it. I had the opportunity to comment on it before it was finalised.<sup>15</sup>*

The Inquiry heard evidence from Dr Karen Wild-Allen and Dr Alistair Hobday from CSIRO regarding its involvement in the development of the SIGP:

**Dr WILD-ALLEN** - *As far as I'm aware, my team has had no official involvement in the development or review of this sustainable industry growth plan.*

**Dr HOBDAY** - *That's correct. The information developed prior to that plan included a range of workshops that scientists presented at, and we understand that government used some of that information in developing that plan. You'd be aware a second plan is also under development by government, which is called the Review of Tasmanian and International Regulatory Requirements. CSIRO was given a chance to comment on that plan.<sup>16</sup>*

The Inquiry received verbal and written evidence from industry stakeholders – Huon Aquaculture, Petuna and Tassal Group and the representative body the Tasmanian Salmonid Growers' Association (TSGA) regarding industry involvement in the development of the SIGP.

---

<sup>14</sup> Tim Baker, *Transcript of Evidence*, 17 February 2020, p. 5.

<sup>15</sup> Wes Ford, EPA, *Transcript of Evidence*, 21 February 2020, p. 2.

<sup>16</sup> Dr Karen Wild-Allen and Dr Alistair Hobday, CSIRO, *Transcript of Evidence*, 1 April 2020, pp. 1-2.

When asked about Petuna's involvement in the development of the SIGP, Mr Alvarez CEO, took the question on notice. According to the Question on Notice response received on 11 August 2020 from Petuna Aquaculture:

*Petuna had minimal involvement in the development of the Government's Sustainable Industry Growth Plan. It is our understanding that this work was conducted by the Government, largely independent of industry consultation. At the time, the regulation of the industry had been the subject of a Senate Inquiry and Four Corners investigation, sparking significant community scrutiny, led by environmental activists. It would not have been appropriate for the industry to play an active role in determining its own future growth in the state.<sup>17</sup>*

Mark Ryan, CEO Tassal provided a summary of Tassal's involvement in the development of the SIGP:

*At that time plenty of leases in Tasmania were unutilised so it was simply a matter of filling those leases and optimising what we did have. We knew we would get to a point where they would be optimised and new frontiers would be needed. We engaged with government as an industry to talk about what that might look like and how that might evolve.*

*...Much to our surprise, when the growth plan came out, we really did not have a lot of play into that process - a lot less than I thought we might have because we had seen many of the areas where we were growing fish so we knew where the better areas were to grow fish.<sup>18</sup>*

Frances Bender, CEO Huon Aquaculture, made the following comments on the sustainable industry growth plan:

*My perspective on the plan is that it is great we have a plan. With any plan, a plan should always be a living document; it should always be being reviewed and should be contemporised.*

*For many years the industry was growing. To be quite frank, in some ways we took the state and the government, perhaps, by surprise that we were quietly going about growing, and all of a sudden this industry was actually so valuable to the Tasmanian community. There wasn't really a plan in place. There was legislation and environmental management of us, but not a strategic plan.*

*The fact we have a plan now is great, but the plan needs to be constantly reviewed, just like some of the issues, like the portal, and those sorts of things. The whole thing just needs to be constantly reviewed. I would agree with some of the comments that Laura Kelly made today, as well.*

*We are not sitting here saying that we don't agree with some of those comments. We need to work together in whatever way is appropriate to make sure that the Government understands the requirements of the industry, and the responsibilities*

---

<sup>17</sup> Petuna Aquaculture, Question on Notice Response dated 11 August 2020.

<sup>18</sup> Mark Ryan, Tassal, *Transcript of Evidence*, 30 November 2020, p. 4.

*that we have, and what the community wants from living in this state. What it is all about.*<sup>19</sup>

Craig Garland, fisher, reported to the Inquiry that commercial fishers were not involved in the development of the SIGP:

*As far as I am aware not one fisherman was involved in this salmon growth plan. We weren't consulted through our industry bodies. One of the big problems we have is the conflicted nature of TSIC managing wild finfish and the finfish aquaculture at same time.*

....

*We haven't had any opportunity to say this area is crucial and this is what is going on there. We found out about it on the evening news and, to my mind, that's a terrible way to run this state of affairs. The reason we have a division in this state and salmon farm conflict is because of this very nature. They've not taken us, the community, the stakeholders in these areas, along with them.*<sup>20</sup>

When questioned in a hearing, the Tasmanian Association for Recreational Fishing (TARFish) indicated they made a submission to the draft plan and this was provided to the Inquiry as an addendum to their submission which is available on the Inquiry webpage.

**Findings:**

1. The Department carried out what it considered to be a comprehensive consultation process in the development of the Salmon Industry Growth Plan.
2. A number of community and non-industry stakeholders felt there was inadequate opportunity for their involvement and input in the development of the Salmon Industry Growth Plan.
3. Fin fish companies indicated they had limited involvement in the development of the Salmon Industry Growth Plan.
4. While evidence was received that scientific data and information was used in the development of the Salmon Industry Growth Plan, the extent of that evidence base is unclear in regard to scientific, environmental, economic, social and recreational factors.

<sup>19</sup> Frances Bender, *Transcript of Evidence*, 21 February 2020, p. 82.

<sup>20</sup> Craig Garland, *Transcript of Evidence*, 24 February 2020, p. 2.

5. The EPA's involvement in the development of the Salmon Industry Growth Plan was limited to comment on environmental standards to manage and regulate the industry.
6. The Salmon Industry Growth Plan does not include fresh water use, smolt production, wellboats and downstream processing.

### **Recommendation 1**

A revised Salmon Industry Growth Plan be developed as one aspect of an overarching Marine Plan for Tasmania, through a process that:

- includes comprehensive stakeholder consultation;
- is informed by assessment of environmental, social and recreational values; and
- has a transparent evidence base.

### **Recommendation 2**

Ensure a revised Salmon Industry Growth Plan specifies potential fin fish farming areas identified through a process of marine spatial planning, and sets an industry growth target for these areas which is transparently developed, sustainable and evidence-based.

### **Recommendation 3**

Develop a plan, in consultation with industry, scientific and community stakeholders, to reduce inshore fin fish farming sites, with priority given to ceasing operations in sensitive, sheltered and biodiverse areas.



## The \$2 billion growth target in the Salmon Industry Growth Plan

Tim Baker, Acting Secretary and Colin Shepherd, Aquaculture Coordinator, DPIPWE, were asked how the \$2 billion aspirational target in the SIGP was derived:

**Mr BAKER** - ... At the end of the day, again, it was a target founded on discussions the Government had about likely growth and talking to industry but, ultimately, it's an aspirational target set by the Government and not by the department.

**CHAIR** - In terms of that being a government-supported target, was assessment made at the department level on the appropriateness of that or the reality of that aspiration for growth prior to adopting that?

**Mr BAKER** - In coming up with a target, the department provided data around likely growth and where growth could be. We spoke to industry as well but it's an aspirational target. It's a target set by the Government and the advice that we provided was broad in nature around the likely growth of the industry and from discussions we've had with industry.

**Mr SHEPHERD** - My understanding is that the previous target had been \$1 billion by 2030 and in light of where the industry was at this point in time, given that they were already approaching close to that one billion, the target was then revised to take into account, as Tim said, some of the future growth that was likely to happen.

**CHAIR** -...Would it be fair to say that the department deemed that to be a sustainable figure for the industry in this state?

**Mr BAKER** - Yes, based on the advice we had at the time and based on talking to industry, looking at where potential water could be and where appropriate finfish farming would be.

**Ms FORREST** - The department determined it was sustainable, based on advice. On what advice were you, or DPIPWE, basing that decision?

**Mr BAKER** - By talking to industry about what their goals and what their likely growth path would be, by looking at the state and making broad decisions around where salmon could potentially be grown and by talking to community and community expectations.

**Mr SHEPHERD** - It's down to some of the growth plans that were already in train. We know what the current production for the industry is. It is sitting at around 60 000 tonnes and we knew we had Storm Bay, which had been approved. That was coming online and obviously there was potential there to grow the industry to a certain amount, which, conservatively at the moment, is up to 30 000 tonnes. Knowing that, plus what is in the salmon growth plan, the aspirations of the industry and some of the work been done in some of those areas currently subject to exploratory permits in the event that, through the proper planning processes, those areas became marine farms and were operating there was additional growth there, it is just looking at what industry's growth is at the moment and projecting

*how it might grow into the future. You could see that a doubling of the industry was potentially possible and the normal planning processes would apply and, therefore, we wouldn't allow farming in any areas unless we consider it would be done sustainably and we are quite confident that would be the case.*<sup>21</sup>

Evidence provided from Wes Ford, indicated the EPA was not involved in informing the growth target presented in the SIGP:

**CHAIR** - *In either of those processes, from the initial input you provided when this plan was being developed or in the review process, was the EPA involved in any sense in informing the Government's assessment of the industry growth target in that plan?*

**Mr FORD** - *By the industry growth target, you mean the size of the growth?*

**CHAIR** - *Yes. The industry has a growth target to grow to a \$2 billion industry by 2030 ... did the EPA have a role in informing the Government's assessment of that?*

**Mr FORD** - *No.*<sup>22</sup>

When asked if CSIRO had input to the Government's \$2 billion target for the salmon industry, Dr Alistair Hobday responded:

**Dr HOBDAY** - *No, we didn't formally provide information there. CSIRO's position is that that was a policy decision and we would provide research that would support the sustainable management towards any particular target, but again our research contributed to the material that I know the EPA used in deciding what were the different carrying capacities around Tasmania. Again, that's a line in the sand; we haven't crossed into actually recommending what the actual target should be.*

**CHAIR** - *So CSIRO wouldn't have a view on a recommended target, based on your research?*

**Dr HOBDAY** - *No, it's the combination of economic factors, the available space that's given over to those growth operations around Tasmania and then also the different carrying capacities, the different environments, and we didn't put all that together to make a contribution there.*<sup>23</sup>

According to Jen Fry, newly appointed Chief Advisor, TSGA:

*I don't know if the industry itself was involved in informing that figure... The TSGA definitely supports that plan. We're happy it will be reviewed and adjusted as necessary, as all good planning strategies should be. It is a living document. We believe there is considerable scope for the industry, but I am not certain how the*

---

<sup>21</sup> Tim Baker and Colin Shepherd. *Transcript of Evidence*, 17 February 2020, pp. 6-7.

<sup>22</sup> Wes Ford, EPA, *Transcript of Evidence*, 21 February 2020, p. 2.

<sup>23</sup> Dr Alistair Hobday, CSIRO, *Transcript of Evidence*, 1 April 2020, pp. 1-2.

*industry or the TSGA had input into that figure. I would have to take that on notice and look back.*<sup>24</sup>

Petuna Aquaculture provided the following responses to questions taken on notice in relation to the industry growth target of \$2 billion:

*1. What was Petuna's involvement in setting the industry growth target of \$2 billion by 2030?*

*It is Petuna's recollection that this work started in 2015, when then Secretary of DPIPW, John Whittington, invited the industry to submit a proposal for expansion into Storm Bay. The Tasmanian Salmonid Growers Association (TSGA) worked with the Government and all three companies on the development of an industry aspiration of \$1 billion by 2020 and later \$2 billion by 2030.*

*2. What information, evidence or science informed this target?*

*The TSGA considered extensive scientific data and evidence to inform its proposed target, including research conducted by IMAS and CSIRO as well as a number of independent environmental and economic impact studies commissioned by the industry itself.*<sup>25</sup>

Frances Bender, CEO Huon Aquaculture was asked during a public hearing about her company's involvement in the industry growth target:

*I can't really talk you through where that number came from. I don't know where that number came from, so I can't sit here and say that I do.*<sup>26</sup>

Representatives of the Environmental Defenders Office (EDO) were questioned in a hearing on their understanding of the way the \$2 billion growth target was derived. According to Ms Claire Bookless, Litigation Lawyer, EDO:

*We don't understand how that figure has been arrived at or whether it has taken into account the types of issues that have arisen. For instance, the Okehampton Bay expansion caused a strong community outcry and the vision of expanding by such an amount by 2030 might necessitate a shorthand, or shortened, public consultation period about these types of areas, which I'm sure the community will have something to say about.*<sup>27</sup>

In relation to the way the growth target was determined, Jo-anne McCrea, WWF, commented:

*We don't have any information to suggest how that target was determined. I guess it's for industry to determine what its aspirations for growth are. I have no reason to understand why government chose to support that target. If we go back to the planning process I envisage, I would not imagine you could truly come up with a*

---

<sup>24</sup> Jen Fry, TSGA, *Transcript of Evidence*, 24 February 2020, p. 43.

<sup>25</sup> Petuna Aquaculture, Question on Notice Response dated 11 August 2020.

<sup>26</sup> Frances Bender, *Transcript of Evidence*, 21 February 2020, p. 80.

<sup>27</sup> Claire Bookless, EDO, *Transcript of Evidence*, 11 February 2020, pp. 3-5.

*sustainable growth limit until you had gone through that exercise and identified, first, where a good place for salmon is and then conducted the necessary environmental surveys to understand what the carrying capacity of those areas could be.<sup>28</sup>*

When asked about the achievability of the \$2-billion industry by 2030 target, Professor MacLeod and Dr Donald Ross from IMAS stated:

**Prof. MacLEOD** - *The number instantly does not say, 'No, you can't do that' or 'Yes, you can'. We would have to say that in order to make a judgment on that, we would need more details about what you are planning to do and where you plan to do it.*

**CHAIR** - *That hasn't been shared with you by industry or government as both a proponent of that target and a supporter of that target?*

**Prof. MacLEOD** - *Not specifically, to my knowledge.*

**Dr ROSS** - *We know the industry is looking to move into and has already expanded into Storm Bay. Technology is advancing all the time. The aspiration, I assume, through investment in things like the Blue Economy CRC, is an aspirational goal. That aspirational goal would be contingent on the technologies and innovation developing with it so they can achieve it.<sup>29</sup>*

**Findings:**

7. The Department understands the \$2 billion growth target in the Salmon Industry Growth Plan to be aspirational and a policy decision by Government.
8. The Government's \$2 billion growth target was based on progress made towards the previous target of \$1 billion and from discussions with the fin fish farming industry regarding likely growth opportunities.
9. The Department regards the Government's \$2 billion fin fish farming industry growth target as sustainable.
10. The Department's public consultation material relating to the Salmon Industry Growth Plan did not provide a rationale for the growth target of \$2 billion.
11. The EPA had no role in assessing or advising on the Government's \$2 billion fin fish farming industry growth target.

<sup>28</sup> Jo-anne McCrea, WWF, *Transcript of Evidence*, 21 February 2020, pp. 31-32.

<sup>29</sup> Professor Catriona MacLeod and Dr Donald Ross, IMAS, *Transcript of Evidence*, 11 February 2020, pp. 39-40.

12. CSIRO was not involved in providing information for the Government's \$2 billion fin fish farming industry growth target.
13. Inconsistent views were presented between fin fish farming operators and also the Department as to the role the Industry played in setting the \$2 billion growth target.
14. Non-industry and community stakeholders were unclear as to how the Government's \$2 billion fin fish farming industry growth target was set.
15. There is support for a fin fish farming industry growth target that is transparently developed, sustainable and evidence-based.

## Development of the Grow/No Grow Map in the Plan

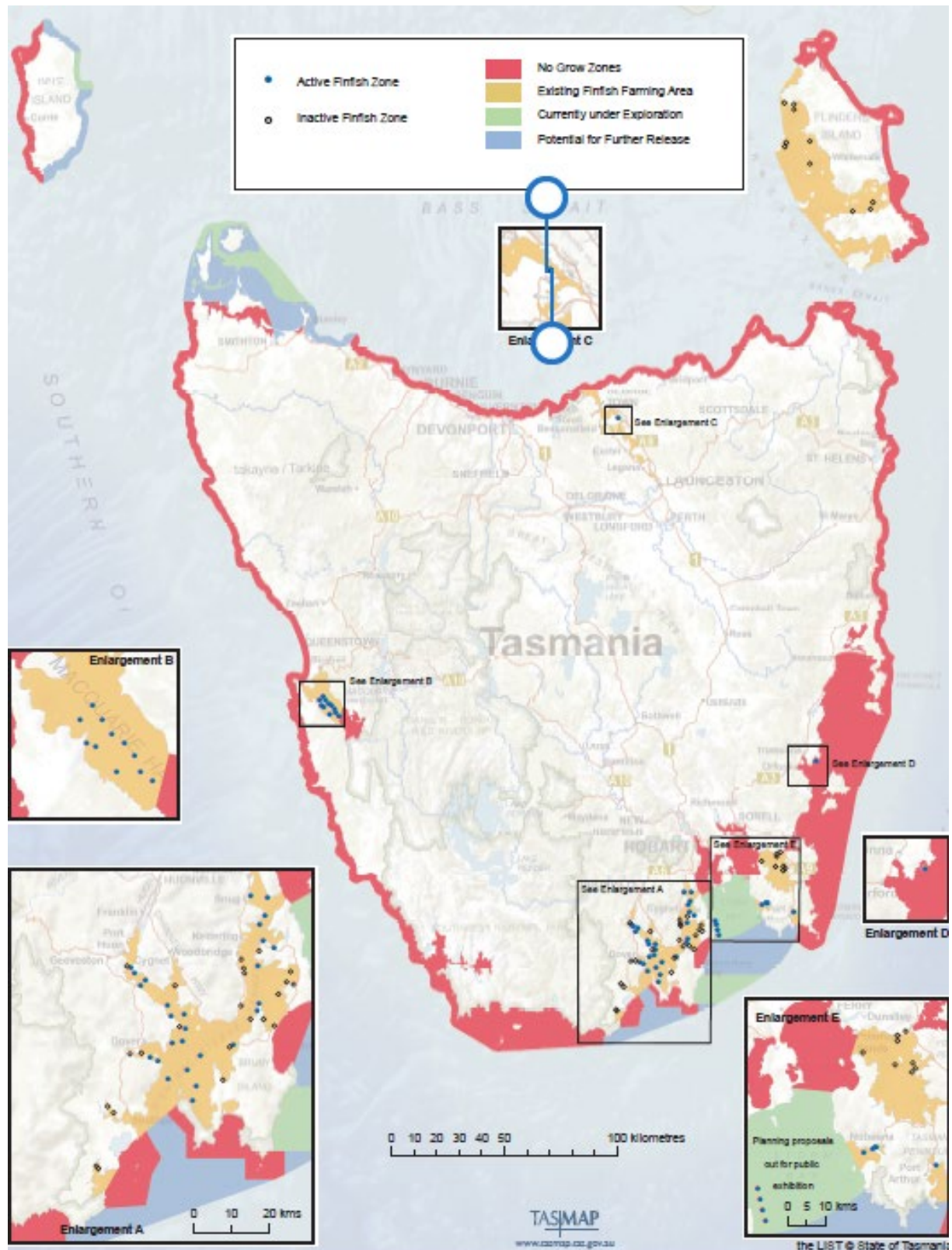


Figure 2: Proposed “grow” and “no grow” zones for finfish in Tasmania

(<https://dpiwwe.tas.gov.au/Documents/Proposed%20grow%20and%20no%20grow%20zones%20for%20finfish%20in%20Tasmania.pdf>)

The SIGP contains a map marking out Grow and No Grow zones around the Tasmanian coastline for future development of salmon farming, indicated on the map by red and blue shaded areas (see Figure 2).

In relation to the development of proposed 'grow' and 'no-grow' zones for finfish in Tasmania, Tim Baker, Acting Secretary, described the process and consultation undertaken:

**Mr BAKER** - *First, the salmon plan itself is not a planning document - it is a strategy document. It was never designed to be the final decision on whether, if an area were available for future growth, it would obviously still have to go through the full planning process. We used three broad steps in coming up with the map. The first one was by obtaining and incorporating advice across government and industry about what areas could be suitable or not suitable for marine farming based on the physical and environmental reasons, as you have just described.*

*The second was by talking to industry about its plans and where it considered it would be going to grow salmon and where it could grow it in a way that had strong environmental and biosecurity outcomes.*

*Third, we listened to the concerns of the community and where it felt marine farming was not appropriate for a range of reasons. If you look at what happened, the draft plan went out with a map; we did the full consultation - we went out to the public and then the map was changed to reflect the feedback that we received. They were the steps, as simple as that.*

**CHAIR** - *Was anything specifically changed in response to the community feedback you had about where or -*

**Mr BAKER** - *There were things specifically changed in response to the feedback we received.*

**CHAIR** - *You can't tell me whether specific community feedback was provided at that point about where sites should or shouldn't be that then influenced where they ended up on the final version of the map?*

**Mr BAKER** - *What I can tell you is that feedback was received from the community and a range of stakeholders and, as a result of that feedback, the map changed.<sup>30</sup>*

In relation to the development of the map showing grow zones, Frances Bender, CEO confirmed Huon did not have any input:

**Mrs BENDER** - *I have no idea where the map came from. If I am being very frank, the map actually caused more community angst. I agree that a map should have been developed after further investigation of where the industry physically can be.*

...

---

<sup>30</sup> Tim Baker, DPIPWE, *Transcript of Evidence*, 17 February 2020, p. 5.

*...It has created more angst for us because people think it is the industry saying we want to have this and we want to go there. That is not the case. It certainly is not the case for my company.<sup>31</sup>*

Mark Ryan, CEO Tassal, made the following comment in relation to Tassal's view of the map in the SIGP:

**Mr RYAN** - *One of the things we were advocating at the time before the growth plan came out was the whole concept of spatial planning - to look at this not just from an area where you could grow fish but to look at communities in areas where industry was wanted, and where we could continue to grow and prosper. ...We have always taken that really seriously, but we said to both sides of government, 'You need to do this process in an informed way. You need to go out to the communities and engage with them.*

...

*... we thought the map that came out was probably too restrictive to industry and to a lot of the communities because many areas that might have been identified for growth actually were not able to be grown in from the fish side.<sup>32</sup>*

And further, Mr Ryan compared the process to his company's experience in Queensland:

*Government put out a map that really did not have a lot of relevancy to anyone. I guess what we experienced with Queensland was they did a whole spatial planning exercise - they went up and down the coast of Queensland. They went to all the communities; they identified both adequate areas to grow and then also adequate areas that communities wanted industry, and they had a match. You are not always going to get a perfect match, but it is like looking for the least risk from that. The process Queensland went through was what we thought would have been the better process to go through. Again, because we had not really gone through a whole lot of the process for the Tasmanian growth plan, we did not quite understand all the bits that had been done, but we felt more engaged with the Queensland process than we did with the Tasmanian process, which has seen us expand into Queensland, into prawns, and we are doing that in way in which we have complete community support and understanding - there is a want to have us in those areas.<sup>33</sup>*

Mr Ryan made the following further comments in relation to the red and blue areas on the map:

**Ms FORREST** - *... Are you actively seeking to have other areas opened up in that area or areas marked red at the moment? We have talked about a proper process to do*

---

<sup>31</sup> Frances Bender, Huon Aquaculture, *Transcript of Evidence*, 21 February 2020, pp. 80-1.

<sup>32</sup> Mark Ryan, Tassal, *Transcript of Evidence*, 30 November 2020, p. 4.

<sup>33</sup> Mark Ryan, Tassal, *Transcript of Evidence*, 30 November 2020, p. 5.



*that, which seems to be mapping the first one, but if a proper process is to be put in place, would you be actively seeking to look at other areas?*

**Mr RYAN** - *We have told government that it needs to come back to us now and clearly articulate to us where the areas might be and the work that would be done in terms of doing that because for us they have put out a map that has red around some areas, so for us those red areas are red. We are not seeking to grow in those red areas. If government came back to us and said 'We have now convinced the community in that area, or we have done this and now it is a process that can be undertaken to go forward', we would have to understand what that looked like before we would even think about moving forward.*

...

**Ms FORREST** - *I will clarify. The question is: if you felt there were other areas you would like at least to explore in terms of options, what is the process from here? ...*

**Mr RYAN** - *I am really unclear of the process from our perspective, Ruth, because what sits there at the moment for us is that we have a map with red on it and we can't see past that at the minute. We have a strategic plan out to 2030. We are talking about 45 000 tonnes of growth by 2030 and, based on the leases we have in place, including making West of Wedge operate as we gradually go through that. That is where our planning is at. We haven't looked at anything further than the 45 000; at the moment we are growing about 40 000 to 41 000 tonnes. That gives you an idea - over the next eight years, we are only looking at another 4000 tonnes, which, if all the leases can be optimised, would mean we would get to that with West of Wedge.*

**CHAIR** - *You can achieve what you have planned for growth within your existing leases?*

**Mr RYAN** - *Out to 2030. Past that point, we haven't even looked at. Again, we have said government has put out a map; that is how the map sits - our growth is then limited to what's on the map and we haven't looked past that 45 000 tonnes, which includes a fully utilised West of Wedge.<sup>34</sup>*

Professor Catriona MacLeod, IMAS, confirmed IMAS's involvement in informing the 'Grow' and 'No-Grow' map included in the SIGP:

*We have been, to my knowledge, only involved in that in the sense of the general context around the environmental carrying capacity, as it were, what areas might be suitable and might be unsuitable. My understanding is that as sites are explored, information on them is gathered. We have not been directly involved in exactly how the areas were derived within the sustainable growth plan, other than in general conversation.<sup>35</sup>*

---

<sup>34</sup> Mark Ryan, Tassal, *Transcript of Evidence*, 30 November 2020, pp. 6-7.

<sup>35</sup> Professor Catriona MacLeod, IMAS, *Transcript of Evidence*, 11 February 2020, p. 39.

Nicole Sommer, Principal Lawyer EDO highlighted the importance of spatial planning in determining sustainable growth areas for the industry:

*We have made recommendations about spatial planning, which is what needs to happen. It's a very opaque planning term but it means you identify areas where you can have salmon farming and there will be limited environmental risk and adverse community outcomes by doing the science in identifying those locations. Then we should identify what are no-grow areas and that should guide how the industry develops. That science needs to be done upfront and that's not how the industry growth plan operates, to my understanding.<sup>36</sup>*

Claire Bookless, Litigation Lawyer EDO added:

*The growth plan identifies areas for proposed growth around King Island, for instance, and the north-east; there are areas that have been identified as no-grow areas, the east coast being the most notable of those, but we would say there needs to be integrated assessment, planning and decision-making around not only where the ideal growing conditions for salmon are but the other contributing factors that lead to a successful and sustainable industry.<sup>37</sup>*

When asked for comment on the 'grow' and 'no-grow' zones, Ms Bookless and Ms Sommer responded:

**Ms BOOKLESS** - *There hasn't been any public release of information about the identification of those areas. One suspects, though, that the areas of potential grow zones have been identified by the industry itself as areas probably most likely to support a salmon farming industry. Obviously, most of the west coast would be out of the range of salmon farming due to conditions, so there are a lot of constraints necessarily on salmon farming and one suspects they have informed the identification of those areas.*

*Obviously, there was a great community outcry around the expansion of salmon farming up to Okehampton Bay and that is currently the only legislated no-grow zone. No other no-grow zones have been prescribed in legislation to date.*

**Ms FORREST** - *The information DPIPWE put out some time ago now about the red coastline where it is a no-grow zone is just indicative. There is only one area that is legislated.*

**Ms BOOKLESS** - *That's right. Apart from the Mercury Passage, except Okehampton Bay itself, that is the only place that has been prescribed as a no-grow zone.*

---

<sup>36</sup> Nicole Sommer, EDO, *Transcript of Evidence*, 11 February 2020, p. 3.

<sup>37</sup> Claire Bookless, EDO, *Transcript of Evidence*, 11 February 2020, p. 3.

**CHAIR** - *Your understanding is that while the map that shows those areas have a lot of red areas, they are not necessarily protected as such - they are just proposed as not for finfish farming?*

**Ms BOOKLESS** - *That's my understanding, but, as I say, there hasn't been a public release of information about how they have arrived at these locations.*

**Ms SOMMER** - *I would just add that this is indicative of the issue we see, which is that there might be policy released or statements made, but there are no legislated criteria and there is no legislated certainty about how decisions are made. That's the core issue we've identified.<sup>38</sup>*

According to Chris Wells, resident of Tasmania with experience in aquaculture development planning in South Australia:

*The Tasmanian Government aquaculture growth plan is essentially a map of the state with red dots for sites stuck all over it, except for parts of the east coast where people's objections have run too strong. The only considerations in this plan are convenience for the business owners, farmers and politics.<sup>39</sup>*

Mark Bishop, professional fisherman, described an example of where local knowledge was not utilised in the growth plan maps:

*I've seen the salmon so-called sustainable industry growth plan and it's a mystery to me why they're not further along, for instance, off Ulverstone. Stanley is a point where we get a very strong north-easterly wind that develops regularly in the summer and if it's blowing 20 knots north-easterly in Stanley I can with 90 per cent confidence go to Ulverstone or Devonport and fish for the day and have 5 knots of wind. To my way of thinking it would have less impact on their pens.<sup>40</sup>*

**Findings:**

16. The Department regards the Salmon Industry Growth Plan, including the Grow/No-Grow Map, as a strategy document and is not designed to be definitive on future growth areas.
17. The Salmon Industry Growth Plan Grow/No-Grow Map gave rise to community concern due to the perception it was a definitive planning document.
18. A comprehensive marine spatial planning process was not undertaken to identify areas suitable for sustainable industry growth.
19. There is no legislative basis for comprehensive marine spatial planning, including the identification and planning of future industry growth areas.

<sup>38</sup> Nicole Sommer and Claire Bookless, EDO, *Transcript of Evidence*, 11 February 2020, pp. 4-5.

<sup>39</sup> Chris Wells, *Transcript of Evidence*, 12 February 2020, p. 29.

<sup>40</sup> Mark Bishop, *Transcript of Evidence*, 24 February 2020, p. 17.

## Calls for a moratorium on industry expansion

Numerous submissions received by the Inquiry expressed support for a temporary pause on further growth of the industry until such time that concerns raised in relation to the process used to identify the \$2 billion growth target and the proposed 'grow' and 'no-grow' zones for growth of the industry were resolved.

Christine Coughanowr, independent scientist, stated the following regarding her call for a pause on growth of the industry:

*Again, I'm not saying shut down the salmon industry in any way. I'm saying we have an existing industry but there are clearly some issues with it. Let's sort those out. Let's make sure that we have the science, the biosecurity, the regulations to manage that sustainably before going to a very significant expansion. Doubling production in a period of 10 years is fairly extreme.<sup>41</sup>*

John Redgrove in his submission, stated:

*I also believe that there should be a moratorium on any further expansion of salmon farming in Tasmania until all environmental concerns are addressed and resolved satisfactorily. Until these and other concerns are addressed the Tasmanian Government's top priority actions [listed under the heading] 'Maintaining public confidence in the salmon industry', Source: A sustainable industry growth plan for the salmon industry P. 5. These goals will not be attained.<sup>42</sup>*

Chris Wells stated:

*What I would like to see from this inquiry is a moratorium on any expansion of fish farming in this State until the following occurs:*

- *Site selection to include issues of tide, current, wave activity as well as convenience to farmer. This site selection to be undertaken by independent professionals and not by the business owners.*
- *Federal Environment department to place water quality inspectors on all sites.*
- *Renegotiation of leases to include net depth and stocking density limits based on a formula including tide, depth and current. Lease costs to be addressed after densities agreed.*
- *An inquiry into the conduct of all senior public servants and Ministers involved in the oversight of the industry over the past twenty five years.<sup>43</sup>*

According to Allison Stubbs's submission:

---

<sup>41</sup> Christine Coughanowr, *Transcript of Evidence*, 17 February 2020, p. 43.

<sup>42</sup> John Redgrove, 2019, *Submission #5*, p. 5.

<sup>43</sup> Chris Wells, 2019, *Submission #6*, pp. 1-2.

*Concerned groups and citizens of Tasmania are calling for a HALT to salmon farm expansion until serious governance issues have been addressed.*<sup>44</sup>

Dr Sharon Moore called for:

*A moratorium on new leases and new pen placements until an independent scientific analysis of environmental impacts of existing leases is carried out and baseline studies in proposed new lease areas.*<sup>45</sup>

The Tasmanian Greens, in their submission, supported a pause on growth:

*The Greens recognise the current marine farming planning and monitoring framework is not fit for purpose. As such, a moratorium must be placed on the approval of new fish farms or expansion of existing fish farms until such time that the framework is significantly overhauled.*<sup>46</sup>

**Finding:**

20. Submissions received by the Inquiry expressed support for a pause on expansion of the fin fish farming industry until such time that issues and concerns raised are addressed.

**Recommendation 4**

There be no further expansion of the fin fish farming industry in the form of new farming areas or increased stocking limits until the revised Salmon Industry Growth Plan is finalised (refer to Recommendation 1).

---

<sup>44</sup> Allison Stubbs, 2019, *Submission #11*, pp 2-3.

<sup>45</sup> Dr Sharon Moore, 2019, *Submission #73*, p. 2.

<sup>46</sup> Tasmanian Greens, 2019, *Submission #101*, p. 1.

## TOR 1 (a) Data Collection and Publication

The Marine Solutions Tasmania (MST) submission outlined the importance of data collection and analysis in the effective sustainable development and management of marine resources:

*Data collection, analysis and informed interpretation is crucial for characterizing our marine environment, and assessing change within that environment. Gathering robust environmental data to inform investigative site assessments, pre-farming baselines, and to assess change caused by anthropogenic impacts of farming activities is critical to allow effective sustainable development and management of our marine resources.... Data collection and publication has resulted in a significant amount of information available to assist the understanding of waterway health. This information is based on data collected from a variety of sources, and by a variety of methods, and is utilized by companies for decision making, regulators for compliance, and the public for information.*

...

*Much of this monitoring has been part of large, multi-year projects which contribute to long-term data sets that are peer reviewed and cross institutional boundaries. A large portion of this monitoring is undertaken by independent businesses that have a strong understanding of Tasmanian issues, and existing relationships with other stakeholder groups. Monitoring programs are designed according to best international practice while maintaining relevancy to the specific issues in the Tasmanian marine environment. The integrity of the data is central to building and maintaining community trust in the interpretation of that data.<sup>47</sup>*

According to the Tasmanian Alliance for Marine Protection (TAMP) submission, there is a current failure to provide timely, independent and scientifically validated information regarding the impact of fish farming on marine ecology:

*Genuine efforts need to be made to force fish farms to release timely information about all their activities, including fish escapes, disease, mortalities, effluent, antibiotic use, seabed changes, debris from operations and any other impacts on communities, the environment and safe navigation. This should be enforced by legislation. Government processes need to be simplified and easily accessible to public scrutiny. A one-stop reporting shop should be established to report concerns and breaches of regulations and to keep public records of those concerns, breaches and enforcement practices. The application of commercial-in-confidence should be abandoned when the activities are carried out on public waterways and lands particularly as so many of the activities of salmon farms impact surrounding areas.<sup>48</sup>*

The submission provided by community member Jennifer Hadaway indicated the community perception is that data is inconsistent, inadequate or poorly displayed:

---

<sup>47</sup> Marine Solutions Tasmania, 2019, *Submission #99*, p. 5.

<sup>48</sup> TAMP, 2019, *Submission #42*, p. 6.

*Ordinary Tasmanian citizens want data that explains the where and how of the industry now and what expansion really means. ....*

*Information seems inconsistent, poorly displayed, often inaccurate and out of date, not scientifically based and at times incongruous. It is impossible to compare or judge between companies. Information is under different topics although it might be about similar matters. Information is often in pseudo-scientific language which is hard to comprehend. Information often appears without reason or explanation about where it has come from or why it is there and is quite commonly without a reference or a date. It is also impossible to know what government regulations or controls are applicable to any given circumstance outlined on the web-sites.*

*... Release of assessment of and reporting on readily available data, particularly data updates of environmental impacts, would do much to develop some faith in this government and its questionable support for this environmentally unsustainable industry.<sup>49</sup>*

The submission provided by Rebecca Howarth indicated a perception that data collection may not be currently undertaken independently of industry:

*Previously, salmon farming companies were required to hire independent monitoring companies such as Aquenal. Nowadays, the companies are allowed to carry out much of their environmental monitoring themselves. My belief is this needs to be an external and independent process. Baseline data collection prior to salmon farm leases being granted is minimal and poor.<sup>50</sup>*

The practice of engaging independent organisations to carry out the existing and proposed broad-scale environmental monitoring programs was reinforced by some witnesses, for instance Aquenal which stated:

*It is advantageous to have experienced independent scientists analysing and interpreting the data because they are at arm's length from economic imperatives. These principals are central to maintaining public confidence in the salmon industry – a key plank of the Growth Plan. Monitoring requirements such as the Broadscale Environmental Monitoring Programs (BEMPs) currently recognise these principals by stipulating that 'monitoring required by this licence schedule must be undertaken by a consultant'. Areas currently under exploration identified in the Growth Plan, such as Storm Bay, currently rely heavily on IMAS and local marine consultancies for environmental surveys and monitoring programs. Aquenal recommends the continuation of the engagement of independent environmental practitioners in future broad scale monitoring programs. Aquenal is responsible for the collection, curation, analysis, dissemination and reporting of data collected under baseline environmental assessments and a range of ongoing monitoring programs and surveys.<sup>51</sup>*

---

<sup>49</sup> Jennifer Hadaway, 2019, *Submission #104*, pp. 2-3.

<sup>50</sup> Rebecca Howarth, 2019, *Submission #84*, p. 2.

<sup>51</sup> Aquenal, 2019, *Submission #85*, p. 4.

Sam Ibbott, MST stated:

*... we are consultants and much of our work is for clients who wish to answer a particular question and who do not or only partly release the data and reports to the public record.<sup>52</sup>*

The CSIRO submission pointed to its data collection and modelling work, and the opportunity for regulation of transparency and timely release of industry monitoring and compliance data:

*CSIRO scientists seek to publish their findings in project reports and reputable peer-reviewed journals, and this provides an evidence base to support decision makers and regulators.*

*Our world-class models rely on both scientifically collected and industry data and we have a strong history of collaboration for data collection in joint research projects.*

*Additional data on environmental conditions are collected by industry as part of their operational monitoring and regulatory/compliance requirements. There is an opportunity for greater transparency and more timely publication of industry monitoring and compliance data. Industry data are often held confidentially (as is standard in many industries), and some is published on company websites. Some of this confidential data practise is likely in response to a history of negative media attention and within-industry commercial competition.*

*Other aquaculture farming regions outside Australia regulate the release of industry-collected data. In Scotland for example, the regulatory agency (SEPA) report industry monitoring and compliance data on a public website for transparency in environmental condition and associated decision making. The Tasmanian regulator could follow this route. With resources, CSIRO could also deliver data systems to support real-time environmental reporting.<sup>53</sup>*

According to Christine Coughanowr, independent scientist, the current situation with respect to both data collection and publication is not consistent:

*Information is variously collected by industry consultants, the EPA and IMAS scientists. Associated reports are then published in various places and formats, and in many cases are not publicly available at all. Older MFDPs/leases typically have less available information, newer ones have more, but this is still very inconsistent between sites and operators. Information on salmon biomass, pollutant loads (e. g. bioavailable nitrogen) and localised impacts (impacts at 35m compliance boundary) is rarely available, and requests for this information have been denied on the basis of Commercial-in-Confidence, or diverted through onerous Freedom of Information processes. These are public waterways, and as such, the community should have a right to this information.<sup>54</sup>*

---

<sup>52</sup> Sam Ibbott, Marine Solutions, *Transcript of Evidence*, 20 October 2020, p. 2.

<sup>53</sup> CSIRO, 2019, *Submission #90*, p. 6.

<sup>54</sup> Christine Coughanowr, 2019, *Submission #67*, p. 3.



Ms Coughanowr also suggested that there be more stringent regulated requirements on the publication of identified environmental monitoring data related to the industry:

*Publicly available Annual Environmental Reports (AERs) should be required for all fish farms, as is normally required for other large-scale premises, including industries, tips and sewage treatment plants. These AERs should include information on operations, pollutant loads and their management, plans for future improvements, as well as monitoring results. Information should also be provided on e.g. antibiotic and chemical use/discharges, in situ net cleaning, discharges from desalination operations, as well as fish mortalities and escapes.<sup>55</sup>*

The Neighbours of Fish Farms (NOFF) submission expressed concern regarding the websites in providing standardised information to the community:

*In looking at these five websites involved in salmon farming in Tasmania, we have considered only the lowest of the four commonly accepted levels of community engagement: the provision of information. This has been defined as providing the community with balanced and objective information to help them understand a problem, alternatives, opportunities or solutions. "*

*Our analysis in this section of our submission shows that each site fails to meet this minimal standard in many ways, and taken together, the five sites present an inconsistent, non-standardised, confusing mish-mash of information, with little accessible or usable quantitative data. This cannot and does not foster community trust.<sup>56</sup>*

The NOFF submission provides a useful website analysis, which can be found at Appendix B of this report.

Wes Ford, Director EPA noted the inadequacy of the current website and indicated the website was in the process of redevelopment:

**Mr FORD** - *...We have a website that currently doesn't lend itself to any of that so rebuilding our website is a priority for us. But that is not something that happens overnight. We have to completely redevelop our website to make information more available.*

**CHAIR** - *What's your expectation on the time line for that?*

**Mr FORD** - *Late next year. We are in the sausage machine and trying to get IT development done. Everyone is in the same sort of challenge around here.<sup>57</sup>*

---

<sup>55</sup> Christine Coughanowr, 2019, *Submission #67*, p. 4.

<sup>56</sup> NOFF, 2019, *Submission #41*, p. 10.

<sup>57</sup> Wes Ford, *Transcript of Evidence*, 8 September 2020, p. 87.

**Findings:**

21. Data collection, analysis and publication assist in the understanding of waterway health and are important for sustainable development and management of marine resources.
22. Data and information relating to the fin fish farming industry is collected by industry, the EPA, DPIPWE, independent consultants and scientific research institutions.
23. Data, information and associated reports relating to the fin fish farming industry may be either regulated, voluntary or independent and are published on a number of sites.
24. The publicly available data and information relating to companies and individual fish farm operations lack consistency.
25. Monitoring of the fin fish farming industry via cross-institutional, peer reviewed, multi-year projects contributes to long-term data sets, and provides an evidence base to support decision-makers and regulators.
26. Concerns were raised that monitoring, collection and publication of data is not sufficiently comprehensive, transparent and/or independent from industry.
27. Independent collection, analysis, interpretation and publication of data is regarded as integral to building and maintaining public confidence in the fin fish farming industry.
28. Currently, published data on the fin fish farming industry is not always presented on company or government websites in clear connection with the relevant regulatory requirement.
29. Publicly available data and information relating to Marine Farming Development Plans/leases is not consistent across older and more recent leases.
30. Data and information on salmon biomass, pollutant loads and localised impacts in relation to the fin fish farming industry is not always publicly available.
31. Public requests for information on biomass, pollutant loads and localised impacts have been denied on the basis of commercial-in-confidence, or diverted through Right to Information processes.
32. There is an expectation of timely public release of information relating to the fin fish farming industry, including fish escapes, disease, mortalities,

effluent, antibiotic use, seabed changes, and marine debris from operations.

33. Some large-scale industries, for example waste disposal and sewage treatment plants, are required to produce a publicly available Annual Environmental Report which includes information on operations, pollutant loads and their management, plans for future improvements and monitoring results.
34. The EPA intends to redevelop its website to make information on the fin fish farming industry more available.
35. It is reported that other aquaculture farming regions outside Australia stipulate and regulate the publication of industry data to a greater degree than occurs in Tasmania.

#### **Recommendation 5**

Require through legislation/regulation government disclosure of data and information on the operations of the fin fish farming industry to a degree that meets or exceeds better practice in other jurisdictions.

#### **Recommendation 6**

Review the basis on which fin fish farming industry data or information may be withheld from the public under a claim of commercial confidentiality.

#### **Recommendation 7**

Review the online data portal in partnership with all key stakeholders, including community, industry and research.

#### **Recommendation 8**

Expand the scope of the data in the online portal and ensure it is presented in a format that connects directly to regulatory requirements and is comparable over time and between industry stakeholders, including references to when and by whom it was collected.

#### **Recommendation 9**

Legislate/regulate that fin fish farming operators produce and make publicly available Annual Environmental Reports.

## Web Portal

The SIGP included the establishment of an independent web portal, to be hosted by IMAS, to present environmental data and information relating to the industry:

*The Government will also improve the transparency of information on the industry's environmental performance by the establishment of an independent web portal that will be hosted by the Institute for Marine and Antarctic Studies. The website will provide access to all environmental data and to as much production information as possible, subject only to not revealing genuine "commercial in confidence" information.<sup>58</sup>*

Similarly, the One Year Review<sup>59</sup> document included Action 10 which confirmed the portal was to be hosted by IMAS:

<p><b>10.</b> Collection of a wider range of environmental information, including real time data, and increased public access to relevant environmental information through an independent portal hosted by the Institute for Marine and Antarctic Studies (IMAS)</p>	<ul style="list-style-type: none"><li>• The new salmon industry data portal website will make publically available an increased range of information on relevant topics. This is expected by mid-2019.</li><li>• Environmental Licences that have been issued to companies are now publically available on the EPA website, along with more environmental information from across the industry.</li><li>• The three salmon companies have updated their own websites to feature an increased range of publicly available information.</li><li>• The EPA has commenced development of revised Environmental Standards to allow collection of a wider range of environmental information. Relevant information will be available on the new data portal website.</li></ul>
---	--

According to the DPIPWE submission:

*A key commitment of the Salmon Plan was increased transparency and accessibility of finfish marine farming data through the introduction of a web data portal. This data portal was released on 27 September 2019 and can be accessed at [dPIPWE.tas.gov.au/sea-fishing-aquaculture/salmon-farming-data-portal](https://dPIPWE.tas.gov.au/sea-fishing-aquaculture/salmon-farming-data-portal).*

*The portal provides a range of environmental, production and other metrics sourced from across DPIPWE and the Environment Protection Authority (EPA). It should be noted that some production information is commercial in confidence and cannot be released until the stock market has been advised of company results.*

*The information that has been reported on the web portal relates to the three finfish producers in Tasmania (Tassal, Huon Aquaculture and Petuna) noting, that as described above, each of these companies has associated consolidated entities*

<sup>58</sup> Sustainable Industry Growth Plan for the Salmon Industry, 2017, 2017, p. 21, <https://dPIPWE.tas.gov.au/Documents/salmonplan.pdf>

<sup>59</sup> One Year Review: Sustainable Industry Growth Plan for the Salmon Industry, 2020, p. 5. <https://dPIPWE.tas.gov.au/Documents/Salmon%20Plan%20-%20One%20Year%20Review.pdf>

*along with sublease agreements with other entities. The data shown on the portal is presented for individual Marine Farming Development Plans.<sup>60</sup>*

The Aquenal Pty Ltd submission stated:

*We strongly support the push for transparency within the Salmon Plan to maintain public confidence in the salmon industry (e.g. see Action 10 of the Growth Plan) and therefore strongly support the publication of all reporting emanating from environmental surveys and monitoring programs. ... We note that the data portal will be hosted by IMAS (see Action 10 of the One Year Review of Growth Plan) and we consider the continued engagement of experienced databased (sic) managers at IMAS as essential for ensuring well-constructed and well-maintained online databases for environmental information from the Salmon Industry.<sup>61</sup>*

According to the WWF submission:

*The Growth plan included a commitment to develop a data portal to enable all stakeholders to understand key data about the industry. While an independent web portal would increase transparency, it is important to ensure that the content and format of the portal is developed in consultation with the community and key stakeholders outside of industry (including the conservation sector) to ensure that information is delivered in a manner that is readily understood, digestible and relevant. WWF, with significant experience in both environmental management and community engagement, sought multiple opportunities to contribute to this process seeking input into this process for over a year and been consistently ... advised that it is being developed with industry.*

*Finally, the web portal is live and we note the following issues:*

- Graphs of environmental data are provided, however no guidance on how the data is collected or how to interpret this information. For all key monitoring data, Government should have clearly defined acceptable threshold. These many [sic] be absolute levels, or based on prescribed trends (e. g. no more than x% increase over 12 months). However there is a complete absence of narrative around the significance of the parameter or the results.*
- Some sections display graphs which compare ... industry data and EPA collected data. These graphs are visually difficult to interpret with many lines and similar colour-use the cause of this. Nonetheless, the results seem to suggest that there are discrepancies between these two data sets, but not comment or guidance on the significant [sic] of this data. Documentation of the deviation between the data sets should be provided.*
- The timeframes are also misleading. Data is provided for the current years and previous years only to 2017. Of course, this misses the significant impacts observed in 2016. But also, it is important to contextualize the data*

---

<sup>60</sup> DPIPWE, 2019, *Submission #221*, p. 6.

<sup>61</sup> Aquenal Pty Ltd, 2019, *Submission #85*, p. 4.

*against a longer time set, at minimum share pre-salmon farming levels of the environmental parameters.<sup>62</sup>*

According to Christine Coughanowr:

*The proposed Salmon Farming Data Portal website has been significantly delayed, and finally went on-line in late Oct/early Nov 2019. This has been hosted by DPIPWE, rather than through an independent portal hosted by IMAS, as intended. Despite several enquiries, no input was sought/welcome from the community about what information they would like to have access to on this portal. While the new portal provides some information about compliance, this is mostly in the form of Y/N answers, which does not address community concerns about such issues as nutrient overloading, loss of amenity and biodiversity, etc. Links to Environmental Licenses (ELs), BEMP reports and other scientific reports are not provided directly, but must be accessed through other platforms (e. g. the LIST, EPA Water Section, IMAS). The proposed Salmon Scorecard seems to be missing in action altogether. Altogether, this is a very disappointing outcome.<sup>63</sup>*

The Institute for Marine and Antarctic Studies (IMAS) submission clarified the subsequent decision for DPIPWE to host the portal:

*The website will provide access to all environmental data and to as much production information as possible, subject only to not revealing genuine “commercial in confidence” information. There has been considerable discussion between industry and government regarding just what this portal might look like, and what data it should contain, as a result DPIPWE has determined that they will host a website to provide access to all regulatory compliance data, and that is currently under construction.<sup>64</sup>*

Fionna Bourne, DPIPWE, provided further clarification regarding the decision for DPIPWE to host the portal, rather than IMAS as originally intended:

*The decision was a decision of the government of the day. When it started to look at the implementation of developing a salmon portal, it realised, and it was clear, that there was already in the public domain a significant amount of information from the EPA on its website about environmental compliance and management.*

*IMAS had quite an extensive website of its own about where its science was at. The gap, what was missing, was more in the operational and regulatory space. The decision was to increase the transparency around there, because those are the data that needed to be made more visible. As the data rest with the department, it was more appropriate that the portal rested with the department as well.<sup>65</sup>*

---

<sup>62</sup> WWF, 2019, *Submission #94*, p. 21.

<sup>63</sup> Christine Coughanowr, 2019, *Submission #67*, pp.3-4.

<sup>64</sup> IMAS, 2019, *Submission #100*, p. 5.

<sup>65</sup> Fionna Bourne, DPIPWE, *Transcript of Evidence*, 17 February 2020, p. 16.

Tim Baker and Fionna Bourne, DPIPWE, made the following comments when questioned about the data available and design of the portal:

**Ms FORREST** - *...One of the problems identified by witnesses at our previous hearings and in the submissions is that the data are not necessarily comparable.*

...

*Do you have a comment about that, and are there actions to be taken to address those concerns?*

**Mr BAKER** - *I guess this is another one of those ones where we are all about continual improvement. We have the data up; we have met the requirement. Are there ways we can improve the data and how they are displayed? Absolutely we can, and we will continue to work through that as we go.*

*It is not a 'set and forget'. I have read most of the submissions. On the information I saw in there, I think there is opportunity for us to look at how we can improve the dataset. The big milestone was getting the data up there, which we have done now. Now Fionna and her team will be progressively improving those data, based on the feedback that came back through this process and also the feedback we have received directly.*

*It is certainly not the intent, and I wouldn't want anyone to think that it is the intent, of the department to confuse or to make it difficult. There are a lot of data and a lot of data being put up there. As we go, we will continue to improve the way we display it and the consistency of the data sets.*

**Ms BOURNE** - *I think Tim has covered it. In designing the portal, we looked at how best we could try to break down what is quite a complex dataset. Which is why, when you look at the portal, some of the data are reported by way of plan area because we thought that was most appropriate, and it was the easiest to understand and gave a significant level of detail.*

*The others are reported in a more industry-wide area for various reasons, including some commercial sensitivity reasons and needing to make sure that in providing those data we don't in any way compromise the companies from their respective reporting requirements to the ASX, for the companies that are listed.*

*That is then provided in more industry-wide, holistic data rather than at the plan area. We did look at a very complex dataset.*

...

**CHAIR** - *I'm interested in what input you sought and from whom, in determining what data you would present on the portal.*

**Ms BOURNE** - The data we presented on the portal - as I said, we identified the gap - were the regulatory data. The missing data were data reported to the department by way of their licence conditions. That is the information that went on to the portal.

**CHAIR** - Have you mapped out then the data and the different sites in which it currently sits for public access? Do you have that mapped out in some way that also could be a resource for people to navigate and understand where to find different aspects of data relating to the industry?

**Ms BOURNE** - We don't have that publicly available, no. As Tim said, we are making efforts internally to try to improve our data; it's a continuous improvement. We are also looking at ways we can have a backend black box of the different data inputs that come in so it can go out in a more unified way. That is more of a technical internal data management process that we are going through.<sup>66</sup>

At a further hearing, Tim Baker and Deirdre Wilson, DPIPWE, provided an update on the portal:

**Mr BAKER** - We have made a quantum leap in getting the portal up. We have put a large amount of data on to that portal. Have we still got more work to do? Absolutely.

*I remember talking about our continual improvement methodology when I talked about this last time. There is absolutely more data that can go on the portal that should go on the portal. In the time since we have last talked, we have done a lot about making sure the data that's going up there is accurate and timely. But I would be the first person to say that there's more work to be done in actually getting more data onto that portal. I also ask you to acknowledge that we've made a big step in actually getting that data up there.*

*In terms of why it's in the department and not in the EPA, really I just think it's a matter of resourcing. So, we have the big department, and Deidre can talk to this, with a large team EPA is a lot more nimble and separate, so that was the logic behind it. As soon as we get those changes made we'll be looking to put that data up onto the portal.*

*I don't know if you want to add anything, Deidre?*

**Ms WILSON** - ... my understanding was the assessment was made at the time that there was a gap analysis done of what information was on the EPA website and what was also readily available on the IMAS website, FRDC. The gap that remained was around regulatory information.

*As we collect the regulatory information, we are actually the appropriate repository for that data and the appropriate entity to understand what can and cannot lawfully be used and presented publicly. I take the point around what data can and can't be presented does come down to what lawfully you can do at a point in time, but as*

---

<sup>66</sup> Tim Baker and Fiona Bourne, DPIPWE, *Transcript of Evidence*, 17 February 2020, pp. 16-7.



noted, there are obviously some moves to consider what data can be made more readily available.<sup>67</sup>

**Findings:**

36. A key commitment of the Salmon Industry Growth Plan was increased transparency and accessibility of environmental data and information through the development of a portal.
37. Scientific consultants to industry supported a portal hosted independently by IMAS.
38. The online data portal originally proposed in the Salmon Industry Growth Plan and its one-year review, was to be independently hosted by the Institute for Marine and Antarctic Studies (IMAS), however it was subsequently decided DPIPWE would host the portal.
39. Government consulted with industry in regard to the portal and the data it should contain, however community and non-industry stakeholders were not consulted.
40. The portal was originally planned to provide access to all environmental data and as much production information as possible (excluding commercial-in-confidence information), however the DPIPWE-hosted portal focuses solely on regulatory compliance data.
41. Some stakeholders consider the portal has not fulfilled the original commitment in the Salmon Industry Growth Plan.
42. DPIPWE regards the portal to have met the requirement committed to in the Salmon Industry Growth Plan.
43. DPIPWE acknowledges that the portal can be improved, including the dataset it contains and the display and consistency of the data.

---

<sup>67</sup> Tim Baker and Deirdre Wilson, DPIPWE, *Transcript of Evidence*, 20 October 2020, p. 36.

## TOR 1(b) progress in the development of an industry-wide biosecurity plan

### Overview

The DPIPWE submission provided an overview of biosecurity planning, including work by Biosecurity Tasmania to develop a salmon industry Biosecurity Program with zone-specific biosecurity standards:

*With the commencement of the Biosecurity Act 2019, a new regulatory regime has been introduced to address disease introduction and transmission concerns.*

*The objectives of the Biosecurity Act 2019 are:*

- to ensure that responsibility for biosecurity is shared between government, industry and the community;*
- to protect Tasmania from threats posed by pests and diseases to land and water-based industries and environments, public health and public amenities, community activities and infrastructure;*
- to provide a robust and fair regulatory framework for biosecurity in Tasmania that is based on sound risk assessment and evidence;*
- to give effect to State, national and international biosecurity agreements and strategies, such as the Tasmanian Biosecurity Strategy;*
- to facilitate the trade of Tasmanian produce by ensuring it meets national and international biosecurity requirements; and*
- to promote compliance with a 'general biosecurity duty' through emergency preparedness, effective enforcement measures, and communication and collaboration between government, industry and the community.*

*As framework legislation, the Biosecurity Act 2019 sets out the overarching legal concepts, principles, functions, and legal machinery to support biosecurity management in Tasmania. Biosecurity Tasmania has begun work in relation to the development of a salmon industry biosecurity program and has assessed the enabling provisions of the Biosecurity Act 2019 in relation to regulation of biosecurity in the industry. Following further consultation with the industry, a Biosecurity Program will soon be established that will improve the overall biosecurity of all salmonid farms in Tasmania with respect to managing infectious diseases of salmonids and associated aquatic pests. This will be achieved through a series of zone-specific biosecurity standards imposed under the program that are designed to reduce biosecurity risks between growing regions, year classes, operators, and individual farms, where practicably possible.*

*These biosecurity standards will protect the industry from the risks posed by the introduction, establishment and spread of aquatic biosecurity risks (pests and disease pathogens) that have an adverse effect on fish health, welfare and productivity, and help to protect the wider environment from those biosecurity risks by: a. Minimising the risk of introduction of biosecurity risks; b. Minimising*

*the risk of spread of biosecurity risks; and c. Minimising the impact of endemic, introduced or new and emerging biosecurity risks.*<sup>68</sup>

Dr Lloyd Klumpp, Biosecurity Tasmania, appearing before the Inquiry provided a chronology of the process regarding the development of the Biosecurity Plan which commenced in 2014.<sup>69</sup>

Dr Klumpp outlined the next steps for progressing the regulations to give effect to the biosecurity standards:

*We are hoping for June [2020] but, understanding the regulatory process, there may [be] regulatory impact statements required and other delays that result from the consultation process or from the legislative process... One of the advantages of a program is that the program will be enabled by regulations which are fairly straightforward. That shouldn't take long. That's about naming up the biosecurity zones, for example, that the program refers to. The actual program is then signed off by the minister and the standards within the program are signed off by the minister to become law.*<sup>70</sup>

The IMAS submission outlined biosecurity farm management practices informed by global research and best practice:

*IMAS was a founding partner and integral participant in the 2018 Global Salmon Symposium (GSS) (Carter et al. 2019) and helped to co-ordinate research discussions throughout the meeting. At this symposium biosecurity was one of three critical issues which were discussed as having the potential to make or break the industry.*

*A number of recommendations for improved biosecurity practices were identified as part of the GSS:*

- *Single cohort stocking and fallowing periods between cohorts;*
- *Fallowing protocols for the pens, sites and regions and including regulation of protocols;*
- *Spacing of farms with guidelines drawn from international experience, for example 5 km minimum;*
- *Single owners within region (i.e. company separation) or ensuring stocking is coordinated between different companies in shared region;*
- *Mortality removal and disposal protocols;*
- *Biosecurity training, including regular refreshers and updates, for all staff;*
- *Tracking and management of any movement between pens or sites including fish, vessels, equipment, people; and*

---

<sup>68</sup> DPIPWE, 2019, *Submission #221*, pp. 9-10.

<sup>69</sup> Dr Lloyd Klumpp, Biosecurity Tasmania, *Transcript of Evidence*, 17 February 2020, pp. 29-30.

<sup>70</sup> Dr Lloyd Klumpp, Biosecurity Tasmania, *Transcript of Evidence*, 17 February 2020, p. 31.

- *Management of ecological interactions with such possible vectors in seals and wild fish.*

*We feel that these quite clearly align with the stated aims of the Sustainable Industry Growth Plan, and as such advancement of knowledge in any area would inform management practices. Although IMAS has not been formally involved in developing the Biosecurity Blueprint, the summary of GSS discussions collated by IMAS has played a key role in generating the commitment to that initiative. The Atlantic salmon industry has been affected by a range of infectious diseases worldwide, many still absent from Australia. The international experience based on outbreaks of those diseases suggests that single management areas are most effective for biosecurity. Allocation of leases to more than one company in a farming area will require high level cooperation between companies, including open communication and timely exchange of information. Use of enclosed transport, for example wellboats to transfer fish between sites significantly improves biosecurity. Awareness of new pathogens, fast development of diagnostic tests and vaccines support the industry sustainability but cannot replace biosecure farm management practices.<sup>71</sup>*

The CSIRO submission supported the development of an industry-wide biosecurity plan:

*With regard to informing biosecurity management, CSIRO has recently delivered a comprehensive modelling and risk assessment information system to the Chilean Government environmental agency SERNAPESCA for strategic and tactical decision support and management of biosecurity issues in their salmon industry. This expertise is available to inform the strategic development of a salmon biosecurity plan for Tasmania.<sup>72</sup>*

Jen Fry, TSGA, outlined the importance of a strong biosecurity regime:

*The TSGA believes that a strong biosecurity regime is fundamental to both the existence and continued growth of our industry. We strongly supported the introduction of the Biosecurity Act and have worked to develop a collaborative industry and government biosecurity plan. It is critical that we learn from past mistakes and we want to make sure we can continue to supply a sustainable protein for Tasmania and the mainland, for Australia and the world for the future.<sup>73</sup>*

The Environment Tasmania submission stated there has been no information released to the public on the development of an industry wide biosecurity plan.

*This development process should include a credible stakeholder consultation process. Biosecurity laws should include a requirement for companies to disclose mass fish kill events and release details of antibiotic use, given the risks of antibiotic resistance spreading in the marine environment.<sup>74</sup>*

---

<sup>71</sup> IMAS, 2019, *Submission #100*, p. 9.

<sup>72</sup> CSIRO, 2019, *Submission #90*, p. 6.

<sup>73</sup> Jen Fry, TSGA, *Transcript of Evidence*, 24 February 2020, p. 46.

<sup>74</sup> Environment Tasmania, 2019, *Submission #12*, p. 2.

And further, made the following recommendations in relation to the Biosecurity Plan:

2. *An urgent stakeholder consultation process regarding development of an industry wide biosecurity plan; and*
3. *That biosecurity regulations require the industry to publicly disclose antibiotic use, mass fish kills and escape incidents.*<sup>75</sup>

According to Christine Coughanowr, ignoring or postponing the necessary biosecurity planning and implementation is a major risk for the Tasmanian salmon industry:

*The combination of multiple operators in close proximity, farming fish of different cohorts is a recipe for disaster. Tasmania has already experienced severe disease outbreaks such as the POMV outbreak in Macquarie Harbour that killed an estimated 1.35 million fish in 2018. More recently, a disease outbreak in salmon pens off Bruny Island resulted in the transfer of fish from Storm Bay to 'hospital pens' in Norfolk Bay, under emergency provisions. This caused widespread community concern and anger and has fuelled the increasingly polarised debate about the rapid expansion of the salmon industry in Tasmania. Nonetheless, biosecurity management to date has been largely voluntary, and a comprehensive State Government mandated biosecurity plan has not been completed.*

...

*In addition to diseases, biosecurity planning should include other likely causes of salmon mortality, including toxic algal blooms (e. g. Noctaluca), jellyfish, and warming ocean temperatures/ocean heat waves that reduce salmon resistance to disease. While this issue may seem to be primarily related to industry-driven self-interest, there are important implications for the wider community. In particular:*

- *'Emergency' transfer of sick or vulnerable salmon into 'hospital pens' in clean and sheltered waterways. This occurred in Norfolk Bay (Aug 2018) in an area critical to survival of the endangered Red Handfish, and with essentially no public consultation.*
- *Disposal of large fish kills. This has not yet been adequately planned for, as illustrated by the problems associated with disposal of fish from Macquarie Harbour following the 2017/18 fish kills there. Proactive planning is required to address this contingency, rather than an ad hoc response. Planning and management of disease and marine pests associated with movement of gear and water (wellboats).*

*Further expansion of salmon aquaculture should be postponed until rigorous biosecurity planning has been completed and implemented for all existing leases. This plan should be reviewed by independent experts, and should include clear prior arrangements for emergency pen movements (in consultation with the community), disposal of morts, and broader biosecurity management to prevent spread of introduced marine pests.*<sup>76</sup>

---

<sup>75</sup> Environment Tasmania, 2019, *Submission #12*, p. 2.

<sup>76</sup> Christine Coughanowr, 2019, *Submission #67*, pp. 1-5.

In response to a question taken on notice dated 15 April 2021, Tim Baker, Secretary DPIPWPE, provided an update on progress made in relation to the Industry Wide Biosecurity Plan:

*The process of developing an industry-wide Biosecurity Plan was delayed due to CoVID-19. Following consultation with the three salmon companies, Biosecurity Tasmania is currently finalising a Draft Biosecurity Plan in preparation for consultation with secondary stakeholders (for example, other aquatic industries/service providers) to commence in the second quarter of 2021. It is anticipated that following this secondary stakeholder consultation the Draft Biosecurity Plan will be released for public comment in the third quarter of 2021.*

*Regulations will be developed in parallel with these consultation processes and it is expected regulations will be finalised within this same timeframe (of third quarter 2021). It is intended for the Biosecurity Plan to be in operation by the end of 2021; noting this may be subject to unforeseen delays in response to consultation feedback and/or if it is determined that a regulatory impact statement is required.*

### **Industry action in absence of biosecurity plan**

In relation to biosecurity risk in the absence of a biosecurity plan, the Inquiry heard that industry is being proactive taking measures to reduce risk, including separation of year classes and fallowing periods.

According to Ruben Alvarez, CEO Petuna Aquaculture:

*We are doing very simple things that improve the biosecurity of the area. Basically, we receive all the smolt in one lease. We do the grow-out in another completely different lease and also, we have a fallowing period, which is to keep one farm completely empty without any fish for more than a year. That is probably the first time we do that in Tasmania and probably you not hear any bad news from Macquarie Harbour in terms of mortalities and stuff like that.*

*We are improving biosecurity. These concepts are considered in the biosecurity plan of the industry, were considered in the separation of year classes included there, which are good farming practices.<sup>77</sup>*

According to Frances Bender, CEO Huon Aquaculture:

*A key component of this company's ethos is making sure we have a comprehensive and effective biosecurity regime in place which is underpinned by government regulations and the new Tasmanian biosecurity act. Our commitment to achieving this outcome has been clearly demonstrated through Huon's preparation and public release of the Tasmanian Salmonid Industry Sustainability Assurance Framework which largely focuses on biosecurity matters. Huon also led the efforts*

---

<sup>77</sup> Ruben Alvarez, Petuna, *Transcript of Evidence*, 24 February 2020, pp. 32-33.

*to hold the global salmon conference in 2017, which was attended by highly recognised international government and industry experts on biosecurity.*

*This conference was instigated to highlight the importance of biosecurity for the Tasmanian salmon industry, and drive effective biosecurity practice and regulation into the future.<sup>78</sup>*

Colin Shepherd, DPIPW, made the following comments relating to industry action:

*I think the industry is being very proactive in this space. It is taking steps but, as Lloyd says, these things can take time. They are looking at year/class separation, single species on their leases, agreed fallowing times, agreed vaccination of all fish entering into the water - these sorts of things. I think they're being really proactive. The industry is doing a great job with regard to recognising the issue and taking positive steps to improve on the way they've done stuff in the past.<sup>79</sup>*

**Findings:**

44. The global fin fish farming industry has been affected by a range of infectious diseases, many still absent in Australia.
45. Tasmania has experienced disease outbreaks, including in Macquarie Harbour and Storm Bay.
46. International research and experience indicate that multiple fin fish farming operators in a single body of water can increase biosecurity risk.
47. Industry biosecurity arrangements have largely been managed on a voluntary basis between government and industry in the absence of a mandated biosecurity plan.
48. The 2018 Global Salmon Symposium provided recommendations relevant to improved biosecurity practises in Tasmania.
49. The *Biosecurity Act 2019* provides for the development of a Biosecurity Plan for the industry, enabled by regulations under that Act.
50. It was intended for the Biosecurity Plan to be in operation by the end of 2021.
51. Non-industry stakeholders have not been involved with the development of an industry wide biosecurity plan.

<sup>78</sup> Frances Bender, Huon Aquaculture, *Transcript of Evidence*, 17 February 2020, p. 66.

<sup>79</sup> Colin Shepherd, DPIPW, *Transcript of Evidence*, 17 February 2020, pp. 34-35.

52. Concerns were raised over the absence of biosecurity regulations in relation to antibiotic use, disease outbreaks, mass fish kills and escape incidents in the fin fish farming industry.

### **Recommendation 10**

Further expansion of the fin fish farming industry be postponed until the Biosecurity Plan has been completed and regulations are implemented and applied to all current farming operations.

## **Mass mortality as a biosecurity risk**

Questions and concerns regarding the management of mass mortality events in the salmon industry and the biosecurity risk they pose were raised in evidence provided to the Inquiry.

In relation to mass mortality, Dr Lloyd Klumpp, Biosecurity Tasmania, responded to questions:

***Ms FORREST** - One of the issues that raises concern in the public, particularly, is the issue of the risk of, and actual occurrence of, mass mortalities of fish in any setting. Are you happy with the plans of each company to deal with a mass mortality?*

...

***Dr KLUMPP** - First of all, this is a responsibility of the EPA to manage that. However, we are engaged in that process as well. Mass mortality events - and we have experienced them in other species and we have experienced them in salmon - they are all quite separate and unique. They all have different conditions. They all occur in different places, in different environments. So it is an example of having broad plans in place ready to go but being very flexible in how you then manage that. The EPA has broad plans in place for those events. If the balloon goes up then we all come together, the Chief Veterinary Officer, the Director of the EPA, those bodies that are responsible for it, with industry representation, to map out immediate actions and what needs to happen. We are prepared for them but we are also aware that they vary a lot and you have to be flexible. You can't put rigid structures in place and say that is what is going to happen.*

***Ms FORREST** .... What plans do the companies have to deal with, say they lose one third of the fish on their lease, die, what do they do with them? What is the plan?*

***Dr KLUMPP** - Again, that depends on the particular circumstance. I can tell you what we are planning in the future for this under the new Biosecurity Act. Under the Biosecurity Act and the program that we are developing there will need to be biosecurity plans for those zones, and they will include, specifically for those areas, what those requirements are. We are investigating ways of treating these things to make them environmentally sound, so composting them.*



**Ms FORREST** - Dead fish?

**Dr KLUMPP** - Yes, dead fish. Composting and silage. Those sorts of processes. We don't have the facilities to do those at the moment.

**Ms FORREST** - If we get a mass mortality in Macquarie Harbour today, what would we do with the fish?

**Dr KLUMPP** - Bury them most likely.

**Ms FORREST** - Where would you bury them?

**Dr KLUMPP** - Wherever the EPA said it was appropriate.<sup>80</sup>

According to the EPA's response to questions on notice response, dated 23 March 2021:

**1. What level of mortality needs to be reported to the EPA?**

Marine Fin Fish Farms

Environmental Licences (EL) require:

i. the licence holder must report any suspected or known incidents of disease or mortality affecting more than 0.25% of fish per day for three consecutive days in any individual cage. These reports are to be provided to the Director, EPA (by e-mail to [SalmonRegulation@epa.tas.gov.au](mailto:SalmonRegulation@epa.tas.gov.au)) and the DPIPWE-assigned fish veterinarian or an inspector under the Animal Health Act 1995;

ii. Monthly mortality weight must be reported (i.e. electronic format) on a quarterly basis to the Marine Farming Branch of DPIPWE (by e-mail to [mafarming.environment@dpiuwe.tas.gov.au](mailto:mafarming.environment@dpiuwe.tas.gov.au)). These records must be submitted to DPIPWE within fourteen days of the end of each quarter and must be kept by the EL holder for a period of five years.\*

\* There is a level of overlap currently in place whereby the EL requires reporting of parameters, including monthly mortality weight, to the Marine Farming Branch which undertakes quality assurance checks on data before providing to EPA. This arrangement will be modified with issue of new ELs and Environmental Standard.

Inland Fin Fish Farms

Environmental Licences require:

i. The licence holder must immediately notify the Director, EPA of any significant fish or ova mortality event.

**2. Is there consistent expectation, condition or requirements included in all Marine Farm Development Plans to deal with mass mortality events and to outline mass mortality reporting requirements?**

All Marine Farming Development Plans include management conditions related to controls on waste, including mortalities arising from production, and disease

---

<sup>80</sup> Tim Baker and Dr Lloyd Klumpp, DPIPWE, *Transcript of Evidence*, 20 October 2020, pp. 62-3.

controls outlined in 1 and 2 below. These controls are generally consistent between all plans where salmonid farming currently exists. An exception is the Great Oyster Bay and Mercury Passage Marine Farming Development Plan October 1998 where prescribed disposal of waste relates to disposal so as not to affect the marine environment. There is no prescription for removal of mortalities as per point 2 below.

### 1. Controls on Waste

These prescribe:

- i. Waste from production, including mortalities, must be disposed of in accordance with relevant Acts or regulations and in a manner that the Secretary is satisfied will not cause an unacceptable effect on the ecology of the marine environment or nearby shoreline.
- ii. All mortalities arising in connection form [sic] marine farming operations must be disposed of at a site that has the necessary approvals to receive the material.

### 2. Disease Controls

These prescribe:

- i. Lessees must remove dead fish from cages and report mortalities in accordance with any direction from the Secretary or the Director, EPA.<sup>81</sup>

Mark Ryan, Tassal provided the following comments in relation to facilities to deal with mass mortality events:

*Summer is probably the riskiest time and, look, there's not a facility in the state that's going to take a mass mortality in terms of, let's say, all the salmon in the state died, there's just not a facility to be able to deal with that. In terms of the sources (sic) we've got, in terms of capturing them, we've obviously got the wellboat and harvest boats so we can actually hold them and then it's about how you dispose of those fish. So, we've things like our rendering plants and obviously we've got land facilities where they can be composted in at the minute but, much beyond that, that's where it becomes a bigger issue.<sup>82</sup>*

And further:

**Mr RYAN** - ...Normally in a typical year we might deal with survival levels of only 80 per cent, so 20 per cent mortality. We've dealt with a significant number of fish and biomass of fish but that has been over the life-cycle of the fish, but we've equally had mortality events where you might lose 100 000 fish in an event, and we've been able to deal with them.

*Yes, in that total catastrophic scene, I think we would all have much bigger issues to deal with than how we're going to dispose of the fish - the very viability of everything would come into question.*

---

<sup>81</sup> EPA Question on Notice response, dated 23 March 2021.

<sup>82</sup> Mark Ryan Tassal, *Transcript of Evidence*, 30 November 2020, pp. 31-33.

*Ms FORREST - I'm concerned with the environmental impact of not having a mechanism to deal with a mass mortality.*

...

*Mr RYAN - Yes, we've continuing discussions with the EPA around what may or may not happen. The way I see that is we can deal with a 500-tonne event but much beyond that the EPA would have to make a call on how it wants that to be dealt with, whether, if it's on land and you just have a big pit in a low-risk area, or whether you have to dispose of them at sea and take them far enough out. I think logically they're the only two ways we would be able to deal with them.* <sup>83</sup>

**Findings:**

53. All Marine Farming Development Plans include management conditions related to controls on waste, including mortalities.
54. Fin fish farming operators are required to report to the EPA and DPIPW suspected or known incidents of disease or mortality affecting more than 0.25% of fish per day for three consecutive days in any individual cage.
55. The EPA is responsible for managing mass mortality events in the fin fish farming industry and does so on a case by case basis.

---

<sup>83</sup> Mark Ryan, Tassal, *Transcript of Evidence*, 30 November 2020, pp. 31-33.

## Storm Bay biosecurity risk

Concern was raised regarding the operation of three companies in Storm Bay in relation to biosecurity.

Frances Bender CEO, and Dr Steve Percival, Chief Veterinarian, Huon Aquaculture, made the following comments in relation to biosecurity implications of the three companies being granted leases in Storm Bay:

***Ms BENDER** - ... We are on the record for saying there should only ever have been two biosecurity zones there anyway, one on one side and one on the other. We don't believe there should have been one in the middle. We think it is not appropriate as far as biosecurity is concerned and we are on the public record and have been the entire time.*

...

***CHAIR** - That is because of the indication that with the movement of the sea there, you can get biosecurity hazard with things moving further distances, so therefore there should be more distance between pens?*

...

***Dr PERCIVAL** - There are a whole range of reasons but having three companies in the one area makes it more difficult and overseas experience tells us that. They try to shrink it back so there are only single operators in particular areas. To reinforce the point, people have suggested that the companies have exactly what they want in terms of the Marine Farming Review Panel. I fronted the panel a few times and I can tell you that we did not get what we wanted in terms of some of these issues.<sup>84</sup>*

Christine Coughanowr, independent scientist, also expressed concern in relation to biosecurity risk in Storm Bay:

*While this may be in part the result of incremental/uncoordinated past development, the recent approval of three new/expanded operations in Storm Bay is of particular concern. Previous investigations and preliminary modelling results by IMAS suggests that salmon diseases could travel significant distances across Storm Bay during strong winds, and conservative separation distances have not been adhered to, particularly with respect to the Storm Bay North MFDP, off Betsey Island. Furthermore, the pilchards that carry the POM virus are not limited in their movements and can travel long distances, mingling with salmon within their cages.<sup>85</sup>*

Marine Farming Planning Review Panel (MFPRP) members Mr Andrew Paul (Chair), Professor Colin Buxton (marine scientist) and Mr Pheroze Jungalwalla (marine farming

---

<sup>84</sup> Frances Bender and Dr Steve Percival, *Transcript of Evidence*, 21 February 2020, p. 86.

<sup>85</sup> Christine Coughanowr, 2019, *Submission #67*, pp. 1-5.

expert) made the following comments when asked about the role of the Panel in assessing biosecurity:

**Prof. BUXTON** - *With specific reference to pilchard orthomyxovirus - POMV - and the global salmon conference you have probably heard about - this relates to biosecurity concerns we all had about three companies farming in Storm Bay - the panel considered these issues very carefully.*

*We took advice and we took the edits of Barbara Nowak in particular on numerous occasions. All of these things were carefully considered and were signed off by the entire panel through resolution. Again, I will keep repeating: we had no dissenting views in the lead up to the acceptance of our reports.*

*It is fair to say that world's best practice in the salmon industry suggests that as far as possible you should have a single operator in a single water body. There are practical impediments to doing that. There are particularly practical impediments to doing that in a case like Tasmania, which has very limited spaces to go farming. However, that is not the only consideration that relates to virus security concerns. This is where we used the expertise of Larry Hammell quite explicitly. There is a very long list of things that companies should do in order to minimise or mitigate the risks associated with disease transfer in a single water body.*

...

**Prof. BUXTON** - *Larry Hammell is an international expert on biosecurity risks in salmon farming. He is from the -*

**Mr JUNGALWALLA** - *Prince Edward Island. He consults internationally. He was brought out to give us some advice.*

...

**Ms FORREST** - *... In terms of having one operator in one water body, would you say that having more than one in one water body, Macquarie Harbour, was part of the problem there?*

**Prof. BUXTON** - *Certainly, it was perceived to be a risk, and it will still be a risk. There are lots of things we believe can be done to minimise that risk and they are all contained in the management controls recommended by the panel.*

**Mr JUNGALWALLA** - *Can I add something at this point in terms of biosecurity specifically? The panel was presented with a modelling of circulation of Storm Bay, seasonal variation and inter-annual variation by Rod Andrewartha, and it showed, to put it bluntly, there is no area in Storm Bay which could not experience some fish pathogens being there. As Colin has said, biosecurity is not just one item. If you can't keep pathogen hosts apart, there are other things you can. On that basis there is nowhere in Tasmania really where you can say, 'Oh, we only have one operator' as opposed to other countries.*

**Prof. BUXTON** - *You cannot eliminate the risk, you can manage it.*

**Mr JUNGALWALLA** - *There is no such thing as zero risk.*

**Ms FORREST** - *I am not suggesting that, but I am saying that more than one operator in Macquarie Harbour contributed to the damage done there...*

**Mr JUNGALWALLA** - *I guess it would have been easier had there not been three operators, but one operator operating individually could also have caused a problem. It is a risk assessment.*

**CHAIR** - *... In terms of Storm Bay, the decision to have three operators as opposed to two - is that what you were referring to when you said there are particular circumstances in Tasmania that have to be considered? As in, you can't leave one operator out?*

**Prof. BUXTON** - *No, what I meant was that if you had the luxury of, in a simplistic way, farming salmon in a fjord and you had three companies and three fjords separated geographically, the smart move would be to put one company in each of the three fjords. That is what goes on in other parts of the world. We know that the proximity of companies in South America led to significant disease problems and the industry there coming to the verge of collapse. It has taken a long time to recover.*

*Notwithstanding all that, if you are forced to accommodate three operators in a single waterbody, quite a large waterbody I might say, there is a whole list of things other than physical separation that very strongly mitigate the risk of disease.*

**CHAIR** - *I have heard you say that. What I am interested in though is this concept that we are forced to accommodate three in a single body. What is the imperative that forces us to accommodate three in a single body? We could, I am assuming, contemplate two or one, any of the options. If science indicated two were safer and more appropriate than three -*

**Prof. BUXTON** - *I think that is a valid point, but it is certainly not the panel's job to try to drive that.*

**CHAIR** - *Was the panel then instructed to accommodate three in Storm Bay and have that as an underlying assumption to decision-making or advice provided?*

**Prof. BUXTON** - *The panel was not asked to make the determination that three companies would exist in Storm Bay.*

**CHAIR** - *That is not what I asked you. I understand that was not your decision, but were your instructions as fundamental as three companies would be accommodated in Storm Bay and the panel had to provide advice and make its analysis and assessment on the basis that three would be there?*

**Prof. BUXTON** - *Yes, that is a fact.*

**Mr PAUL** - *I think we are misinterpreting the question. I do not think the panel was instructed to provide; I was not part of it but having read the history of it.*

**Mr JUNGALWALLA** - *If I may, the Government declared a no-grow zone and a grow zone as part of the plan. A large area in Storm Bay was excluded and a large area was included. My understanding is that three companies put in proposals. I know for a fact that where the companies chose to go was subject to a lot of discussion between the companies and the Marine Farming Branch, and they had to move and accommodate because many things were taken into consideration.*

*There were shipping channels, recreational fishing considerations, rock lobster reefs et cetera. Where they ended up was subject to quite a lot of negotiation and juggling. We were not party to that. So there was no instruction from anybody to say, 'You will have three people there.'. We were presented with this as what had to be assessed. That would be my summary of where it came from.*

**CHAIR** - *... Given that there were two companies already there and you were asked to assess a third, is it your understanding that the expectation was a third would be accommodated regardless of what may be best indicated around biosecurity and those other factors that they would be accommodated into that area?*

**Prof. BUXTON** - *The panel did not make the determination that there would be three companies operating in Storm Bay. The panel received an instruction from the minister to evaluate both the two amendments and the plan. In that sense, the panel was requested, instructed and clearly understood that there were three items for consideration on the table. We could have made a recommendation to reject any of those things at an appropriate point in the process. First of all, we were not asked that question in terms of the plan, which related to Petuna's presence in Storm Bay.*

**CHAIR** - *You weren't asked what question?*

**Prof. BUXTON** - *We weren't asked to comment on the approval of the plan. We were asked to evaluate the plan.*

**Mr PAUL** - *To be clear, I don't think the panel was ever instructed, as part of that request from the minister, to consider it a third company per se. It was put forward as three proposals. The operator is, by and large, irrelevant. There were three proposals that the panel was instructed to evaluate.*

**CHAIR** - *My understanding would be, though, that as part of your assessment of risk around biosecurity, the fact that there was more than one company is a very pertinent factor to be considered.*

**Mr PAUL** - *You're absolutely right. I'm just trying to differentiate that the panel wasn't instructed to allow three operators. They were considering three proposals and inherent in those, the panel's consideration was that it was three different operators. They weren't instructed to provide for three different operators.*

**Mr VALENTINE** - So you were asked to assess the three proposals individually, as opposed to collectively?

**Prof. BUXTON** - We were asked to assess them individually. We wrote to the minister requesting to assess them as a package, and particularly with respect to the hearings, we asked that we could hold the hearings concurrently so that members of the public could get their heads around things as well.

**Ms FORREST** - Did you also want to assess the combined impact?

**Prof. BUXTON** - Absolutely. The combined impact was critical to all of our evaluations.

**Mr VALENTINE** - So that's not outside your brief? You can look at the combined impact of those three, even though you're looking at each one as a separate plan.

**Prof. BUXTON** - I think the way the act is written we are expected to evaluate each proposal on its merits independently. The fact that these proposals came in pretty much at around the same time and were pertinent to the same waterbody prompted the panel to request that we do much of the evaluation concurrently. When you are talking about farming in the same waterbody, what applies to one applies to the other. If you scrutinise the management controls, for example, they are very generic in terms of what we wanted all three of these proponents to do by way of operating in Storm Bay.<sup>86</sup>

Former Panel members Professor Barbara Nowak, expert in animal health and biosecurity, and Louise Cherrie, environmental management consultant, resigned from the Panel over what they regarded as the flawed process and assessment of biosecurity risk in Storm Bay:

*Poor functioning of the Marine Farming Planning Review Panel includes the inability to apply sound science, an unwillingness to discuss and learn from changes (e.g. Macquarie Harbour, emergence of POMV), and the propensity to only provide advice operationally convenient to salmon industry. Indeed, the salmon industry had ready access to the Panel to advise on the operational impact of potential management conditions and were consulted on frequent basis and at a minute notice to the Panel.*

*We were not allowed to consider the previous salmon industry issues in Macquarie Harbour as they were considered irrelevant by other members of the Panel. While Macquarie Harbour is a very different system to Storm Bay (hydrodynamically and biogeochemically), the factors that are the same are: same operators, same operation, same regulation, and based on flawed or inadequate science. We were not allowed to apply biosecurity recommendations from Global Salmon Conference 2017 (Carter et al. 2019) to assess MFDP. This inability to take into account the*

---

<sup>86</sup> Professor Colin Buxton, Andrew Paul and Pheroze Jungalwalla, *Transcript of Evidence*, 8 September 2020, pp. 27-31.



*latest information and policy recommendations jeopardises the sustainability of Tasmanian salmon industry.*<sup>87</sup>

All submissions and hearings relating to the disagreement between Ms Cherrie and Professor Nowak and the Panel are in evidence in the public domain. Refer to the compilation of this evidence in Appendix C.

**Findings:**

56. Biosecurity concerns were raised in relation to the approval of three separate fin fish farming operators in close proximity in Storm Bay.

---

<sup>87</sup> Louise Cherrie and Professor Barbara Nowak, 2019, *Submission #51*, p.2.

## TERM OF REFERENCE 2

### **APPLICATION OF THE *MARINE FARMING PLANNING ACT 1995* RELATING TO:**

**A. PREPARATION AND APPROVAL PROCESS FOR MARINE FARMING DEVELOPMENT PLANS, INCLUDING MODIFICATIONS AND AMENDMENTS TO MARINE FARMING DEVELOPMENT PLANS;**

**B. ALLOCATION OF LEASES, APPLICATIONS FOR AND GRANTING OF LEASES;**

**C. MANAGEMENT OF FINFISH FARMING OPERATIONS WITH RESPECT TO THE PREVENTION OF ENVIRONMENTAL HARM.**

## **A. PREPARATION AND APPROVAL PROCESS FOR MARINE FARMING DEVELOPMENT PLANS, INCLUDING MODIFICATIONS AND AMENDMENTS TO MARINE FARMING DEVELOPMENT PLANS**

### **Overview of planning processes under *Marine Farming Planning Act 1995***

The DPIPWE submission provided an overview of planning processes under the *Marine Farming Planning Act 1995*:

*The Marine Farming Planning Act 1995 (MFPA) sets up the process for planning for marine farming development. The purpose of the MPFA [sic] is to achieve well-planned sustainable development of marine farming activities to:*

- *integrate marine farming activities with other uses; and*
- *minimise adverse impacts; and*
- *set aside areas for activities other than for marine farming activities; and*
- *take account of land uses; and*
- *take account of the community's right to have an interest in those activities.*

*The MFPA shares its objectives with other State resource management legislation including the Living Marine Resources Management Act 1995 (LMRMA), where marine farming activity is regulated and managed through marine farming licences, and the Environmental Management and Pollution Control Act 1994 (EMPCA), which sets up environmental licences for the regulation of finfish farming and empowers the EPA to regulate the environmental impact associated with finfish farming.*

*The MFPA, LMRMA and EMPCA are components of Tasmania's Resource Management Planning System [sic] (RMPS), which was established in 1994 to*

*achieve sustainable outcomes for the use and development of the State's natural and physical resources.*

*The planning process set out in the MFPA is extensive and comprehensive. The same process applies for all sea-based marine farming planning developments, whether for finfish, shellfish or other species, such as seaweeds.*

*The planning authority is the Secretary of DPIPW. The MFPA establishes a review panel (the Panel), which considers and reviews planning proposals and makes recommendations to the Minister. The Director, EPA has statutory involvement throughout the planning process. The Minister determines planning outcomes. The focus of the planning process is on the planning, rather than operational elements of a proposal.*

*Marine farming areas are identified through marine farming development plans (plans). A development plan identifies zones for marine farming, how much area may be leased within each zone and contains management controls to mitigate, minimise and manage any negative effect on the environment. There are currently 14 marine farming development plans, including seven where salmonid marine farming leases operate. The complete list of marine farming development plans can be viewed at: [dpipw.tas.gov.au/sea-fishing-aquaculture/marine/marine-farming-aquaculture/marine-farming-developmentplans/current-marine-farming-development-plans](http://dpipw.tas.gov.au/sea-fishing-aquaculture/marine/marine-farming-aquaculture/marine-farming-developmentplans/current-marine-farming-development-plans)*

*The plans work in conjunction with conditions on marine farming leases, as well as marine farming licences (issued under the Living Marine Resources Management Act 1995) and environmental licences (issued under the Environmental Management and Pollution Control Act 1994). The MFPA sets out two distinct planning processes: creation of a new plan; and amendment of an existing plan.*

...

### ***Creation of marine farming development plans***

*The MFPA sets out a specific process by which a development plan is made. The process requires the Minister to consent to the preparation of a draft plan, which, once drafted, is submitted to the Panel by the planning authority. The Panel considers the draft plan and, if satisfied that it meets the requirements of the MFPA (including any requirements of the Director, EPA), recommends the draft plan be released for public exhibition.*

*If the Minister approves the public exhibition of the draft plan, it is exhibited, together with the required environmental impact statement (EIS) for two months, during which time people may make submissions.*

*The submissions are considered by the planning authority, which submits a report to the Panel recommending whether the draft plan should be modified as a result of any submission. The Panel considers the submissions, the planning authority's*

*report, environmental management matters that the Director, EPA requires the Panel to consider and, if the Panel considers it necessary, or if someone has requested, conducts hearings. The Panel then forms a view on whether the draft plan is acceptable, should be modified, or should be rejected. If it is acceptable, the Panel recommends to the Minister that the draft plan be approved and the Minister, after considering that recommendation, may approve the draft plan.*

*Fifteen marine farming development plans have been approved through this process. Eight of these relate to areas where finfish may be farmed, however one of these (Furneaux islands) does not currently have any active finfish marine farms. Thirteen of these plans were created through a government-led process in the years following the commencement of the MFPA. These plans related to pre-existing marine farming regions. They considered the location of existing farms (that had been established prior to the commencement of the MFPA) and, where appropriate, zoned these locations or identified alternative locations for those farms to move to. They also identified new zones where possible, to provide for industry expansion and development.*

*A further two plans have been created following a proponent-led process, one in 1998 (Storm Bay off Trumpeter Bay, North Bruny Island) and the other in 2019 (Storm Bay North). The two new plans prepared by proponents have related to discrete areas distinct from any existing plan areas. The MFPA provides for either government-led or proponent-led scenarios.*

### ***Amendment of existing plans***

*The MFPA also provides for the amendment of existing plans. The process for an amendment may begin with a proponent submitting a formal request for amendment. The planning authority is then required, within 35 days, to recommend to the Panel whether the draft amendment should be made. If the Panel approves the making of the draft amendment, the Panel seeks the consent of the Minister to direct the planning authority to prepare the draft amendment.*

*If the Panel refuses to approve the making of the draft amendment, this decision by the Panel may be appealed to the Resource Management and Planning Appeals Tribunal. Alternatively, the MFPA provides that the Panel may at any time determine that an amendment to a plan is desirable, either of its own motion, or in response to a request from the Minister, the planning authority or the Director, EPA.*

*Except where the request is from the Minister or the Director, EPA, the Panel may only direct the planning authority to prepare the draft amendment with the Minister's consent. Since 2009, most amendments have been proponent-led. Once directed by the Panel, the planning authority prepares the draft amendment and submits it to the Panel for consideration. If the Panel is satisfied that the draft amendment is suitable for exhibition, the Panel certifies it as such and recommends it to the Minister. If the Panel considers that the draft amendment is not suitable, it may modify the draft amendment directly, or refer it back to the planning authority for modification. This can be an iterative process and can take considerable time.*

*The Minister may then approve the release of the draft amendment for public exhibition. The draft amendment and accompanying environmental impact statement (EIS) are released for a period of between three weeks and two months.*

*The Director, EPA may issue the Panel with requirements that must be addressed in the draft amendment, EIS, or considered by the Panel throughout the process.*

### ***Environmental Impact Statement and pre-planning assessment***

*As well as the preparation and consideration of a draft plan or draft amendment, the planning process involves the preparation of an EIS pursuant to section 23 of the MFPA, to*

- disclose any available information relating to the environmental impact of the draft plan, except if there is a reason for confidentiality;*
- if it relates to finfish farming, address any matter relating to environmental management that is required by the Director, EPA, in a notice under section 17A (1), to be addressed in the environmental impact statement or in any environmental impact statement;*
- contain information appropriate to the significance of the draft plan, a modification to a draft plan, a draft amendment to a plan and a modification to a draft amendment to a plan to the environment and the likely public interest.*

*Under either a new plan or an amendment process, an early step is for the Minister to provide consent for the draft plan or draft amendment to be prepared. Such approval indicates that the Minister is satisfied with the general intent and concept of the proposal. In the case of an amendment, this also comes after the planning authority has recommended to the Panel that the amendment be made and the Panel has considered and approved the making of the amendment. The Director, EPA is notified of an application and any approval by the Panel or the Minister.*

*To inform this assessment, DPIPWE has implemented a pre-planning process that a proponent must work through. It involves preparing a proposal overview, which is used by DPIPWE, with input from the Panel and the EPA, to prepare proposal specific guidelines for the EIS that will be required if the proposal proceeds.*

*The pre-planning process further requires that a draft EIS is prepared to an acceptable standard by the proponent before making application to either prepare a new plan, or an amendment. This pre-planning process ensures that fundamental considerations are thoroughly worked through before a proposal is taken forward, so that only well considered proposals proceed to the formal planning stage. For a proposal to be suitable to proceed, it must meet the requirements set out in sections 21 and 22 of the MFPA. This includes a requirement that:*

- it furthers the objectives of resource management within the area; and*
- it has regard to use and development of the region as an entity in environmental, economic, recreational and social terms; and*

- *if it relates to finfish farming, it contains any matter relating to environmental management that is required by the Director, EPA to be contained in the plan or amendment.*

*The formal planning stage then provides for robust, independent review by the Panel, formal notification to the Director, EPA and consideration of any requirements they may have and statutory public consultation (which is in addition to the extensive public engagement that necessarily occurs as part of the pre-planning process). Through this process the draft plan, or draft amendment may be modified if necessary (and, if the modifications are substantial, may be subject to further public consultation).*

### ***Suitability for public exhibition***

*The MFPA sets out that a draft plan or draft amendment is suitable for public exhibition when:*

- *it complies with sections 21 and 22, which set out the things a draft plan or draft amendment must do, may do and must not do;*
- *it contains any matters relating to environmental management of finfish farming that the Director, EPA, requires;*
- *it is accompanied by an environmental impact statement; and*
- *as the circumstances require, it contains appropriate details about marine farming zones, maximum leasable areas, draft management controls etc.*

*The Panel, therefore, considers a draft plan or draft amendment in relation to each of these aspects to inform its assessment of whether to recommend it for public exhibition.*

### ***Public consultation and final recommendation***

*Public engagement occurs in two phases in the planning of marine farming developments. The first phase occurs during the formulation of the proposal and the preparation of the EIS. This is led by the person preparing the draft plan or draft amendment, who is required to engage with the community in relation to the proposal, to gauge views, any concerns and work with government and stakeholders to avoid or mitigate potential impacts. The outcomes of this engagement are detailed in the EIS.*

*The second phase is the statutory process. This involves public exhibition, representations and (potentially) hearings. A draft plan is released for two months and a draft amendment is released for at least three weeks and at most two months. People may make written submissions (representations) during this period. At the end of this period, each representation is carefully analysed and the issues raised are considered by the planning authority. The focus of this process is on what concerns are raised in the submissions, and how the management framework allows those issues to be managed through mitigation or avoidance, or, if necessary, how it may be modified through the planning process to provide the required regulatory capability.*

*The planning authority prepares a report for the Panel containing a copy of each submission, the planning authority's assessment of the issues raised, and whether the draft plan or draft amendment should be modified, or whether the issues have an effect on the draft plan or draft amendment as a whole. The Panel considers this report and, if it considers it necessary, or if any representor has so requested, it conducts public hearings in relation to the draft plan or draft amendment. The Director, EPA also receives a copy of the report and in response may formally require the Panel to consider specific matters. Through this process the MFPA places considerable emphasis on public consultation to inform the assessment of whether the draft plan or draft amendment is suitable.*

*After considering the representations, the planning authority's report and the information received through the hearing process and any matters as required by the Director, EPA, the Panel then proceeds to determine whether to recommend to the Minister that the draft plan/draft amendment be approved. This may include either modifying the draft plan/draft amendment or requiring the planning authority to modify the draft plan/draft amendment before being satisfied to recommend it for approval. If the Panel is not satisfied, the MFPA allows for the draft plan/draft amendment to be modified until an acceptable solution is reached.*

...

***Amendment is not of a substantial nature or is to correct an error***

*In some situations, a draft amendment to a plan may not require an EIS or public consultation. The Act provides that if the Panel is satisfied that a draft amendment is to correct an error, is not of a substantial nature, or is to remove an anomaly to clarify or simplify a plan, it may recommend to the Minister that the EIS and public consultation provisions do not apply. If the Minister agrees that those elements are not required, the Minister may then proceed to approve the amendment directly.<sup>88</sup>*

A number of flow charts illustrating the regulatory framework and processes described above were provided to the Inquiry by the Department and are included as Appendix D.

The Environmental Defenders Office submission also provided an outline of their understanding of the regulatory framework:

*Marine farming in Tasmania's state waters is principally regulated under the following Acts:*

- *Marine Farming Planning Act 1995 (MFP Act);*
- *Living Marine Resources Management Act 1995 (LMRM Act); and*
- *Environmental Management and Pollution Control Act 1994 (EMPC Act).*

*The procedures for planning and approving activities are explained briefly below.*

---

<sup>88</sup> DPIPWE, 2019, *Submission #221*, pp. 13-17.

*Land-based marine farming aquaculture facilities, including jetties, landing and loading areas, hatcheries, storage and processing facilities, are subject to the Land Use Planning and Approvals Act 1993 (**LUPA Act**). Applications are determined by local councils, following an assessment against the relevant planning scheme. Depending on the size and location of a proposed development, this process will generally involve public notification and representation rights. The grant of any discretionary permit by a Council may be subject to merits appeal to the Resource Management and Planning Appeal Tribunal.*

*In contrast, marine farms in State waters are explicitly excluded from the operation of planning schemes. Such proposals are assessed primarily under the MFP Act, LMRM Act and EMPC Act.*

*There are now two different licences that marine salmon farms require before they can operate: a marine farming licence issued by the Minister under the LMRM Act, and an environmental licence issued under the EMPC Act. Applications for licences under the LMRM Act are assessed by the Marine Farming Branch of Department of Primary Industries Parks, Water and the Environment (**DPIPWE**). They are not subject to any transparent or public assessment process.*

*In terms of regulation and enforcement, the Secretary and Marine Farming Branch of DPIPWE was historically responsible for both planning for and regulating the salmon farming industry. Since July 2016, the EPA has had responsibility for the environmental regulation of the industry – first through delegation, and then through the implementations of amendments to the EMPC Act. The EPA now is responsible for monitoring and enforcing the environmental performance of salmon farms against conditions of their environmental licences, marine farming licences, and the management controls of Marine Farming Development Plans (**MFD Plans**).*

*Where non-compliances with the requirements are detected, the EPA has powers to take enforcement action against the operator, for example by issuing fines or taking prosecution.*



Player	Description of Role	Planning	Permitting	Monitoring	Regulation & Enforcement	Research & development
Minister for Primary Industries	The Minister is currently responsible for both the promotion and regulation of the salmon farming industry. After considering the advice of the Panel on a draft MFD Plan, it is up to the Minister to decide where salmon farms should be located and how they should be regulated. The Minister also decides applications for leases and licences by salmon farm operators.	x	x		x	
Marine Farming Development Panel	The Panel consists of eight members with marine farming, fishing, planning and local government experience, appointed by the Governor for a period of five years. The Panel is responsible for assessing draft MFD Plans, and making recommendations to the Minister about whether they should be made. The Panel also provides advice to the Minister if requested.	x				
Board of Advice and Reference (MFP Act)	The Board of Advice and Reference consists of three persons (including a lawyer, a business person and a person with experience in marine farming) appointed by the Minister who are responsible for providing advice to the Minister on such matters as the criteria for and assessment of applications for the allocation of leases.		x			
DPIPWE, Marine Farming Branch	The Marine Farming Branch has the widest responsibilities of any player. It is responsible for the preparation of draft MFD Plans, preparing information for the Minister, the regulation of non-environmental aspects of salmon farming, and the promotion and development of the industry.	x		x	x	x
EPA Director	The EPA Director provides direction to the Panel and has responsibility for the environmental regulation and enforcement for salmon farms under the <i>Environmental Management and Pollution Control Act 1994</i> (EMPCA). The Director is also responsible for undertaking the assessment of some (but not all) finfish marine farms, hatcheries and fish-processing plants that are 'environmental licence' activities.	x	x	x	x	
EPA Board	The EPA Board is responsible for assessing some (but not all) finfish marine farms, hatcheries and fish-processing plants that are 'environmental licence' activities under EMPCA.		x	x		
EPA Salmon Farming Unit	Responsible for environmental regulation and enforcement for salmon farms and hatcheries.			x	x	
Local Councils	Responsible for planning for and permitting land-based marine farming activities, including onshore facilities, hatcheries and fish processing plants.	x			x	
Leaseholders	Responsible for applying for MFD Plans (including preparation of EIS), monitoring of compliance with conditions and contributing towards research and development.	x		x		x
IMAS & CSIRO	Principally responsible for research and development. May also be engaged to assist with monitoring of compliance and providing advice to DPIPWE and EPA.			x		x

## **Marine Farming Development Plans**

*Areas of Tasmania's coastal waters are set aside as zones under Marine Farming Development Plans (MFD Plans). In each designated zone, marine farming activities are permitted and regulated in accordance with management controls specific to the plan area.*

*Draft MFD Plans (or draft amendments) for salmon farms are prepared by either DPIPW or the salmon farming company itself. Draft plans, or amendments, must be accompanied by an environmental impact statement (EIS), appropriate to the scale of the likely impacts and public interest in the proposed activities. Unless there is "a reason for confidentiality", the EIS must disclose the information that it has relied upon.*

*Management controls in draft MFD Plans may include a range of rules to minimise and manage adverse effects of the marine farming activities, such as:*

- *restrictions on the types of marine farming activities that may take place in the area (for example, the types of fish that may be farmed, or the year classes that will be permitted);*
- *environmental baseline studies that must be undertaken by a lease holder;*
- *maximum nutrient output and biomass;*
- *water quality indicators and thresholds;*
- *restrictions on noise and light emissions; or*
- *size and location of structures within a marine farming zone.*

*It is noteworthy that, currently, no MFD Plans actually impose restrictions on maximum nutrient output (referred to as Total Permissible Dissolved Nitrogen Output), or total biomass (total quantity of fish that may be stocked). This is despite the fact that the EISs for the MFD Plans assess/model impacts based on an identified maximum nutrient output and biomass.*

*Draft MFD Plans, and most amendments to MFD Plans, will be publicly notified, and submissions to the Marine Farming Planning Review Panel (Panel) will be invited. The Panel may, but is not required to, hold hearings in relation to a draft MFD Plan or amendment. These hearings may or may not be open to the public.*

*While the Panel has the power to reject a draft MFD Plan, once it has determined that a MFD Plan is "acceptable" and contains any matters relating to environmental management required by the EPA Director, the Panel must make a recommendation to the Minister that the draft MFD Plan be approved. The Minister then has the power to either approve or refuse a draft MFD Plan. The Minister has the power to approve amendments to existing MFD Plans irrespective of whether the Panel has recommended that the amendment be rejected.*

*MFD Plans are required to be reviewed at least once every 10 years.<sup>89</sup>*

---

<sup>89</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 4-7.

## Role of the Minister

The submission from DPIPWE outlined the role of the Minister in the marine farming planning process:

### ***Role of the Minister***

*The Minister is involved throughout the planning process. The Minister's consent is required before drafting of a plan or amendment to a plan commences. In this way, proposals that are unlikely to ultimately be acceptable to the Minister of the day do not proceed through the process. The Minister is again involved in approving the release of a draft plan or draft amendment for public exhibition. Once again, only proposals that the Minister is willing to consider make it to the stage of statutory consultation. The power to make the final determination in relation to a draft plan or draft amendment then also rests with the Minister. For a new plan, the Minister may approve the draft plan, or refer the draft plan back to the Panel, indicating any concerns the Minister has. The draft plan is then re-considered through the planning process.*

*For an amendment, the Minister may seek any further information the Minister requires from the Panel, the Board of Advice and Reference, or the Director, EPA, prior to making a decision to accept the amendment without change, reject the amendment, or approve the amendment subject to alterations. Where the Minister's determination is other than that recommended by the Panel, the Minister must notify parliament of the decision. Where the decision is to approve with alterations, and the alterations are minor, trivial or clerical, this requirement does not apply.<sup>90</sup>*

The MFPA was amended in 2011, resulting in changes to the decision-making powers of the Minister. According to the WWF submission:

*Prior to 2011, the Panel was able to refuse unacceptable proposals. In November 2011 the power of the Panel to refuse a draft amendment to a Marine Farming Development Plan was removed by the MFPA. Now, the Panel may make a recommendation to the Minister only and the full power of decision-making rests with the Minister who can also make any changes to the proposal without further consultation with other stakeholders.<sup>91</sup>*

The EDO submission outlined the current role of the Minister:

### *b) Role of the Minister*

*The Minister for Primary Industries and Water is responsible for approval of MFD Plans and amendments to Plans under the MFP Act. While the Panel's role is to assess a draft plan or amendment to a plan, and hear representations made by members of the public, the Panel's role is only to make a recommendation to the*

---

<sup>90</sup> DPIPWE, 2019, *Submission #221*, p. 16.

<sup>91</sup> WWF, 2019, *Submission #94*, p. 16.

*Minister. The Minister is not obliged to follow that recommendation. There is no apparent reason for this “at large” discretion.*

*The lack of criteria for the Minister’s decision is important in the context of the Minister’s portfolio role. While the Minister is the regulator of marine farming under the MFP Act, he is also responsible for the promotion and development of the industry. There is an inherent conflict in the Minister’s responsibilities in this respect. Recall that the MFD Plan is the key document that identifies where marine farming can be located and on what terms. It is legislatively a reason that an application for environmental licence is not publicly notified. It is therefore important that there is transparency and community confidence in how decisions are made.*

*In this context, the Minister should not be the decision-maker on MFP Plans or Amendments.*

*We recommend that:*

- *The Panel be the decision-maker for MFD Plans; or*
- *There be a clear set of prescribed criteria identifying on what basis a Minister can disagree with a recommendation of the Panel.<sup>92</sup>*

And further:

*(b) Minister not bound by Panel recommendations*

*Even where the Panel includes members with relevant scientific expertise, the MFP Act does not require the Panel’s recommendations to be followed. Since amendments in 2011 removed the Panel’s power to refuse an application for an amendment to a MFD Plan, the Minister has not been bound by the Panel’s advice and can make a decision contrary to the recommendation of the Panel, including where the Panel recommends that a proposed activity should be refused due to unacceptable environmental impacts.*

*Where an amendment to an MFD Plan is proposed, the Minister may also make any alterations she or he considers “necessary or expedient” before approving the amendment. The Minister is required to table reasons in Parliament where his decision is contrary to the recommendations of the Panel. While this provides some transparency regarding the decision-making process, it fails to ensure that decisions with the potential to cause significant environmental impacts are guided by science.<sup>93</sup>*

According to Jennifer Hadaway’s submission:

---

<sup>92</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 13-14.

<sup>93</sup> Environmental Defenders Office, 2019, *Submission #220*, p. 19.

*The Marine Farming Planning Act should at the very least be amended to remove the Minister's powers to overturn decisions of the Review Panel and grant the panel the authority to liaise with the EPA directly as required and agreed to by the panel.*<sup>94</sup>

Trish Baily in her submission made the suggestion:

*The Marine Farm Planning Act be amended to constrain the minister's powers to overturn decision of the panel.*<sup>95</sup>

## Governance

The EDO submission considered the separation of governance arrangements for industry development and regulation:

*Strong decision-making requires independence as between the regulator and promoter of an industry. That is one reason why we support the role of the Tasmanian EPA as regulator of finfish farming....*<sup>96</sup>

Further concerns were noted by Dr Rosalie Woodruff, Tasmanian Greens, who called for reform to ensure the independence of the decision-making process:

*Yes, we do need to have independence in making these decisions because they have millions, if not billions, of dollars at stake, if not today, over years to come. There is a lot of money and there are a lot of jobs involved. A lot of communities are impacted and a lot of vastly and quickly changing marine environmental conditions are affected. There are some huge tectonic plates at play and what we have at the moment is non-independence in how the decisions are being made. We have ministerial influence over the two decision-making bodies, the EPA and the Marine Farming Planning Review Panel.*

*All we are asking for is independence. All we are asking is for science to speak, and the way that needs to happen - without drilling down into the detail of each act - is to remove the power of the minister to have unconstrained power to overturn decisions of the Marine Farming Planning Review Panel and put the scientists back on that panel because it has been debased and has a whole lot of industry representatives and other things. Industry can make application. If you are sitting on a council and you are making a decision about a development application, you don't have the developer sitting in there making a decision with you. They provide statements, the evidence, the assessments and the reports, but you need independent people making the decision.*<sup>97</sup>

---

<sup>94</sup> Jennifer Hadaway, 2019, *Submission #104*, p. 5.

<sup>95</sup> Trish Baily, 2019, *Submission #7*, p. 6.

<sup>96</sup> Environmental Defenders Office, 2019, *Submission #220*, p. 12.

<sup>97</sup> Dr Rosalie Woodruff, Tasmanian Greens, *Transcript of Evidence*, 17 February 2020, p. 79.

**Findings:**

57. Marine-based fin fish farming is principally planned, regulated and managed under the *Marine Farming Planning Act 1995*, the *Living Marine Resources Management Act 1995*, and the *Environmental Management and Pollution Control Act 1994*.
58. Land-based fin fish farming facility approvals are subject to the *Land Use Planning and Approvals Act 1993*, with local councils as the Planning Authority.
59. Under the *Marine Farming Planning Act 1995*, the Planning Authority for marine farming is the Secretary of DPIPWE, however the Minister has ultimate decision-making discretion in relation to draft Marine Farming Development Plans/Amendment Plans and is not required to follow recommendations of the Marine Farming Planning Review Panel.
60. There is a conflict between the Minister's role in the promotion and development of the fin fish farming industry and the Minister's statutory responsibility for the regulation of the industry under the *Marine Farming Planning Act 1995*.
61. Concerns were raised there is no statutory requirement in the *Marine Farming Planning Act 1995* for the Minister to make decisions based on scientific evidence.
62. The *Marine Farming Planning Act 1995* approval process requires the proponent to provide a draft Environmental Impact Statement according to guidelines prepared by DPIPWE and reviewed by the Marine Farming Planning Review Panel and the Director, EPA; the process includes a requirement for community engagement.

**Recommendation 11**

Review of the *Marine Farming Planning Act 1995*, including:

- purpose and objectives of the Act;
- alignment with other legislated planning instruments;
- role of the Planning Authority and powers of the Minister;
- membership, general functions and powers of the Marine Farming Planning Review Panel;
- stakeholder and public consultation;
- criteria for and discretion in decision-making;
- public release of information;
- access to appeal rights and merits review;
- lease allocation process; and
- recognition of community amenity.

**Recommendation 12**

Require marine farming development plan and lease applications to demonstrate they relate to areas identified for fin fish farming in a revised Salmon Industry Growth Plan through a comprehensive marine spatial planning process.

**Recommendation 13**

The marine farming development plan and lease application process to include a comprehensive assessment of the impact on social, recreational, cultural and natural values.

**Recommendation 14**

Establish prescribed criteria on which the Minister can reject the recommendation of the Marine Farming Planning Review Panel in regard to marine farming development plans or amendments to Marine Farming Development Plans.

**Recommendation 15**

Require decisions made by the Minister contrary to the Marine Farming Planning Review Panel's recommendation in regard to Marine Farming Development Plans/Amendments, to be tabled in Parliament and include a statement of reasons.

**Recommendation 16**

Require Environmental Impact Statements within marine farming development plan applications to be made publicly available, including the independent modelling, data and evidence on which they are based.

## Criteria for decision making

Nicole Sommer, EDO expressed concern “*about the scientific basis for decision-making at all stages of marine finfish farming and how decisions are made. Unlike other jurisdictions, there are poorly defined criteria for decisions and no legislative criteria about environmental outcomes.... One of our key criticisms is that there is no requirement to impose licence caps on biomass or nitrogen in either marine farming development plans or environmental licences.*”<sup>98</sup>

According to the EDO submission regulatory decisions in Tasmania are not legislatively required to be supported by certain scientific data:

*Despite the opportunities presented by having world-class scientific researchers based in Tasmania, there are a number of areas in which the current laws fail to ensure that regulatory decisions are supported by scientific data regarding*

---

<sup>98</sup> Nicole Sommer, EDO, *Transcript of Evidence*, 11 February 2020, p. 1.

*environmental impacts, biosecurity, carrying capacity or future risks to productivity.*<sup>99</sup>

And further, the EDO argued there is a need for a clear hierarchy of objectives to guide decision making with priority being given to protect natural values:

*Across the board, the legislation governing decision-making lacks clear and specific criteria to guide decision-making – whether this be decisions made by the MFD Panel, the Resources Minister, the EPA Director or the EPA Board. The lack of criteria means that decisions made in respect of fin-fish farming are entirely discretionary. The consequence of this is that decision-making is opaque, there lacks the transparency and certainty needed to give the community confidence about how decision-making weighs economic, environmental and social considerations.*<sup>100</sup>

...

*There are no criteria legislated in the MFP Act on when the impacts identified in an Environmental Impact Statement (EIS) will be acceptable, what level of scientific certainty is required about potential adverse environmental impacts, or the extent to which economic, social or amenity issues will be considered.*

*... Further, the MFP Act provides no guidance about how to balancing (sic) competing economic, social and environmental considerations, which can lead to economic considerations being weighed against environmental ones. Clear criteria for decision-making, for instance, about whether marine farming development plans in an area should be approved should be legislated and should reflect the environmental values of an area, and the impacts or potential impacts on those values.*<sup>101</sup>

## **Integrated assessments**

The EDO submission noted the absence of integrated and cumulative assessments in the Tasmanian system:

*Tasmania's system maintains separate assessment frameworks for marine farming and for other use and development, including land-based aquaculture. Proponents are able to propose new or expanded marine farming operations with little regard to existing or potential uses of adjoining land. As the Okehampton Bay example highlights... this often results in salmon farming companies needing to obtain a series of permits or approvals, with each application assessed without regard for the outcome of related applications. That is, a failure to consider the cumulative impacts of marine farming on the marine environment and communities.*

*In our work, it is apparent to us that there is substantial concern in the community about the lack of integrated and cumulative assessment. The impacts of marine*

---

<sup>99</sup> Environmental Defenders Office, 2019, *Submission #220*, p. 19.

<sup>100</sup> Environmental Defenders Office, 2019, *Submission #220*, p. 7.

<sup>101</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 7-9.



*farms on communities is, in our experience, much greater than is currently assessed by the Panel under the MFP Act. Communities are concerns (sic) about amenity impacts directly from marine farms themselves - noise, odour, visual impact – but also the related and necessary consequential impacts from supporting infrastructure, including smolt breeding, land-based processing, freshwater dams and pipes, access to transport routes and waste management facilities. There are impacts not only to residents in the affected areas, but also to tourism and recreation activities, none of which are adequately assessed through existing processes.*

...

*Other jurisdictions with intensive salmon farming, such as Scotland, New Zealand and Norway, have adopted a more integrated approach to marine farming planning. These jurisdictions require a range of authorities to be consulted in relation to marine farming approvals, but generally provide for a coordinated process for undertaking the consultation. Each of these jurisdictions emphasises environmental protection in the coordinated assessment process.*

*This integrated approach to marine farming planning means that these jurisdictions are better placed to provide “well-planned, sustainable development” than Tasmania. If marine farming planning was better integrated with land use planning under the LUPA Act, it would ensure that communities would be better informed about areas that are within or outside of marine farming zones. It would also ensure that areas where marine farms are clearly incompatible with existing land uses or the natural values of a marine area could be identified and marine farms prohibited.<sup>102</sup>*

The WWF submission acknowledged and supported the arguments and analysis made by the EDO, and called for the holistic management of Marine Activities under the Tasmanian Framework and made the following recommendations:

*Bring marine farming within the Land Use Planning and Approvals Act 1993 by:*

- *Requiring regional coastal and marine plans to be developed through consultation with all affected stakeholders (including the public). The plans could identify appropriate zones for marine farming, set limits on intensity of development and performance based standards that must be achieved. Regional plans could be reviewed by the Tasmanian Planning Commission and implemented through planning schemes;*
- *Introducing Statewide guidance for marine farming provisions in planning schemes;*
- *Establishing the Marine Farming Planning Review Panel (subject to the changes discussed below) as a referral agency to consider applications for individual lease developments/expansions;*
- *Providing resources to planning authorities to adequately assess applications for marine farming operations.*

---

<sup>102</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 15-6.

- *If the Marine Farming Planning Act 1995 remains, ensure that a clear hierarchy of objectives is set out to guide decision making. The hierarchy should prioritise maintenance of natural values.*<sup>103</sup>

Dr Sharon Moore, in her submission expressed concern at the separate planning system in place for the fish farming industry:

*Having a separate planning system for one industry has never inspired confidence in the transparency and fairness of its regulation. This lack of confidence has only been exacerbated by the government's plans to expand the industry, without regard to independent scientific input, including the most basic of requirements – baseline environmental data – or community concerns, and the lack of independent scientific and community input into planning and industry oversight.*<sup>104</sup>

**Findings:**

63. The *Marine Farming Planning Act 1995* provides no framework to balance economic, social and environmental considerations.
64. It is not clear how impacts, including on residents, tourism and recreation activities, are weighted in the marine farm planning process.
65. Concerns were raised that the legislation lacks clear and specific criteria to guide decision-making by the Marine Farming Planning Review Panel, the Minister, EPA Board or the Director, EPA.
66. Concerns were raised there are no legislative criteria relating to environmental outcomes, such as requirements for caps on biomass or nitrogen in either marine farming development plans or environmental licences.
67. Concerns were raised that legislation does not require the consideration of integrated and cumulative impacts of marine farming on the marine environment and communities.
68. It is reported that other jurisdictions with intensive fin fish farming, such as Scotland, New Zealand and Norway, have adopted a more integrated approach to marine farming planning.

**Recommendation 17**

Establish a framework, with criteria, for the consideration and weighting of economic, social and environmental factors in the assessment and approval of marine farming development plans.

**Recommendation 18**

<sup>103</sup> WWF, 2019, *Submission #94*, p. 3.

<sup>104</sup> Dr Sharon Moore, 2019, *Submission #73*, p. 1.

Require consideration of cumulative environmental and social impacts of marine farming in the assessment of marine farming development plans.

**Recommendation 19**

Require Marine Farming Development Plans to specify biomass and nitrogen limits, and any proposal to increase the biomass or nitrogen limits be considered an amendment to the plan.

**Marine Farming Planning Review Panel membership**

The submission from DPIPWE provided detail on membership of the Marine Farming Review Panel (the Panel):

*The Panel is a statutory body established under Section 8 of the MFPA. The primary function of the Panel is to consider marine farming planning matters and make recommendations to the Minister. The Panel comprises up to nine individuals appointed by the Governor:*

<b>Position</b>	<b>Current member</b>
Chairperson	Mr Andrew Paul
A person nominated by the chairperson of the Tasmanian Planning Commission with ability and experience in planning issues	Mr Mitchell Clark
A person, other than the Director, EPA, with ability and experience in environmental management	Ms Jo-Anne Fearman
A person, other than the Director, EPA, with ability and expertise in fish health and biosecurity	Dr Rod Andrewartha
A person with ability in marine resource management	Professor Colin Buxton
A person with ability to assess boating, recreational and navigational issues	Mr Terry Long
A person with experience in marine farming	Mr Pheroze Jungalwalla
A person with expertise in local government issues	Mr Neil Campbell
A person nominated by the Minister	Ms Heather Chong

**Figure 3: Panel Membership (as at 27/7/2020)** <sup>105</sup>

<sup>105</sup> DPIPWE, 2019, *Submission #221*, pp. 10-11.

The WWF submission expressed concern regarding the membership of the Panel as set out in section 8(2) of the MFPA, highlighting the following deficiencies in the membership of the panel as required under the Act:

- *There is no explicit requirement for the Panel to include a member with qualifications in relation to marine ecology, hydrology, marine sediments or conservation management.*
- *Other than the person appointed by the Minister, there is also no capacity for community concerns or conservation sector positions to be represented.*
- *There is no transparent reporting of the members credentials and material evidence of their presumed expertise and its relevance specifically to finfish farming.<sup>106</sup>*

Jo-Anne McCrea, WWF, in a hearing, called for transparency in relation to the expertise of panel members:

*I'll just underline the importance of the panel in terms of where it currently sits. It's for that reason that the flaws in the system at the moment are so significant. Maybe it's there, but I'm not able to determine the depth and breadth of the expertise of the person currently appointed around the marine environment criteria -*

...

*- which is worrying given that the panel recently approved an over 50 per cent increase in the state's salmon production. Even if the whole panel was present in making that decision, a lot is riding on the credentials of that person who, for me, would be representing the kind of interests that the conservation sector represents.*

*I'm not able to determine whether that person has the breadth and depth of experience to assess and advise on large-scale aquaculture operations. They are quite different from us marine biologists. We're quite diverse in our areas of expertise. Somebody's expertise in marine environment may or may not be relevant or enough to make decisions about this -*

...

*I think their credentials should at least be transparent so that anybody can judge whether they're sufficient or not.<sup>107</sup>*

Similarly, the EDO submission stated the composition of the panel is cause for concern as there is no requirement to represent the community or expertise in ecological disciplines, and raised other concerns:

*It would also seem sensible, given the responsibility for regulation and consequences for enforcement, that one member is a legal member, which would better ensure that*

---

<sup>106</sup> WWF, 2019, *Submission #94*, p. 16.

<sup>107</sup> Jo-Anne McRea, *Transcript of Evidence*, 21 February 2020, p. 39.

*management measures specified in MFD Plans are the controls are enforceable, meet the requirements of s22 of the Act and are consistent with the objectives of the MFP Act, and who would have a greater capacity to recognise issues of conflict of interest and good governance. However, this is of lesser importance than community and ecological membership.*

*We recommend that the membership include:*

- *One or more members with qualifications in marine ecology, hydrology and marine sediments and conservation management;*
- *A community representative; and*
- *A legal member.*

*The current composition means that the quorum has the potential to be weighted towards industry members rather than community or scientific expert members... If our recommendations were adopted as to membership composition, this would restore the balance to scientific and expert membership, with community and industry members being legitimate voices, but without the balance of power. This would go some way to restoring community confidence in the decisions of the Panel.<sup>108</sup>*

Laura Kelly, Environment Tasmania stated:

*There needs to be more clarity about the skill set of the representatives, as WWF spoke to. There should be community and the NGO representation.<sup>109</sup>*

The Environment Tasmania and Tasmanian Conservation Trust submissions also supported changes to panel membership requirements. They felt there should be increased representation on the panel for interests not aligned with fish farming (conservation group, recreational fishing and community), and for fish farming scientists to be totally independent of commercial interests.<sup>110</sup>

Former Panel members Louise Cherrie and Professor Barbara Nowak made the following comments on panel membership:

***Ms NOWAK*** - *If you have a panel that is advisory and has representatives from other stakeholders, not just someone who represents aquaculture - because if you look at membership of the panel, there are different skills, but then there is someone who knows things about aquaculture who represents aquaculture. Why not have other stakeholders who have interests and use the marine environment? Or we don't have a panel at all because all the roles we were doing could be done by the department - and it would be done obviously - it's not independent, which it's not.*

***Ms FORREST*** - *Is it a role that could be done by the EPA or is that separate again?*

---

<sup>108</sup> Environmental Defenders Office, 2019, *Submission #220*, p. 13.

<sup>109</sup> Laura Kelly, Environment Tasmania, *Transcript of Evidence*, 21 February 2020, p. 52.

<sup>110</sup> Tasmanian Conservation Trust, 2019, *Submission #219*, p. 6.

**Ms NOWAK** - Yes, that's what I am saying.

**Ms CHERRIE** - That's exactly the same way as land-based developments happen under the Environmental Management and Coordination Act – EMCA (sic). Somebody puts in a proposal and they prepare all their plans. The department considers it. They get together with all the scientists in the relevant areas and they thrash it out, sometimes over two or three years. They work up a development that is worthy, all the bugs have been ironed out, of coming to the EPA board and you only send it when it is worthwhile.<sup>111</sup>

Christine Coughanowr's submission raised the following issues in relation to the panel:

*The Marine Farming Development Panel (the MFDP)(sic) is neither fully independent nor broadly representative... Furthermore, a number of the current panel members have uncomfortably close relationships with the aquaculture industry and/or state government; others have sat on the Panel for over 10 years and are accustomed to past regulatory practices.*<sup>112</sup>

Tim Baker, DPIPWE, made the following comments when asked about panel membership and the concerns raised in some submissions regarding the mix of expertise and skills required by the act to be on the panel:

**CHAIR** - ... there is no requirement for any of the appointed panel members to hold specific qualifications in environmental marine resource management, there is no requirement for any panel members to have expertise in marine ecology or hydrology, and there is no community representative required on the panel. Were those particular areas of expertise and representative roles considered when drafting the legislation that outlined whom the panel needed to consist of? Or is there any suggestion now that it would be appropriate to have those skills required to be on the panel? ...

**Mr BAKER** - ... ultimately our job is to implement the rules as set out in the legislation. A number of roles are set out in the legislation. I am unaware of any plans for the Government to change those as set out, but I am not really in a position to comment other than to say that the positions set in the legislation are currently filled with people who meet those requirements.<sup>113</sup>

Professor Colin Buxton, Panel member, made the following comments on the decision to add expertise to the panel during the assessment of the Storm Bay proposals:

**Prof. BUXTON** - ... In relation to the Storm Bay proposals, the panel began the process of assessing these proposals in June 2016. Very early in the piece we wrote to the minister, noting the complexity of the process, given that there were three separate proposals, two amendments, two existing plans and a new plan area for

---

<sup>111</sup> Louise Cherrie and Professor Barbara Nowak, *Authorised In Camera Transcript of Evidence*, 21 February 2020, p. 13.

<sup>112</sup> Christine Coughanowr, 2019, *Submission #67*, p. 6.

<sup>113</sup> Tim Baker, DPIPWE, *Transcript of Evidence*, 17 February 2020, p.27.

*Storm Bay and all of them obviously related to the same water body, and the panel noted to the minister that the proposals should be considered as a package.*

*Part way through this process there was a change in panel membership, notably with the addition and strengthening of expertise on the panel, and that included Barbara Novak (sic) and Louise Cherrie.*

...

**Prof. BUXTON** - *It was towards the end of 2017 that they came onto the panel.*

**Ms FORREST** - *Was that because of the perceived complexity of the three assessments being undertaken at once, or was there some other reason?*

**Prof. BUXTON** - *No, I think at the time there was a belief that the panel in conducting its business could be enhanced by including the specific expertise these two people brought. I believe it was publicly advertised and they were selected based on merit.*

**Ms FORREST** - *So not a perceived gap in the skill set, then?*

**Prof. BUXTON** - *I don't think so, just an additional complementary skill set.*

**Mr VALENTINE** - *Was that by expression of interest?*

**Prof. BUXTON** - *I am subject to correction on this matter, because I wasn't involved in the selection of these panel members, but I believe the way this is done, other than the direct appointment from the Governor, is through an expression of interest.*

**CHAIR** - *Can I clarify in terms of the timing of adding those two members that it was after the process had commenced in terms of the applications for Storm Bay?*

**Prof. BUXTON** - *That is correct, and that's a very important question because the panel had already passed the stage at which we would have been in a position to reject an amendment or reject a plan.<sup>114</sup>*

Clarification was sought from Tim Baker and Fionna Bourne, DPIPW, in relation to a quorum of the panel engaged in decision making:

**CHAIR** - *You could have a quorum engaged in a decision-making process on behalf of the panel that had a predominance of industry representatives or, potentially, a dearth of scientific representatives.*

**Ms BOURNE** - *The current membership of the panel, as set out in the act, and the individuals contained therein have a broad range of skill sets. None of them is directly employed by any of the industry representatives. Some members are appointed for one particular heading, but they have a range of experience over several fields, so they would be equally suitable to have appointment against one or*

---

<sup>114</sup> Professor Colin Buxton, MFPRP, *Transcript of Evidence*, 8 September 2020, pp. 19-20.

*other of the other skill sets required by the panel. The full breadth of knowledge of all of the members are brought to the table at all times, not just purely this specific headline they are appointed for.*

**CHAIR** - *Noted, but in terms of what we could be given comfort with externally, through the legislation, there is not a requirement that there is a particular skill set or experience present in the quorum at a decision-making moment, just to be clear.*

**Ms BOURNE** - *I would have to go back to the act to double-check.*

**Mr VALENTINE** - *It's in schedule 3 and it simply says that the quorum at any duly convened meeting of the panel is five members and it doesn't have any other statements. "A duly convened meeting of the panel at which a quorum is present is competent to transact any business of the panel." It doesn't have any riders, as far as I can see.*

...

**Mr VALENTINE** - *In section 3 of the schedule, meetings of the panel -*

*(3) A question arising at a meeting of the Panel is to be determined by a majority of votes of the members present and voting.*

*Three members that could carry a vote with a quorum of five.*

...

**CHAIR** - *The total number of members of the panel is nine, a quorum is five and a decision could be carried by three as a majority of the five. One-third of the panel could be in favour of a particular - ...*

**Mr BAKER** - *I would note that I would be very surprised if that were not reflected in the report, which is made public, that goes to the minister.<sup>115</sup>*

The Inquiry sought information on whether the resignation of two Panel members had triggered a formal review of the composition or functioning of the Panel:

**CHAIR** - *In terms of what transpired with the two panel members who resigned from the panel, we have heard some quotes and received submissions from those two members. Given that is quite a significant act to have occurred and the concerns put into the public domain by those two individuals, was a review conducted, or some sort of assessment of the composition of the panel and the way that panel conducts its decision-making functions, prompted by those resignations?*

**Ms BOURNE** - *If you are talking about the specific decision, the panel -*

---

<sup>115</sup> Tim Baker, DPIPWE, *Transcript of Evidence*, 17 February 2020, p. 29.



**CHAIR** - No, I am not talking about the specific decision. I am talking about the things those two individuals have highlighted in their assessment to be deficiencies of the way the panel operates, broadly. Did that prompt at that level, not at a specific decision level but at a whole-of-panel level, contemplation of whether the panel was appropriately configured under the legislation and was able to fulfil its function given those issues raised?

**Mr BAKER** - I think I am best placed to answer that. As far as I am aware, the Government has no plans to change the configuration of the panel. As I have said a few times, from the department's point of view, the recommendation in the report that went to the minister was consistent with the legislation. As far as we are concerned, our strong view is that it was consistent with the legislation and was sound.

...

**CHAIR** - I want to take you back to my question. I heard you say that the Government does not have any intention to change the way the panel is configured or how it functions. My question was, was there a review triggered by the resignation, some form of formalised review or consideration of the concerns raised at the time?

**Mr BAKER** - I wasn't in the department at the time, but as far as I am aware, no.<sup>116</sup>

## Marine Farming Planning Review Panel process

The submission from DPIPWWE outlined the functions and powers of the Panel:

*The general functions and powers of the Panel are provided in the MFPA under Section 9, being:*

- *to consider draft plans, draft amendments to marine farming development plans and draft modifications to marine farming development plans following reviews;*
- *to consider environmental impact statements;*
- *to consider comments made on draft plans, draft modifications and draft amendments;*
- *to make recommendations to the Minister in respect of draft plans, draft modifications and draft amendments;*
- *to perform any other function imposed on it under the Act or any other Act;*  
*and*
- *to undertake any other function or activity the Minister determines.*

*The Minister, by notice in writing, may give directions to the Panel. The Panel must perform its functions and exercise its powers in accordance with any directions given*

---

<sup>116</sup> Tim Baker, DPIPWWE, *Transcript of Evidence*, 17 February 2020, p. 29.

*by the Minister. In undertaking its functions, the Panel may conduct hearings to assist it in the performance of its functions and do anything necessary or convenient to perform its functions.*

*To assist the Panel in performing its functions the Department's expertise and capabilities are available to it upon request. Additionally, the MFPA provides for the Panel to seek expert advice from any person or body on:*

- *the adequacy or otherwise of proposed environmental controls;*
- *technical aspects in relation to marine farming;*
- *biological and physical requirements of fish species; and*
- *any other matter to assist it in performing its functions.*<sup>117</sup>

Christine Coughanowr's submission suggested a loss of public confidence in the independence of the Panel:

*Several well-respected panel members with strong scientific backgrounds and independent views have not been welcome on the MFDP (sic) when their views have not been 'operationally convenient' for the salmon industry. Most recently, two members (Dr Barbara Novak [sic] and Dr Louise Cherrie) resigned in protest when their concerns about the Storm Bay expansion were not addressed. Previously, another respected scientist (Dr Lois Koehnken) was not reappointed to the Panel after her concerns about ecological impacts of a proposed lease in the Channel area resulted in perhaps the only instance where the Panel has ever knocked back an application. Shortly after this, the legislation was changed such that the Panel no longer had decision-making powers; this was transferred to the Minister and the Panel was demoted to an advisory role. Is it any surprise that the public has lost confidence in the Panel and its 'independent' role?<sup>118</sup>*

Further, Ms Coughanowr suggested there is a need for legislative change to provide the Panel with the power to refuse an application for a MFDP amendment:

*Sections 33 and 35(2) of the MFP Act 1995 should be changed such that once the Panel has agreed to accept an application for a MFDP amendment, they are not then obliged to approve it, should the amendment be determined to be unsuitable. As currently written, the Act allows the Panel to alter the amendment, or require further changes, but they cannot refuse it. This is unacceptable if the Panel is genuinely independent.<sup>119</sup>*

The Tasmanian Greens submission asserted that public confidence in the Panel as an independent entity has been eroded:

*The independent functioning of the Marine Farming Planning Review Panel has been eroded over time. In 2011, a change to legislation empowered the Minister to make the final decision on any plans, and relegated the panel to only make*

---

<sup>117</sup> Tim Baker, DPIPW, *Transcript of Evidence*, 17 February 2020, p. 28.

<sup>118</sup> Christine Coughanowr, 2019, *Submission #67*, p. 6.

<sup>119</sup> Christine Coughanowr, 2019, *Submission #67*, p. 5.

*recommendations. This has had an unhealthy corrupting effect on what had previously been an independent scientific assessment of a location and a farm's potential impact. This legislative change has resulted in approvals for a number of new leases by successive ministers despite substantial unresolved scientific and community issues.*<sup>120</sup>

The submission of Louise Cherrie and Professor Barbara Nowak calls into question the functioning of the Panel and its relationship to industry:

*Poor functioning of the Marine Farming Planning Review Panel includes the inability to apply sound science, an unwillingness to discuss and learn from changes (e.g. Macquarie Harbour, emergence of POMV), and the propensity to only provide advice operationally convenient to salmon industry. Indeed, the salmon industry had ready access to the Panel to advise on the operational impact of potential management conditions and were consulted on frequent basis and at a minute notice to the Panel.*

*We were not allowed to consider the previous salmon industry issues in Macquarie Harbour as they were considered irrelevant by other members of the Panel. While Macquarie Harbour is a very different system to Storm Bay (hydrodynamically and biogeochemically), the factors that are the same are: same operators, same operation, same regulation, and based on flawed or inadequate science. We were not allowed to apply biosecurity recommendations from Global Salmon Conference 2017 (Carter et al. 2019) to assess MFDP. This inability to take into account the latest information and policy recommendations jeopardises the sustainability of Tasmanian salmon industry.*<sup>121</sup>

Members of the Marine Farming Planning Review Panel appeared before the Subcommittee and clarified a number of matters. The Panel members also expressed concern with evidence presented to the Inquiry regarding its performance and the resignation of two members:

**Prof. BUXTON** - *The reasons for their resignation, however, were only provided in a letter to Mr Barnett some three months after they had resigned and they were leaked to the press from sources unknown. I suppose it was the contents of that leaked document that we believe reflected very poorly on the workings of the panel, that certainly questioned the integrity of other panel members and we believe have contributed significantly to an erosion of public confidence in the workings of the panel.*

*... We were certainly past the point, as we have already mentioned today, at which the panel had the power to reject either those amendments out of hand prior to evaluation or to reject the plan.*

**Ms FORREST** - *To clarify: didn't you just say you can't reject the plan?*

---

<sup>120</sup> Tasmanian Greens, 2019, *Submission #101*, p. 2.

<sup>121</sup> Louise Cherrie and Professor Barbara Nowak, 2019, *Submission #51*, p. 2.

**Prof. BUXTON** - We can't reject a plan, correct; that is a power the panel does not have. The panel could make a recommendation to it.

**Ms FORREST** - After the assessment, but you can't reject an assessment of a plan.

**Prof. BUXTON** - Yes, that is correct. The second point that they make - the absence of base information on which they could provide evidence - was very well understood and appreciated by the rest of the panel. However, in our deliberations, the panel came to the view that this could be accommodated and we noted several things. We noted that Huon Aquaculture was already operating in Storm Bay and that Tassal was also operating effectively by way of contributing nutrients to Storm Bay in its current operations.

There was considerable amount of information on Storm Bay in the work done by IMAS and CSIRO that describes the underlying conditions - that there were commitments from all three companies to establish a robust research program that would further provide information on this farming activity; that the historical development of salmon farming; and other aquaculture ventures in Tasmania and Australia in general had proceeded without perfect knowledge and had been regulated under an adaptive management framework that, might I say, is considered to be internationally best practice. The regulator had clearly articulated a slow ramping up of activity while this significant research program was underway, so the argument that there was insufficient base information on which to proceed was by way of our discussion as a full panel rejected, and we proceeded. Their third point - that the panel showed an undue propensity to support what is operationally convenient for the aquaculture industry - is a highly subjective statement. No evidence was led to support the statement and we don't think it merits a response.<sup>122</sup>

Given the Inquiry's terms of reference, the disagreement between Ms Cherrie and Professor Nowak and the Panel is not for the Inquiry to resolve. Refer to the compilation of evidence relating to this matter in Appendix C.

The Marine Life Network submission expressed concern at the difficulty of public participation in the Panel process:

*The planning process is also seen as difficult to access or comprehend, and lacking in independence. There have been criticisms about a lack of meaningful consultation and the timing of consultation, e.g. Marine Farm Development Plans containing 50 appendices, thousands of pages of documents, studies and reports are delivered over the Christmas New Year Period. Comments have been made that this does not constitute a meaningful attempt at consultation.*

*Draft MFDPs and amendments are placed on public exhibition for up to two months, but some further processes may be needed, like allowing interest groups to subscribe to planning notice alerts. Members of the public with an interest in the proposals are*

---

<sup>122</sup> Professor Colin Buxton, MFPRP, *Transcript of Evidence*, 8 September 2020, p. 24.

*usually likely to lack an understanding of tight time limits imposed on review processes, lack the capacity to bear the cost of obtaining quality independent technical opinions, and do not have the capability to respond quickly to the large volumes of technical material provided. The submissions in reply can be rushed and poorly researched, even by the preferred standards of the submitter. There may or may not have been public briefing opportunities in the lead-up to a process, especially forums conducted by an independent reviewer like the EPA.*

*This leads to a sense of community powerlessness, so that regardless of the quality of the proposal the process does not generate trust that it has been independently vetted. The EPA could fulfil the role of a public defender, but this body appears to be under-resourced, is obviously directed by the Minister, and so it tends not to be seen currently as completely independent.<sup>123</sup>*

Christine Coughanowr's submission questioned the consideration given to community input on proposed MFD Plans:

*Public representations to the Panel are not taken seriously, and very few of their concerns and recommendations are incorporated into final MFDPs or Environmental Licenses. This process appears to be largely run a box-ticking 'consultation' exercise. For example, 220 submissions were made on the recently approved West of Wedge expansion in Storm Bay, and many people took the time to travel significant distances to present their concerns to the MFDRP (sic) in person. Virtually all of these were dismissed, including my own which was based on over 35 years of directly relevant scientific expertise... The effort to review and assess the information provided in the EIS documentation is enormous; for Storm Bay this consisted of three massive documents with dozens of appendices, adding up to literally thousands of pages of material, all to be completed over the Christmas holiday period.<sup>124</sup>*

The Tasmanian Conservation Trust (TCT) submission questioned whether the Panel genuinely takes account of community concerns:

*The TCT has made submissions on numerous Draft MFD Plans and participated in numerous MFPR Panel public hearings since the 1990s. We conclude based upon this long and detailed experience that the Panel has proven itself to be an industry rubber stamp. The Panel has never taken seriously the issues raised by the community or conservation groups and has not made significant changes to draft plans in response to community concerns.<sup>125</sup>*

Some community members expressed concern regarding their experience presenting to the Panel.

---

<sup>123</sup> Marine Life Network, 2019, *Submission #22*, p. 4.

<sup>124</sup> Christine Coughanowr, 2019, *Submission #67*, p. 6.

<sup>125</sup> Tasmanian Conservation Trust, 2019, *Submission #219*, p. 4.

Trish Baily, Tasman Peninsula Marine Protection (TPMP), spoke of her experience presenting in a hearing process of the Panel:

*To the best of my knowledge, none of us heard back from the Marine Farm Planning Review Panel. There was no letter of acceptance we had presented. I, for one, and I know other members, certainly another one of my colleagues who will be presenting with TAMP, felt we were almost threatened and abused. I certainly felt that when I was giving my presentation. The way we were treated by the panel members was not appropriate when I gave my submission.<sup>126</sup>*

Rebecca Howarth, TAMP, described her experience participating in the Panel process:

**Ms HOWARTH** - *When we applied to the Marine Farming Planning Review Panel for the Storm Bay expansions a number of community members made submissions. We had acknowledgments of the receipt of our submissions but then we didn't hear anything about what the panel thought of our submissions or what their reasons were for taking parts of those for making recommendations to the minister. Some of us made presentations and we all felt extremely uncomfortable during the presentations. A lot of us shared how we felt afterwards and it didn't feel like a balanced, non-biased process.*

**CHAIR** - *Is there a record of those proceedings you were involved in? Could I, for instance, see the submissions that you made or details about the hearings you attended?*

**Ms HOWARTH** - *I know that the submissions were made available online immediately, when the hearings were going ahead. I don't know where they are recorded and I don't know if there is a recording of the presentations; I have no idea. I know that we did not hear anything afterwards about our contributions. A lot of us had driven a long way, we had taken a half-day or a day out to make this. It caused a bit of anxiety for some community members because this doesn't come naturally to a lot of us, to come and present in front of a panel. It took a lot out of a lot of community members and then we didn't get any receipt of acknowledgement or how that would be contributing to the process at all.*

**CHAIR** - *You are not sure to what degree or in what way your submissions and hearings were incorporated into decision-making...*

**Ms HOWARTH** - *Absolutely no idea; in fact, we felt that our concerns were possibly completely dismissed because we felt a very dismissive attitude in the room when we were presenting to the panel. Personally, I cannot speak for others, but I was presenting alone and I didn't have any of my colleagues in the room with me, not that that is important. There was definitely some body language that made me feel as if I was up against - it did not feel balanced. There was some uncomfortable*

---

<sup>126</sup> Trish Baily, *Transcript of Evidence*, 12 February 2020, p. 4.

*behaviour like jeering and sneering at me. I felt dismissed, definitely. I was even questioned on some of my concerns, and that was quite uncomfortable.*<sup>127</sup>

Peter George, President, Neighbours of Fish Farming stated:

*We presented to the Marine Farming Review Panel. We were told when we arrived that the submissions of other community groups would not be available to us, that they would be all held in secrecy. We were told that we would not have access to any recordings or Hansard-style recordings of the panel. We were challenged quite a lot, not only on our information but also on what science we had undertaken and what science would prove our concerns. We said to the panel, as this group has said, that we are a small community organisation. These are the answers that the Government has and so on. We never heard back from the panel.*

*However, during the conversation with the panel we told them that one of the biggest problems was that there is no baseline science available from virtually any leases, particularly older ones. We were told ... that baseline science had been done and that it was available and that it would be provided to us. We wrote several times afterwards seeking that information and have never heard back. We have never even had a reply.*<sup>128</sup>

Christine Coughanowr described her experience presenting to the Panel:

**Ms COUGHANOWR** - *I guess my experience with the panel: I presented concerns I had to the panel about the Storm Bay expansion from the perspective of the Derwent Estuary Program. I felt my presentation was listened to with interest and respect. Particularly two of the panel members asked a number of very detailed questions. One of those actually thanked me for putting all of the information for the three developments into a single document because that was the first time they'd seen that information put in one place.*

*Then the two panel members who seemed to be taking careful note of my concerns subsequently resigned from the panel so that left me with some real concerns as to whether my submission had been carefully considered by the panel. None of the recommendations I made in my submission were taken on board as far as I can tell into the final approvals.*

**CHAIR** - *How would you know that? Did you see the report the panel provided to the minister with its recommendations?*

**Ms COUGHANOWR** - *The panel did do a summary at the end of all the submissions received and whether the concerns were deemed to be of a substantial nature and how those might be addressed.*

*The concerns I raised - most of them suggested they could be addressed through improved research, improved monitoring and adaptive management. I guess I'm*

---

<sup>127</sup> Rebecca Howarth, TAMP, *Transcript of Evidence*, 12 February 2020, p. 19.

<sup>128</sup> Peter George, NOFF, *Transcript of Evidence*, 12 February 2020, p. 22.

*seeing again that the expansion has progressed but the progress on the improved science, the improved monitoring and the adaptive management and regulatory processes have not kept up with that expansion.*<sup>129</sup>

Tim Baker, Secretary DPIPWE provided some clarification of the Panel process regarding reporting and recording of the hearings:

**Mr BAKER** - *The panel does make a report, Mr Valentine, at the end of the process, which goes to the minister and which is made public. Actually, we have a copy of one we can table today so it's not done in complete isolation -*

**Mr VALENTINE** - *I appreciate there's a report but in terms of deliberations, councils have to deliberate in the open. As I say, other aspects of the planning process for land-based, so one might expect that the same should occur in this instance.*

**Mr BAKER** - *Two points: one they can also hold hearings, as I'm sure you're aware which I think in this case they did, and the second point I would make is the point I have a few times today which is any enhancements or changes to the legislation are a matter for the Government. From our point of view, the process followed was consistent with the rules as they are set out and the minister received a recommendation from an independent panel and made a decision based on that.*

**Ms BOURNE** - *As Tim said, a number of documents end up in the public domain as a result of the deliberations. For an amendment, a section 40 report is prepared. That report contains the submissions that we've received and comments around whether the amendment needed to be modified in light of those submissions.*

*If the panel were to receive, as part of the public process, a request to conduct a public hearing, they are obliged to do so. In the Storm Bay instance, requests were made and public hearings were made available on the process. The panel also provided quite a detailed report on its deliberations and its recommendations, and that also was publicly released.*

**CHAIR** - *Is there a public record of the hearings?*

**Ms BOURNE** - *Do you mean a transcript of the hearings?*

**CHAIR** - *Yes, so that we could go back and look at it on a later date.*

**Ms BOURNE** - *Not publicly available, no.*<sup>130</sup>

Professor Colin Buxton, Panel member, stated the following in response to claims that Panel hearings were conducted in a disrespectful manner:

*One of the representations you received from Rebecca Howarth criticised the behaviour of the panel in a hearing. We would like to submit a recording of those*

---

<sup>129</sup> Christine Coughanowr, *Transcript of Evidence*, 17 February 2020, pp. 49-50.

<sup>130</sup> Tim Baker, DPIPWE, *Transcript of Evidence*, 17 February 2020, pp. 23-24.



*hearings which you can listen to. As a panel, we reject any assertion that the hearings were conducted in a disrespectful manner.*<sup>131</sup>

**Findings:**

69. The Marine Farming Planning Review Panel is a statutory body established under Section 8 of the *Marine Farming Planning Act 1995*, the primary function of which is to consider draft Marine Farming Development Plans or draft Marine Farming Development Amendment Plans and make recommendations to the Minister.
70. The Marine Farming Planning Review Panel must perform its functions and exercise its powers in accordance with any directions given by the Minister.
71. The Marine Farming Planning Review Panel is an advisory body, not a decision-making body, and under current legislation is not empowered to refuse/reject a draft Marine Farming Development Plan or draft Marine Farming Development Amendment Plan.
72. The Marine Farming Planning Review Panel can require the planning authority to modify a draft Marine Farming Development Plan or draft Marine Farming Development Amendment Plan until it is deemed acceptable to be recommended to the Minister for approval.
73. The legislated number of Marine Farming Planning Review Panel members is nine, a quorum is five, which means a decision could be carried by a minimum of three members as a majority of a quorum of five.
74. Concerns were raised that the Marine Farming Planning Review Panel is neither fully independent nor broadly representative.
75. Concerns were raised with regard to the lack of statutory requirement for the Panel to include members with qualifications in marine ecology, hydrology, law, conservation management and a community representative.
76. There is a perception the Marine Farming Planning Review Panel has a close relationship to the Industry, which is viewed as being advantageous to the industry.
77. Two additional members were selected to strengthen the expertise of the Marine Farming Planning Review Panel during the assessment of the Storm Bay proposals.
78. The two additional Marine Farming Planning Review Panel members engaged during the assessment of the Storm Bay proposals resigned due

---

<sup>131</sup> Professor Colin Buxton, MFPRP, *Transcript of Evidence*, 8 September 2020, pp. 23-25.

to the lack of statutory authority for the Panel to refuse an application and concerns regarding the rigour of the application assessment process.

79. The Marine Farming Planning Review Panel defended its decisions in relation to Storm Bay, its diligence in following legislated process and rejected assertions of an inappropriate relationship with industry.
80. The marine farming planning and approval process has limited opportunity for public consultation and engagement.
81. Assertions were made that public representations and concerns raised with the Marine Farming Planning Review Panel were not reflected in final Marine Farming Development Plans or Environmental Licenses.
82. Marine Farming Planning Review Panel hearings are not required to be recorded nor made available to the public.

#### **Recommendation 20**

As part of a review of the *Marine Farming Planning Act 1995*, commission an independent examination of the membership and governance requirements of the Marine Farming Planning Review Panel (the Panel), including assessment of representation, qualifications and expertise in Panel membership.

#### **Recommendation 21**

Publish the relevant credentials, skills and experience of Marine Farming Planning Review Panel members and their tenure on the Panel.

#### **Recommendation 22**

Require a statement of reasons to be published in relation to decisions/recommendations of the Marine Farming Planning Review Panel.

#### **Recommendation 23**

Review opportunities for the Marine Farming Review Panel public hearings to be documented and made publicly available.

### **Appeal rights/merits review**

The EDO submission noted the opportunity for merits review was part of a transparent and robust regulatory system, and that its absence in the regulation of marine farming in Tasmania is unique in comparison to broader industrial regulation:

*There is no opportunity to appeal against a decision to approve a MFD Plan, or an amendment to a plan, other than for existing marine farm operators where it adversely impacts their existing marine farming activities.*

...

*(b) Access to justice in marine farming decisions – merits review*

*Part of a transparent and robust regulatory system is the ability to apply to an independent umpire for a review of an administrative (government) decision on the merits. The ability to substantively (not just legally) review environmental decisions is a recognised component of public participation.*

*The regulation of marine farming is unique in industrial regulation in Tasmania, in that neither the proponent of a marine farm nor a third party has rights to bring a merits review of a MFD Plan, an amendment to the plan. There are also no rights of appeal in relation to decisions of the EPA Director to issue environmental licences where not referred to the EPA Board or approve emergency applications. Likewise, there is no right to appeal biomass or management determinations by the EPA Director under MFD Plans. This places marine farming in a unique position. All other industrial activity in Tasmania [is] regulated by the EPA as a Level 2 activity under the EMPC Act and is subject to rights of appeal to an independent third party, in that case, the Resource Management and Planning Appeals Tribunal or to be assessed by an independent expert body – the Tasmanian Planning Commission – in the case of combined planning scheme amendments and permit application.<sup>132</sup>*

The WWF submission expressed concern regarding the lack of appeal rights in relation to MFDPs:

*For most significant land use and development decisions under LUPAA, any person who made a representation can appeal to the Resource Management and Planning Appeal Tribunal. Tribunal effectively re-hears the evidence and makes its own determination as to whether the use or development should proceed. This is also the case in New Zealand and Scotland. In contrast, there is no right to appeal against a decision under the Marine Farming Planning Act 1995 to amend a Marine Farming Development Plan to facilitate an aquaculture proposal. Particularly given concerns regarding the independence of the decision-making structure under the MFPA, a right of appeal is important and should be open to any person who made a representation in respect of the proposal (including affected residents, NGOs, other industries, tourism operators and the local government).*

*Allowing a right of appeal to the Resource Management and Planning Appeal Tribunal would provide appropriate scrutiny from a body with experience in resource management and procedural fairness that is required to further the sustainable development objectives of the Resource Management and Planning System. The Tribunal has powers to dismiss frivolous appeals and to awards (sic) costs in appropriate situations, which is sufficient to deter appeals which lack merit.*

---

<sup>132</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 22-25.

*Note: bringing marine farming planning and approvals under LUPAA would generally mean that such decisions would be subject to merits review by the Tribunal.*<sup>133</sup>

Jane Gallichan, CEO Tasmanian Association for Recreational Fishing (TARFish) stated:

*Regarding appeals, under the current Marine Farming Planning Act, the marine farm development panel advises the minister on marine farm development plans and the minister then makes a final determination on those plans.*

*There are no appeal provisions against the minister's final approval of a plan. Appeals to the Resource Management and Appeals Tribunal are possible under section 95 against amendments to plans, but these limited appeal grounds are geared to the operators of salmon farms when a minister decides against issuing a planned amendment or refuses to direct the panel to prepare a draft amendment to an existing plan.*

*One solution could be to expand section 95 to include provisions for appeal on a wider range of matters and by third parties to ensure communities have fair and reasonable access to appeal against decisions.*

*This applies similarly to section 75 of the act where there are appeals to RMPAT against lease refusals and lease conditions, but not against the granting of a lease. They need to consider expansion of the ground for appeal and third-party access to appeal provisions appear to be supported by the RMPAT decision database, which I believe contains only three appeals against marine farm decisions - one against a refusal to renew a marine farm lease, one against a refusal to renew a marine farm license, and one relating to the making of an emergency plan. These were all between 1998 and 2001.*<sup>134</sup>

...

*We are not suggesting that it is an unbounded set of appeal rights, but certainly there could be broader grounds, in our view, for appeal rights.*<sup>135</sup>

Peter McGlone, Tasmanian Conservation Trust, stated:

*The panel's recommendations to the minister cannot be appealed, the minister is not bound to implement the panel's recommendations and the minister's decision cannot be appealed, so at every step of the process there is a lack of any right to legal review.*<sup>136</sup>

---

<sup>133</sup> WWF, 2019, *Submission #94*, p. 19-20.

<sup>134</sup> Jane Gallichan, TARFish, *Transcript of Evidence*, 9 September 2020, p. 22.

<sup>135</sup> Jane Gallichan, TARFish, *Transcript of Evidence*, 9 September 2020, p. 25.

<sup>136</sup> Peter McGlone, *Transcript of Evidence*, 11 February 2020, p. 22.

**Findings:**

83. The right of appeal is viewed as an important component of the Tasmanian Resource Management and Planning System, however is seen as inadequate in relation to planning and approval processes for fin fish farming.

**Recommendation 24**

As part of a review of the *Marine Farming Planning Act 1995*, expand access to merits review and appeal rights, including standing and grounds for appeal, in relation to the assessment of marine farming development plans and amendments to marine farming development plans, consistent with other legislated State planning instruments.

## Role of EPA

The EDO submission made the following comments regarding the role of the EPA:

*(c) Role of the EPA*

*The EDO is on the record as being supportive of the transfer of marine farming regulation to the EPA Director and Salmon Farming Unit, however with caveats.*

*First, neither the Unit or the Director are statutorily independent of the government, contrary to public statements by the government. The EPA Director and staff of the Unit are public sector employees, part of the Department of Primary Industries Water and the Environment, and thus under the direction and control of the Minister for Environment. Any employee of the government is not statutorily independent of that government...*

*Second, the decision-making function under the EMPC Act for all other industries regulated as Level 2 activities sits with the EPA Board. The Act only carves out the regulation of finfish farming for special treatment. It is only for finfish farming that the Director has powers to make approval decisions without reference to the Board. This is important because it is only when the Board makes decisions that there are third party appeal rights, allowing independent scrutiny and oversight of such decisions.*

*We recommend that the Board be the decision-maker for all finfish farming decisions under the EMPC Act.<sup>137</sup>*

According to Christine Coughanowr's submission:

*Too much power is invested in the EPA Director for a wide range of decisions, including the ability to significantly increase biomass limits without public*

---

<sup>137</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 13-14.

*consultation or notification. The EPA Board should play a greater role in the review and decision-making associated with finfish operations.* <sup>138</sup>

According to the Tasmanian Greens submission, the current regulatory regime for environmental licenses is not sufficient:

*The environmental licencing regime is currently too weak. Currently applications for an environment licence or variations to an environment licence are only required to be referred to the full Board of the EPA in limited circumstances. This means there is little or no opportunity for community consultation, or a legal appeal to a decision. Environmental licences or variations to environmental licences must be referred to the full board, and should not be left to the Director of the EPAs' discretion.* <sup>139</sup>

The EDO submission made the following comments on environmental licences issued by the Director, EPA or EPA Board:

*An environmental licence may be issued by the EPA Director or by the EPA Board if referred to it by the EPA Director. The EPA Director is to refer an environmental licence application to the EPA Board in the circumstances prescribed by clause 8 of the Environmental Management and Pollution Control (Environmental Licences) Regulations 2019. This is critical because public notice is only required for an EL where referred by the EPA Director to the EPA Board.*

*The criteria in clause 8 of the Regulations are complex. In summary, a referral must be made where:*

- *There is "likely to be a very high level of public interest in the application"; or*
- *It is reasonably likely that an EPBC Act approval will be required for the activity; or*
- *There is no MFD Plan or emergency plan in force for the relevant waters, unless a permit has been issued under the LMRM Act; or*
- *A MFD Plan has been in force for the waters for 10 years but no finfish have been kept in that area or, if they have been kept, they have been kept in accordance with a LMRM Act permit, emergency order or emergency plan; or*
- *A MFD Plan has been in force for the waters for the last 2 years but the Director considers the information provided to the Panel about environmental impacts of finfish farming did not adequately take into account the likely effects of the activity.*

---

<sup>138</sup> Christine Coughanowr, 2019, *Submission #67*, p. 5.

<sup>139</sup> Tasmanian Greens, 2019, *Submission #101*, p. 3.

- *A referral does not need to be made where the application is for an emergency order.*

*These criteria provide broad discretion to the Director for marine farming as to whether to refer the activity where there is a MFD Plan in force for the area of State waters to which the application relates.*

*The lack of transparency means the public is not to know whether the approval was made on the best available science, nor did the public have the opportunity to test the science upon which the approval was based. This is important where the relevant MFD Plan leaves to the Director the dissolved nitrogen and biomass limits for each activity:*

- *The Director, EPA, may, from time to time, determine the total permissible dissolved nitrogen output (TPDNO), within specified periods, attributable to licenced finfish farming for a specified area.*
- *The Director, EPA may from time to time, using whatever information the Director, EPA considers appropriate, determine the maximum permissible biomass of finfish that may be stocked within the area covered by this plan or any other specified area within the plan area.*
- *Further, the EMPC Act does not prescribe criteria to guide a decision on whether an environmental licence should be granted. The Director and the Board may “grant to a person an environmental licence in relation to an activity if ... satisfied that it is appropriate to do so”.<sup>140</sup>*

Wes Ford, Director EPA, was questioned in relation to the degree of independence of the EPA:

**Ms FORREST** - *One criticism made by other witnesses and in submissions to this committee is that the EPA is not an independent statutory authority.*

*Do you think that in any way limits your capacity to fully assess matters raised of an environmental nature and threats to the environment...*

**Mr FORD** - *I operate within the legislative framework that the government of the day or previous governments have established. Where the EPA sits in a degree of independence is hard to pin something down. It clearly doesn't sit at the level of independence of the Auditor-General or the Ombudsman, but it is more independent than - if I just deal with DPIPW, for example - for the Director of National Parks or the Director of Crown Lands. In legislation there is a range of different statutory prescriptions.*

**Ms FORREST** - *Degrees of independence?*

---

<sup>140</sup> Environmental Defenders Office, 2019, *Submission #220*, pp 19-21.

**Mr FORD** - *Degrees of independence. Legislation often struggles to actually spell those out. In terms of the legislative accountability sense, I don't report to a minister; there is no role for the minister in relation to my decision-making. In fact, there is not really a role for the board in my decision-making in those parts where as I am acting as the Director.*

**Ms FORREST** - *Whom do you report to?*

**Mr FORD** - *I don't report to anyone.*

**Ms FORREST** - *Is that a failing in the current legislative framework?*

**Mr FORD** - *I don't think that is for me to comment on. My job is to work within the legislative framework as it exists. Others need to make determinations around what is an appropriate legislative framework for Tasmania.*

**CHAIR** - *You described different levels of independence that can exist and you operate within what you are statutorily designated to do. You also receive ministerial instruction overarching your work?*

**Mr FORD** - *No.*

**CHAIR** - *Nothing that you do in relation to the marine farming industry has to refer back to any sets of instructions or overarching directions that have been given to you by the minister?*

**Mr FORD** - *I don't take any directions from the minister or the Government in relation to the regulatory decision-making process. That doesn't mean that I don't engage with government on a range of matters. This is not just about salmon; you could have the same conversation about the mining industry or the waste industry.*

*The intersect between the government framework and what I have to have statutory regard to is, in part, laid out in legislation. I have to have statutory regard to a state policy under the State Policies and Projects Act. For example, the National Environment Protection Measures, which measure for air and for contaminated soil, are state policies by legal definition. I have to have regard to those.<sup>141</sup>*

Other submissions concerned with the independence of the EPA suggested alternative models such as an aquaculture ombudsman or an independent board.

The NOFF submission called for an aquaculture ombudsman:

*Creation of Aquaculture Ombudsman*

*1. The Government should immediately legislate to create the office of Aquaculture Ombudsman, with authority to investigate and report to the public and parliament, at least annually, on all activities relating to fish farms.*

---

<sup>141</sup> Wes Ford, EPA, *Transcript of Evidence*, 21 February 2020, pp. 10-11.



2. *The Aquaculture Ombudsman must be independent of government and industry, be sufficiently resourced from industry levies, and empowered to oversee operations, enforce regulations and standardised reporting, investigate and report on the quantity, nature, frequency and resolution of issues and complaints, and impose penalties for breaches of regulations.*

3. *The Aquaculture Ombudsman's office should contract or employ independent marine scientists and other professionals able to investigate issues at the Ombudsman's discretion.*

4. *The Aquaculture Ombudsman should become (and should widely advertise as such) a single point of contact (a 'one-stop' shop) for reporting all community issues, incidents and other concerns about fish farm operations, including requesting information, and receiving feedback. This activity should be based primarily around a suitable website, and the Ombudsman should be empowered, for this and all related government and industry websites, to enforce 'best of breed' standards for website content, reporting, structure, linking and terminology, with a specific focus on quantitative data, including historical and baseline data, and ease of public access and use.<sup>142</sup>*

Dr Brendan Schmidt and Marlene Schmidt's submission called for an independent board to govern fin fish operations:

*Recommendation: That the Government establish an Independent Board with a majority of the Board being scientists and members of the public to overview all aspects of the finfish industry. Members of the public should be elected. Scientists should be selected on the basis of their Marine Science expertise as recognised by UTAS/IMAS.<sup>143</sup>*

The EDO submission expressed concern over the lack of Water Quality Objectives (WQO):

*The EPA Board and Director are bound the (sic) apply any Water Quality Objectives (WQO) in making a decision under the EMPC Act, including to grant an environmental licence. However, in the 22 years since the commencement of the State Policy on Water Quality Management 1997, there are no published WQO for either marine or freshwater anywhere in the State. The EPA has advised the EDO that WQO for a particular waterway are developed by EPA Board (or the Director as the case may be) on a "case by case" basis in consideration of the "Default Guidelines Values for Aquatic Ecosystems" and/or a proponent's own water quality monitoring data.*

*Water Quality Objectives should be State-wide, published and enforcement (sic). WQOs should set clear objectives waterways (riverine and estuarine) or marine area, so that the EPA when exercising powers and functions under the EMPC Act, is required to manage that environment to achieve the WQOs. In this respect, it is like*

---

<sup>142</sup> Neighbors of Fish Farms, 2019, *Submission #41*, p. 5.

<sup>143</sup> Dr Brendan and Marlene Schmidt, 2019, *Submission #15*, p. 5.

*spatial planning for air emissions from industrial pollution, where a threshold maximum emissions concentration is identified for an airshed and individual emissions licences are matched to and monitored so that the aggregate of emissions from all point sources does not exceed the limit.*

*To date no environmental licence applications for marine finfish farms have been assessed by the EPA Board. The EPA Director's assessments of environmental licence applications have not been made publicly available. It is therefore unknown what the WQO are for a particular activity or area, whether the WQO identified and applied in an assessment of proposed marine farm are based on the best available science and would withstand scientific scrutiny, or how those WQO account for cumulative impacts (discussed above).*

*Further, given the EPA Director's broad discretion to vary the total biomass and nitrogen output of marine farms, it is necessary to know how such determinations are made consistent with the achievement of the WQO for a waterway in which the marine farm operates.<sup>144</sup>*

Wes Ford, Director EPA, made the following comments at a public hearing in relation to Water Quality Objectives:

**Mr FORD** - ... *If you look more broadly at water quality, the EPA board can, through the state water quality policy, set water quality objectives. It has not. There is a whole history associated with that across successive governments and challenges.*

*The board has set water quality objectives for specific developments where it is deemed appropriate that in the development of a greenfield site water quality objectives are set.*

...

**CHAIR** - *There is not an example you can provide that relates to the salmon industry or the board setting the water quality objectives rather than you, as director, which then informs the monitoring?*

**Mr FORD** - *Yes, but maybe not stated as being a water quality objective. If you look at the board's decision on Huon Aquaculture's Whale Point facility, there are some very clear, prescriptive requirements on discharge limits from that facility in terms of water treatment. If you look at the board's recent decision on the proposed Tassal hatchery at Hamilton, there are some very clear emission limits around the quality of the water suitable to be discharged from that premises.*

*In the Tassal case, the water is used for irrigation. In relation to Huon, principally, the water is used as part of their reuse scheme. They make that water available for the Ronja Storm or the Ronja Huon as part of their access to fresh water.*

---

<sup>144</sup> Environmental Defenders Office, 2019, *Submission #220*, pp 19-21.

*Yes, there are some examples. ... They all relate to land-based activities because water quality objectives in the marine environment are exceedingly difficult. You can spend hours on that conversation.*

**CHAIR** - *...The water quality objectives are defined either by you or the Board either overtly or through other mechanisms. ... Some of the determination around that must have been arriving at an acceptable environmental impact?*

**Mr FORD** - *Yes.*

**CHAIR** - *Is it your discretion to decide that?*

**Mr FORD** - *In the absence of a clear state policy or a national environmental protection measure, the answer is yes, either me or the board, depending on what we are dealing with. In all our assessments, the board will provide a range of prescriptive conditions. If you look at the mining industry, for example, in order for a mining industry to operate, they generally have to have a tailing storage facility. With a tailing storage facility, water is discharged from it. That water can be high in metals. It is not so much a nutrients issue, it is a metals and pH issue. The board will set limits based on best available science, appropriate technology and the understanding of a level of environmental risk. If you bring that back to a freshwater hatchery environment, a discharge limit for a hatchery operating on the Derwent River may reasonably be different to a discharge limit for something operating on a smaller flowthrough creek system. In an environmental sense we talk about an 'effective mixing zone'.*

*You come back to questions around things like TasWater in Macquarie Point. When water is discharged off Macquarie Point, there is a mixing zone. How far away from the end of the pipe can you find evidence of the discharge? That is your mixing zone. Whether we are talking about hypersaline water from wellboats, whether we are talking about discharges from plants, whether we are talking about the marine farm pens, you get a certain distance away from the emission point and you can't detect presence of whatever you are looking for - nitrogen, ammonia, metals, aluminium, zinc, lead, and so on.*

**CHAIR** - *... in any of these circumstances, whether it is the mine tailings, Macquarie Point sewage, or a hatchery on a small river, a determination needs to be made about an acceptable environmental impact ... What are the criteria or mechanisms that are consistently applied to decide that? Is it at your discretion as the director of the EPA, or is it at the discretion of the EPA board or is there a consistent way it is assessed that can be, from an external point of view, understood, held accountable, tested?*

**Mr FORD** - *The consistency process sits within the best available sites, information that the board draws from a range of sources to look at the pollutant of concern. What is the water body it is going in to? How do you make a judgment about what is acceptable? In the absence of any clear guidelines, the board will err to a conservative position. In erring to a conservative position, the board will then*

*require a greater level of technology than a proponent might be planning to build. It is a balance of experience. That is why the board looks at these things. That is why we employ professional people within EPA who can provide advice to the board. I can't produce a document that says, 'In every circumstance this is what is going to apply'.*

**CHAIR** - *... If we were to pick a circumstance where it had been your determination, in relation to a hatchery, to find the acceptable environmental impact, and then set levels accordingly, how would I know and be able to review, or understand, or hold you accountable to that decision about the environmental impact that sits at the beginning of that process?*

**Mr FORD** - *We will go back to what you can identify about the particular environment.*

**CHAIR** - *I do not need you to talk me through how you go about it in this instance; I want to know if there is a mechanism that would require you to undertake that determination in a particular way that is accountable, that we could review?*

**Mr FORD** - No.<sup>145</sup>

Resourcing of the EPA was also identified as a concern.

The Marine Life Network submission stated:

*The EPA could fulfil the role of a public defender, but this body appears to be under-resourced, is obviously directed by the Minister, and so it tends not to be seen currently as completely independent.<sup>146</sup>*

The Bruny Sustainable Aquaculture submission stated:

*The EPA is under resourced to provide the essential close oversight and monitoring by an independent authority. Only when the EPA is adequately resourced will management and regulation of the industry be accountable and transparent.*

*The funding required to adequately resource the EPA and the MFPRP will be readily available if the licence fee regime is changed such that fees paid are commensurate to the real commercial value of the resource to the applicant.<sup>[1]</sup>*

And called for:

---

<sup>145</sup> Wes Ford, EPA, *Transcript of Evidence*, 21 February 2020, pp. 12-15.

<sup>146</sup> Marine Life Network, 2019, *Submission #22*, p. 4.

<sup>[1]</sup> Bruny Sustainable Aquaculture, 2019, *Submission #65*, pp. 6-7.

*The funding provided to both EPA and MFPRP be increased sufficiently to ensure they are adequately resourced to carry out their respective roles in a comprehensive and timely manner.<sup>[2]</sup>*

The submission provided by Senator Peter Whish-Wilson, incorporating the Dissenting Report of the Australian Greens to the 2015 Senate *Environment and Communications References Committee: Regulation of the fin-fish aquaculture industry in Tasmania*, stated:

*Recommendation 16*

*1.56 The Tasmanian EPA be adequately resourced to carry out all of its regulatory responsibilities in respect of fin-fish farming.*

*1.57 While adequately resourced government departments are important to ensuring regulations are properly enforced, the community can also play a role in helping inform regulators of potential impacts from industry activity.<sup>147</sup>*

In the context of questioning related to noise complaints in the North Bruny region, Wes Ford was asked about the resourcing constraints for the EPA:

**CHAIR** - *...What stopped you monitoring to actually ascertain the validity of the complaints?*

**Mr FORD** - *First of all, you need to have a capacity to respond. Take North Bruny, where activity has increased since about January with the Aqua Spa. In terms of equipment, skills and individuals, we are very limited in our capacity - and overlay that with COVID-19, we have not been able to work in the field for a whole variety of reasons. We have not been down monitoring that site. That is just the reality.*

**Mr VALENTINE** - *In the absence of COVID-19, you would be doing those measurements? It wouldn't be the company doing those measurements and giving them back to you?*

**Mr FORD** - *It would be both, because long-term monitoring has to be undertaken by the companies.*

*If the Government wants us to do long-term monitoring programs of anything - whether it's noise, water quality, air quality - it has to be resourced.*

*If we turn to air for a minute, we run the smoke network that monitors air quality in the state. We have about 37 air monitoring stations. In order to resource and manage that - because there is a national commitment required under the national environmental protection measure for air, for monitoring smoke or air impact - it is our most intensive monitoring activity. It's very resource intensive, so you replicate that across noise, water and all sorts of other things, and our workload, our resourcing, would go up by 20 to 30 staff, plus all the equipment. At the end of the*

---

<sup>[2]</sup> Bruny Sustainable Aquaculture, 2019, *Submission #65*, p. 17.

<sup>147</sup> Senator Peter Whish-Wilson, 2019, *Submission #80*, p. 9.

day we do what we can with the resources we have and balance those resources around the state. We work on a basis of trying to deal with noise as a complaints-based issue.

**Mr VALENTINE** - Do you have the arrangement where industry contributes financial resources as opposed to them doing the measurement. You are actually undertaking the measuring, but it is being contributed to by industry.

**Mr FORD** - If you look at entire state of Tasmania, we regulate not only the salmon industry - we just did some analysis for the EPA board at its last meeting and we recover less than 80 per cent of our direct costs of management, let alone the indirect costs of management. We recover less than 80 per cent of the direct costs of management from industry in Tasmania for environmental regulation.

You overlay that and look at salmon from an environmental point of view where recovery is closer to a 100 per cent. From an environmental point of view, we recover more from salmon than we do from any other industry.

**CHAIR** - Yet you do not have the resources available to be able to fully respond necessarily to the complaints made or the situations being faced out there.

**Mr FORD** - That is a general challenge with all government services. There would not be a government service in this state that would not say they do not have adequate resources to do the work required.<sup>148</sup>

**Findings:**

84. Concerns were raised that the EPA is not independent of government.
85. The role of Director, EPA is not legislatively required to report to the Minister or the EPA Board.
86. The Director, EPA and EPA Board are to have statutory regard to any State Policy under the *State Policies and Projects Act 1993*.
87. The EPA Board and Director, EPA are bound to apply Water Quality Objectives in decision-making under the *Environmental Management and Pollution Control Act 1994*, including the assessment of environmental licences for fin fish farms.
88. Since the commencement of the State Policy on Water Quality Management 1997 there are no published state-wide Water Quality Objectives for either marine or fresh water.

---

<sup>148</sup> Wes Ford, EPA, *Transcript of Evidence*, 8 September 2020, pp. 82-3.

89. Water Quality Objectives are developed by the EPA Board or the Director, EPA on a 'case by case' basis for the purposes of assessing environmental licences for particular activities or areas.
90. Concerns were raised that, as Water Quality Objectives applied to environmental licences are not publicly available, it is not clear whether assessments are based on the best available scientific evidence and able to withstand scrutiny.
91. Concerns were raised that the EPA is not adequately resourced to carry out all of its regulatory responsibilities with respect to fin fish farming.
92. The EPA's capacity to undertake long term noise and water quality monitoring programs is inadequate and constrained by a lack of staffing and resources.
93. The Director, EPA reports recovering from the industry close to 100 per cent of direct management cost for current regulatory activities related to fin fish farming.

**Recommendation 25**

As a matter of priority, develop, publish and apply state-wide Water Quality Objectives as per the State Policy on Water Quality Management 1997 and as required under the *Environmental Management and Pollution Control Act 1994*.

**Recommendation 26**

That state-wide monitoring of water quality against published Water Quality Objectives be undertaken and annually reported to Parliament.

**Recommendation 27**

In the absence of state-wide Water Quality Objectives, publish all water quality objectives developed by the EPA Board or the Director, EPA for assessment of individual environmental licences for fin fish farming operations.

**Recommendation 28**

Increase the independence of the EPA as a statutory authority.

**Recommendation 29**

Increase resourcing of the EPA to ensure it can fully undertake its regulatory roles and responsibilities in relation to the fin fish farming industry.

## Review of Marine Farming Development Plans

According to the EDO submission:

*The MFP Act requires MFD Plans to be reviewed at least once every 10 years to “ensure that the objectives of resource management, having regard to any relevant changing circumstances, are achieved to the maximum extent possible.” This is critical where waters within designated marine farming zones have warmed significantly and can no longer support salmon farming, where evidence coastal development adjacent to marine farming zones has intensified since the MFD Plan commenced, or where new data is available regarding impacts of nutrients on biodiversity.*

*The process for a review of a MFD Plan starts with a preliminary review conducted by DPIPWE. Public comment is only invited if DPIPWE considers that modifications to the MFD Plan are required. There are no requirements for DPIPWE to consult with the Panel, IMAS or the public in deciding whether modifications are required. As acknowledged by the Panel when it was tasked with looking at the Okehampton Bay salmon farm proposal, after the expiry of 10 years, further data will be needed to assess the suitability of salmon farming at a particular location. It is unclear why opportunities for the input of this data are not given to public (including scientific bodies such as IMAS) in the MFD Plan review process.*

*If a 10-yearly review of MFD Plan does reveal that a zone or area is not suitable for salmon farming due to unforeseen or changing environmental impacts, this does not give rise to any right [to] alter the terms or lengths of leases issued to salmon farms in these areas. Should the leases be cancelled, or the MFD Plan amended to reduce number or remove salmon farms from the MFD Plan area, salmon farm operators would have an entitlement to compensation from the Government. This highlights the problem with the granting of leases potentially for 30 years with renewal options from 15 years, being timeframes that potentially exceed the length of time that a particular location can sustain salmon farming.<sup>149</sup>*

### Findings:

94. Marine Farming Development Plans are subject to a 10-year review, however this is not a comprehensive reassessment of the plan and is not required to include an opportunity for the public or scientific community to provide input.
95. If a 10-year Marine Farming Development Plan review identifies that an area is no longer suitable for fin fish farming, any alteration of the terms or length of leases for fin fish farms in the Plan area can require government to pay compensation to the lease holder.

<sup>149</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 19-21.



96. Concerns were raised that the current 30-year leases granted under a Marine Farming Development Plan are too long in light of changes to environmental circumstances and/or detrimental environmental impact.

**Recommendation 30**

All 10-year Marine Farming Development Plan reviews be comprehensive and include input from the public and scientific community.

**Recommendation 31**

Ensure the terms of new marine farming leases allow for the alteration of conditions or length of lease if indicated by the 10-year review of the relevant Marine Farming Development Plan.

## B. ALLOCATION OF LEASES, APPLICATIONS FOR AND GRANTING OF LEASES

### Overview

The DPIPWE submission provided an overview of the process for the allocation of leases:

*The allocation of leases follows a process set out in the Act. There are two distinct approaches, depending on whether the marine farming zone has been created through a proponent led process or a government led process.*

*Where a zone is established through a government led process, the MFPA requires that the Minister seeks the advice of the BAR as to who should participate in an allocation process. The Minister can also seek advice from any other relevant person considered appropriate. The Minister then considers the advice and determines who should participate in the process. The Minister may also seek advice of the BAR about the method and criteria to be used to allocate a lease. However, since the bar was abolished, there have been no government led processes.*

*The allocation process could involve some form of tender and may, for example, be open, in the case of a new zone that has been created 'on spec'. Alternatively, where a zone has been created to facilitate a strategic need, it may be appropriate that only existing participants or specific existing lease holders participate in the process. This type of approach was adopted in the early days of the implementation of plans, where zones were created with a stated intention that an existing legacy lease holder may be facilitated to move into a zone created by a plan.*

*For a proponent led process, the Minister may seek the advice of the BAR and can also seek advice from any other relevant person considered appropriate. Alternatively, where a zone is established as a result of a 'privately prepared plan' or 'privately prepared amendment' (i.e. a proponent led process), the Minister may invite the proponent to apply directly for a lease, without reference to the BAR. This has been the process used for recently approved plans or plan amendments and recognizes the time and investment which has been made by the proponent seeking approval for the new area. Following application by the proponent, the Minister may then grant the lease. The Act empowers the Minister to grant 'certificates of preference' to people who have prepared a draft plan, or who have made a significant research contribution, which has a direct relevance to the activities of the marine farming zone. Someone who has a certificate of preference may participate in one allocation process. The BAR may provide advice to the Minister on whether a person with a certificate of preference should participate in any particular allocation process.*

*These arrangements exist within the Act to assist orderly, fair and transparent allocation of leases. It enables a person who undertakes a planning process or who proves up' the suitability of an area to have a reasonable expectation that, if the planning process is approved, they will have first option on a lease. Equally, it provides that the Government may plan for areas of marine farming development*

*and make those available to the market, allocating the lease to the person who is likely to provide the greatest overall benefit from use of the area.*

*The Salmon Plan also contains commitments around providing access to any new farming areas (described in the Salmon Plan as "Potential for further release" areas). All 'new' water will be subject to a competitive tender, with advice on the tenders for a particular area of water to be provided to the Minister by a Tender Advisory Board. Tenders will be assessed with a view to maximising community benefit and amenity.<sup>150</sup>*

The DPIPWE submission provided the following further detail regarding marine farming leases:

*The MFPA provides for marine farming leases to be issued for a maximum thirty years. The lease confers on the lessee exclusive possession of the area specified in the lease and any specified area of seabed in the lease. The marine farming lease document contains a standard set of conditions as drafted by Crown law, the plan of the marine farming lease, and a deed of agreement between the Crown and the leaseholder.*

*Marine farming leases have a range of conditions in regard to the operation of the lease including, keeping the lease area neat and tidy, retrieval of equipment that has broken away from the lease in a reasonable timeframe, and marking of the lease to the satisfaction of the Minister and MAST.*

*The marine farming lease is the instrument that facilitates the collection of annual lease fees for the area of water allocated by the Crown. The fees are determined under the marine Farming Planning Regulations 2016 and are based on fee units that are re-determined on an annual basis. Finfish rental fees for 2019/20 consist of a base fee of \$2,673.00 GST inclusive and \$302.94 GST inclusive per hectare of the marine farming lease.<sup>151</sup>*

The CSIRO submission identified some opportunities in relation to the allocation of leases:

*There is an opportunity to integrate current environmental data, future environmental projections, societal values and economic industry data into a spatial planning GIS to inform decisions around the allocation of new farm leases.<sup>152</sup>*

The IMAS submission made the following comments in relation to the allocation of leases and application process:

*IMAS is not directly involved in the allocation of leases or in the lease application process. However, IMAS has on occasion been asked to provide advice on the information contained in environmental impact statements (EISs) or to obtain*

---

<sup>150</sup> DPIPWE, 2019, *Submission #221*, pp. 20-1.

<sup>151</sup> DPIPWE, 2019, *Submission #221*, p. 28.

<sup>152</sup> CSIRO, 2019, *Submission #90*, p. 7.

*additional data or undertake research on areas of uncertainty. This is provided for under the SMRCA.<sup>153</sup>*

The TAMP submission made comparisons between Tasmania's and Norway's site selection and approval process:

*Norwegian authorities look at sites, apply rigorous research and science, then establish the pen quotas and following regulations to ensure that each site remains ecologically sustainable. A lease auction follows with these regulations already in place. Adjacent communities become major recipients of income from the leases. In Tasmania ad hoc site selection is driven by industry with poor transparency. Rather than careful science-based selection, the methodology of "adaptive management" results in addressing ecological problems in hindsight...*

*Solution: Proper site selection with full and transparent scientific analysis of the impacts, designated following periods, independent monitoring and publicly available records must be part of each lease licence, as well as for the wider region. All licences should be auctioned with a set of management and sustainability conditions included at the time of auction.<sup>154</sup>*

The EDO submission noted:

*(c) Assessment of individual salmon farms*

*Where an approved MFD Plan allows marine farming in a designated zone, no further detailed scientific assessment is required before the Minister can issue a marine farming licence under the LMRM Act for a salmon farm to operate in that area.<sup>155</sup>*

#### ***Marine farm leases and allocations***

*Once a MFD Plan has been approved, the Minister consults with the Board about how lease areas designated in the plan are to be allocated. Applications for marine farming leases are referred to the Board, who will advise Minister if the applicant has the necessary technical and financial resources, and if the proposed lease allocation is consistent with the approved plan. After considering the Board's advice, the Minister may grant a lease on any conditions or restrictions the Minister determines.*

*There is no public notification of the allocation, grant, renewal or variation of leases under the Act and rights of appeal are extremely limited.*

---

<sup>153</sup> IMAS, 2019, *Submission #100*, pp. 10-12.

<sup>154</sup> TAMP, 2019, *Submission #42*, p. 6.

<sup>155</sup> Environmental Defenders Office, 2019, *Submission #220*, p. 19.

*Temporary, emergency leases may be granted for up to 12 months where the original lease area becomes unavailable due to “a situation affecting water quality” or where fish are “substantially affected” by pollution, pests or diseases.*

### **Marine farming licences**

*The LMRM Act regulates marine farming, and fisheries more generally, in Tasmania.*

*Once a lease has been granted, the lessee can apply to the Minister for a marine farming licence to carry out marine farming in State waters, or to operate a hatchery for release of fish into State waters. The licence can include specific conditions relating to environmental management. There is no requirement for licence applications to be publicly advertised, and appeal rights are limited.*

*Salmon farming cannot occur unless both a lease and a licence have been granted for the activity. A marine farming licence is automatically terminated if the licensee ceases to hold a marine farming lease.<sup>156</sup>*

Dr Brendan Schmidt and Marlene Schmidt, in their submission, called for extensive public consultation to be undertaken prior to a lease being granted:

*Prior to a lease being granted that extensive public consultation should be entered into so that the public is aware of the changes that might eventuate at sea and on land because of the lease of public waters for finfish operations. This public consultation is not to be conducted by the finfish industry but by an independent board ... Because of the proximity of finfish leases to land, the impact on private landholders and tourism must be considered before leases are granted, in much the same way as a local Council change of land use is considered.<sup>157</sup>*

According to the Derwent Estuary Program’s (DEP) submission:

*There is no mention of land-based fish hatcheries and smolt production, five of which are in the Derwent Catchment which is the major drinking water supply for the Greater Hobart area. They are all above the intake for drinking water. Will these be regulated under the proposed Finfish Farming Monitoring Unit? They are also not marked on the map. Current data collection for finfish hatcheries is sparse, with data currently not publicly available specifically regarding production levels (biomass) and effluent water quality.<sup>158</sup>*

---

<sup>156</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 4-7.

<sup>157</sup> Dr Brendan and Marlene Schmidt, 2019, *Submission #15*, p. 1.

<sup>158</sup> Derwent Estuary Program, 2019, *Submission #71*, p. 4.

## Legacy of Historical Leases

Several witnesses raised concern regarding the legacy of leases granted prior to the EPA being given responsibility for the granting of environmental licenses in 2017.

Rebecca Howarth in her submission stated:

*It is alarming that any commercial fish-farming company should be allowed to put stock into historically owned leases without a full Environmental Impact Assessment, or even re-application for use of this lease under modern legislation. Two examples of this were when Huon Aquaculture utilised their historic Green Head lease for salmon with POMV in 2018 and Tassal putting stock into their Port Arthur lease in 2017.*

*According to DEP scientist Christine Coughanowr's letter to the EPA, there has been minimal baseline data collection before the re-entry of stock into Port Arthur, which constitutes a rather poor EIS. Tassal have chosen some well-flushed sites for minimal continued water quality testing, but Long Bay and other areas of Port Arthur susceptible to a high nutrient load are shallow and poorly flushed. Tassal's permit doesn't require them to monitor vulnerable seagrass beds, or the more poorly flushed parts of the bay. We are now seeing a dramatic increase in the incidence of filamentous green algae in Long Bay which thrive on high nutrients. It is entangling fishers, swimmers and divers. I have attached some photos of this unprecedented environmental event. This has prompted DEP scientist Christine Coughanowr to write to the EPA with her concerns and recommendations. I share her concerns and endorse her recommendations.*

*There is no stocking limit for Port Arthur. Christine Coughanowr has implored Wes Ford to implement a stocking limit, and he continues to refuse, for a reason which is unknown. This needs to change before Port Arthur becomes the next Macquarie Harbour and we see the coastline of the Tasman National Park, home of the award winning 3-Capes Track, ecologically damaged.*

*Port Arthur is a smolt grow-out area, which is a grey area for sustainability auditing. There is no need for this area to be monitored or for there to be community consultation under the ASC standard. This is a huge loop hole and doesn't make any sense. The Port Arthur community have therefore felt extremely bi-passed and in the dark.*

*I believe strongly that all decisions regarding licenses and license amendments need to be referred to the EPA board, not just the Director, so that the community can have their say.<sup>159</sup>*

The Shooters, Fishers and Farmers' Party submission raised similar concern:

---

<sup>159</sup> Rebecca Howarth, 2019, *Submission #84*, p. 2.

*In recent times, the legacy on old leases has created much angst among local communities. At the time of the old leases being granted, the world was a different place without contemporary management practices and regulatory oversight.*

*It is recommended that the method and approach in approving leases on public waters be more open and transparent and for increased periods of public consultation to be considered. Additionally, land value has escalated and perhaps consideration should be given to the value of these leases, as well as to the terms of the leases. For example, do they include requirement for rehabilitation of leases to their former state?<sup>160</sup>*

Wes Ford, Director EPA provided further information regarding historical leases:

**Mr FORD** - *Let's go back to the Marine Farm Planning Act. The leases as they operate in that framework have no requirements within that process to reassess an activity from a point of view of its suitability for marine farming.*

**Ms FORREST** - *Once a lease has been granted, it is basically there forever. Is that what you are saying?*

**Mr FORD** - *Once a lease is granted, it is there for the term of that lease. Leases have rights to be renewed as well. The lease can be there for a long time.*

*Tassal had operated that activity in the Long Bay area. It was not active for a number of years and then they reactivated it, which was clearly different to the circumstances in relation to Spring Bay and Tassal in Oakhampton Bay.*

**Ms FORREST** - *I just want to focus on that one at the moment where they reactivated it.*

**Mr FORD** - *There was no requirement in the marine farming legislation to have that reassessed. When the environmental changes were made, a provision was inserted in the legislation that says that if a lease has not been used for 10 years, it is then subject to reassessment from the board's point of view. The board will reassess the environmental appropriateness of a lease area that has not been used for 10 years. In that case it was not 10 years, so the board's process did not kick in.*

**CHAIR** - *Can I just clarify? Did they have an environmental licence during the initial time it was being used which then was reactivated when they began using it again after a period of time?*

**Mr FORD** - *No, because no-one had environmental licences. They had a marine farming licence with environmental conditions on it. The environmental licences did not start being rolled out until after March 2018. Most environmental licences under EMCA are less than two years old.*

---

<sup>160</sup> Shooters, Fishers and Farmers' Party, 2019, *Submission #39*, p. 2.

**CHAIR** - *This is one of the ones you have inherited. It still comes under your responsibility. You have not formed it as a new environmental licence; you have inherited the conditions from the previous arrangements when it was under the department. They form what we would regard as their environmental licence now. It is the same as it would have been in the first iteration of activity down there across the blank period to this next iteration. I am trying to make sure I am very clear that that is what has happened.*

**Mr FORD** - *My recollection is that we did make some changes to that licence. I will take that on notice. I can't tell you off the top of my head whether we have said we inherited the marine farming licence and that the licence was granted in its initial form.*

**CHAIR** - *Would it have been you as director or the EPA board that would have done that?*

**Mr FORD** - *It would have been me as director.<sup>161</sup>*

---

<sup>161</sup> Wes Ford, EPA, *Transcript of Evidence*, 21 February 2020, p. 22.



**Findings:**

97. The *Marine Farming Planning Act 1995* allows either a proponent-led process or government-led process for the allocation of leases, each with different requirements.
98. For a government-led lease allocation process under the *Marine Farming Planning Act 1995*, the Minister must seek advice of the Board of Advice and Reference and may also seek advice from any other relevant person, before making a decision.
99. For a proponent-led lease allocation process under the *Marine Farming Planning Act 1995*, the Minister may seek the advice of the Board of Advice and Reference and may also seek advice from any other relevant person before making a decision.
100. The *Marine Farming Planning Act 1995* includes the Board of Advice and Reference (BAR) as an independent source of advice to the Minister in the process of allocating leases, however since 11 July 2015 the BAR has been stood down administratively.
101. There have been no government-led lease allocation processes since the Board of Advice and Reference has been stood down administratively.
102. Under the *Marine Farming Planning Act 1995*, the lease allocation process could involve some form of open tender; or the process may be limited to existing participants or specific existing lease holders.
103. Under the *Marine Farming Planning Act 1995*, a proponent who undertakes the marine farming development planning process has first option on a lease if the Marine Farming Development Plan is approved.
104. The *Marine Farming Planning Act 1995* provides for marine farming leases to be issued for a maximum of thirty years.
105. In some international jurisdictions, marine farming site selection is government-led and lease allocation is facilitated through an auction process to deliver greatest benefit to local communities.
106. Under the *Marine Farming Planning Act 1995*, leases which have been inactive for a period of less than 10 years, can be restocked and used without environmental reassessment.

**Recommendation 32**

Legislate that all marine farming lease allocations are government-led and include a transparent competitive tender process.

**Recommendation 33**

Develop environmental, social and economic criteria to be applied in the marine farming lease tender process.

**Recommendation 34**

Align the length of new or renewing leases to the relevant Marine Farming Development Plan review period, with renewing leases subject to comprehensive reassessment.

**Recommendation 35**

Review and determine the appropriate time period that triggers a reassessment of unstocked leases.

## Environmental license process

The EDO submission provided detail on the process for the granting of environmental licences:

*All proposals involving “finfish farming” (which is presently broadly defined as “the farming, culturing, hatching, rearing, ranching, enhancement, or breeding, of finfish” or any activities associated with, and for the purposes of, those activities), require an environmental licence issued by the Environment Protection Authority (EPA).*

*Unlike all other “level 2” activities regulated by the EPA under the EMPC Act, there is no guarantee that a finfish farming activity will be subject to a transparent and public assessment process conducted by the EPA Board.*

*As the EMPC Act is presently drafted, the EPA Director has some discretion as to whether to refer an application for an environmental licence to the EPA Board. Before determining whether a particular application must be referred by the EPA Director to the EPA Board for assessment, the following questions must be answered:*

- *Is the application an emergency application?*
- *Is the hatchery/farm on land?*
- *If the farm [is] in state waters, will it operate under a MFD Plan?*
- *If there is a MFD Plan, was the Plan assessed by the Panel over 2 years ago, and were there considerations that the Panel failed to have regard to?*
- *If there is a MFD Plan, is it greater than 10 years old?*
- *Is there a lot of public interest in relation to the proposal?*
- *Is it likely that the proposal will require an EPBC approval?*
- *Is the proposal to increase the biomass or nitrogen by more than 10% than the caps imposed under the MFDP?*

*The public is not able to make a formal representation in relation [to] an application assessed by the EPA Director, instead of the EPA Board. There are no third-party appeal rights relating to any environmental licence granted to [a] finfish farm by the EPA Director.*

*There are no criteria for a decision by either the EPA Board or EPA Director to grant an environmental licence.<sup>162</sup>*

And further:

*The Director or Board can “grant to a person an environmental licence in relation to an activity if ... satisfied that it is appropriate to do so”.*

*There are no legislative criteria about when it will be “appropriate” to issue a licence. While there are general environmental duties under the Act, those duties are*

---

<sup>162</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 4-7.

*not explicitly called up by the legislation. Discretion is “at large”, with resulting consequences for consistent and transparent decision-making.*

*Further, the lack of legislative criteria defeats the purposes of public participation, including effective options for legal redress.<sup>163</sup>*

The EDO submission further commented on the environmental licence process with respect to public participation and appeal rights:

*In relation to environmental licence applications, only those applications assessed by the EPA Board will be open to public comment and, potentially, appeal, and not any licence applications or amendment applications for which the EPA Director is the decision-maker.*

*Where an application is assessed by the EPA Board, it is required to take any representations it receives into account in its decision to grant an Environmental Licence. Provided a person can demonstrate that they are a “person aggrieved” of the Board’s decision, they may appeal ... the grant of an Environmental Licence to the Resource Management and Planning Appeals Tribunal. However, for those applications that are decided solely by the EPA Director, there are presently no opportunities for public participation through notice and rights of review.*

*Based on the criteria currently in the EMPC Act, the vast majority of environmental licence applications relating to marine salmon farms will be assessed by the EPA Director without any opportunity for public participation or scrutiny. The way the regulations are drafted, it effectively makes an application “permitted” (in a planning scheme sense) where there is a MFD Plan approved within the last 10 years. However, the impacts of a particular activity fail to be assessed at the environmental licence stage, and it is usually that particular activity and its impacts which are of greatest public concern.*

*... Further, the fact that this decision rests upon the discretion of the EPA Director leads to uncertainty for the community and for the regulated as to when an application will be referred to the Board. For instance, one of the prescribed criteria for referral is whether there will be a high level of public interest. The Storm Bay North environmental licence application was not referred to the EPA Board and, in the context of that application, it is not clear how that application would not have met the threshold “public interest” test.*

*We recommend that all environmental licence applications be assessed by the Board. We recommend that the criteria be refined to reverse the onus – all applications for environmental licence must be referred to the Board, except in clearly defined (and limited) circumstances, and being circumstances that require a quantitative assessment rather than exercise of discretion.<sup>164</sup>*

---

<sup>163</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 11-12.

<sup>164</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 22-25.

...

*While changes to the law in 2017 means that there may be an opportunity for third parties to challenge the merits of a decision by the EPA Board to grant an environmental licence to the Resource Management and Planning Appeals Tribunal, this is only where the EPA Director refers such applications to the Board. No such referral has yet been made for any marine farm, and the criteria on which that decision are made are weighted toward the EPA Director making those decisions.*

*There will be very limited circumstances in which the EPA Board will make decisions, and therefore the public is effectively shut out of decision making under the EMPC Act. This is contrary to the objectives of the EMPC Act, which are to promote public participation in environmental decision-making, including through review processes in the Tribunal.<sup>165</sup>*

Wes Ford, EPA was questioned about the environmental licence process:

**CHAIR** - ... *One more thing specific to this matter relates to the fact that in the EMPC regulations, clause 8 indicates that a referral for an environmental licence application should be made to the EPA board under certain criteria... One of those criteria is that there is likely to be very high levels of public interest in the application.*

**Mr FORD** - *Yes.*

**CHAIR** - *Can you give me an example of when that criteria might have triggered a referral to the board to consider an application for an environmental licence?*

**Mr FORD** - *To take those words in context, those words also appear in Schedule 5 of EMPCA in relation to activities that are designated as Class 2C activities under EMPCA.*

*It is very hard to pin that down. If you took some extreme examples, the pulp mill debate was something that has a high level of public interest. In my near five years in the role, I could not identify a development that would have a high level of public interest.*

**CHAIR** - *Do you have a way that you define 'high level of public interest'?*

**Mr FORD** - *No.*

**CHAIR** - *And you are not given a set of criteria or considerations? Presumably then, when you granted environmental licences as director to the Storm Bay arrangements in recent times, that was done because you deemed that there was not likely to be a sufficiently high level of public interest?*

---

<sup>165</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 22-25.

**Mr FORD** - Yes. There is another clause, which is 'the director must not'. You have to weigh those two up. You have a 'must' versus a 'must not'.

**CHAIR** - What is the 'must not'?

**Mr FORD** - The regulations say that the director must not refer it to the board if it has been dealt with by the marine farm planning process within the last two years.

...

**Mr FORD** - To come back to what I believe was the Government's intent in making the amendments they did: there are a number of steps in the marine farm planning process. If you look at particularly at section 74 of the EMPCA, which talks about the environmental assessment process, one of the elements in that is public participation and the opportunity to be heard.

The marine farm planning process provides an opportunity for representations and for hearings and then ultimately the minister makes a decision about the appropriateness of marine farming in that space.

It also goes on to determine, in terms of the way the planning process works, that the director can have input into what environmental shape the planning process looks like at the very start.

**CHAIR** - You can help shape the environmental impact statement criteria?

**Mr FORD** - The Government's intent is, after being through a public process that allows people to put representation, to then have hearings, resulting in a minister making a decision; it is not then a matter for the board to redo that whole process within the next two years.

**CHAIR** - Even though what you are considering, in terms of the granting of an environmental licence, is quite a separate process to what was being considered for the marine farming planning approval process?

**Mr FORD** - Which is why I believe the Government wrote the regulations the way it did, so that the initial granting of the environmental licence post an extensive marine farm planning process is that they then flow from the decision to grant the leases or to go through the planning process.

**CHAIR** - What we have is a marine farm development planning process which has no third-party review and no merits appeal processes for the general public. They can participate in certain elements of it but there is no merits appeal. If an application is made for an environmental licence within a two-year period, that licence does not go to the EPA board; in fact, it must not.

**Mr FORD** - Yes.

**CHAIR** - *That is the only way there could be a third-party review appeal in that process.*

**Mr FORD** - *Yes.*

**CHAIR** - *The public, or any other stakeholders, is given absolutely no third-party appeal right at all, simply based on that time frame?*

**Mr FORD** - *Industry has appeal rights.*

**CHAIR** - *Come back to public then.*

**Mr FORD** - *One of the challenges the Government clearly had in designing the legislation that came to parliament was that you [have] one piece of legislation is the Marine Farm Planning Act that provides no third-party appeal rights and the land use planning approval's process that does provide third-party appeal rights. If you bring the two together, you have to determine where the line exists.*

*The Government has determined the line exists the way it does to put a planning process in that allows for planning that will then result in the grant of a licence. It then separates and says post that planning process, matters can be dealt with by the board. If we have a planning area that was planned five years ago but no licence has been granted, then I can refer that to the board.*

**CHAIR** - *You have a discretion to do that according to these criteria?*

**Mr FORD** - *I have a discretion. If you look at the rest of the criteria in the regulations, there are also some mandatory requirements where matters must be referred to the board. An increase of more than 10 per cent of nitrogen or biomass in a cumulative sense must also go to the board. If we were to have a conversation about increasing the biomass in Macquarie Harbour from 9500 tonnes to 12 000 tonnes, I contend that would be a matter that would have to go through the board or the board's assessment process.<sup>166</sup>*

**Findings:**

107. Since 2016, the EPA has been responsible for issuing environmental licences for fin fish farms. The EPA is also responsible for monitoring and enforcing the conditions of environmental and marine farming licences and the management controls of Marine Farming Development Plans.
108. Issuing of environmental licences by the Director, EPA does not include a public consultation process, there is no prescribed criteria on which the decision is to be made, and there are no appeal rights on the decision by the applicant, third parties or the public.

---

<sup>166</sup> Wes Ford, EPA, *Transcript of Evidence*, 21 February 2020, pp. 25-6.

109. The Director, EPA's assessment of environmental licence applications is not required to be made public.
110. Under certain criteria, the Director, EPA may refer an application for an environmental licence to the EPA Board for assessment and determination, which includes opportunity for public participation and third party or proponent appeal rights.
111. An application for an environmental licence cannot be referred to the EPA Board within 2 years of the relevant Marine Farming Development Plan being approved, and therefore is determined by the Director, EPA.
112. No environmental licence applications for fin fish farms have been referred by the Director, EPA for assessment by the EPA Board.

**Recommendation 36**

Review and, where necessary, adjust the environmental licence conditions for all existing fin fish farms, including setting defined limits of total biomass, dissolved nitrogen and other key nutrients.

**Recommendation 37**

Require all new marine farming environmental licences to include defined limits of total biomass, dissolved nitrogen and other key nutrients.

**Recommendation 38**

Require applications and variations for marine farming environmental licences to be assessed by the EPA Board, consistent with other Level 2 activities under the *Environmental Management and Pollution Control Act 1994*.

**Recommendation 39**

Legislate criteria for the assessment of marine farming environmental licences by the Director, EPA and EPA Board and require those assessments that are approved to be made public.



## Fees and Levies

According to the DPIPW submission:

*The Government has substantially increased levies and fees to the salmon companies over the last few years. The levies provide funding for essential marine farming related work, including dedicated compliance and monitoring staff in DPIPW and the EPA. These staff work with the salmon industry to oversee such things as marine debris development, implementation of procedures for EPA regulation, compliance and environmental performance and setting conditions and monitoring requirements for environmental licences.<sup>167</sup>*

Further:

*The marine farming lease is the instrument that facilitates the collection of annual lease fees for the area of water allocated by the Crown. The fees are determined under the marine Farming Planning Regulations 2016 and are based on fee units that are re-determined on an annual basis. Finfish rental fees for 2019/20 consist of a base fee of \$2,673.00 GST inclusive and \$302.94 GST inclusive per hectare of the marine farming lease.<sup>168</sup>*

According to the Australia Institute submission, there is evidence to suggest there could be benefits to changing the leasing and licensing arrangements for the industry:

*The industry accounts for around 1% of the state's employment and just 1 to 2% of Gross State Product. Tasmanian salmon companies have gone through a period of growth. This growth has not led to a commensurate growth in returns to the state government, or the communities that bear the environmental costs of the industry. Changing licensing and leasing arrangements could help to rebalance this.<sup>169</sup>*

The Australia Institute submission called for further information relating to payments to the State for licences and leases:

*More publicly-available information on the salmon industry's payments to government would allow for a clearer picture of the industry. However, on information that was publicly available as at July 2019, the Institute estimates that the salmon industry pays the state government about \$920,000 in annual lease and licence fees on its fish farm leases.*

*We estimate that industry levies amount to \$1.1 million, as well as \$500,000–\$730,000 for the EPA Tasmania levy.*

*Public information about payments from the salmon industry to the government is scattered, and in some cases incomplete. The number of leases, and the hectares*

---

<sup>167</sup> DPIPW, 2019, *Submission #221*, p. 7.

<sup>168</sup> DPIPW, 2019, *Submission #221*, p. 18.

<sup>169</sup> Australia Institute, 2019, *Submission #69*, p. 20.

*that they cover, is known, and in some cases can be compared to lease, licence and levy fees. However, it is difficult to tell if these represent the total payment because it is not always clear if some leases have been grandfathered, whether all leases are currently licensed, and so on.*<sup>170</sup>

The Australia Institute submission continued:

*In Tasmania, lessees of finfish farms (including salmonids) must pay annual lease fees, which currently consist of an annual fee of \$2,673 plus \$302.94 per hectare. Since Tasmania has 44 leases occupying a total of 2,257 hectares, this would result in an annual lease fee of \$801,348 for the entire industry.*

*Marine farming licence fees are \$2,765 per lease for one species of finfish (e.g. *Salmo salar*, the Atlantic salmon). Not all of Tasmania's 44 leases necessarily have current licences. However, if assuming they did, licence fees would amount to \$121,660 per year for the industry.*

*The estimated total lease and licence fees of \$923,008 represents about 0.1% (one thousandth) of the total farmgate production of the salmon industry in Tasmania, and 0.02% of total state revenue.*

*Other jurisdictions with large salmon farming operations use different licensing and leasing structures. For example, Norway's licensing system consists of perpetual licences that are limited by biomass. Each salmon farming licence allows the holder to farm up to 780 tonnes of salmon at one time (the "maximum allowed biomass" or MAB). New licences are made available infrequently. Since 2017, production capacity will rise or fall on a biennial basis depending on sea lice levels in the area.*

*An auction of licences last year raised NOK 2.9 billion (\$468 million) for licences covering 14,945 tonnes of MAB. Since 2016 in Norway, 80% of the revenue from the growth in the salmon industry is allocated to municipalities with aquaculture operations.*

*In Tasmania, salmon stocking densities of between 10 and 28 tonnes per hectare have been reported. If the 2,257 hectares of salmon leases in Tasmania leases were valued the same way as the Norwegian biomass licences, they would be worth between \$707 million and \$2 billion at government auction.*

*Another advantage of the Norwegian system is its transparency, with public disclosure of areas, winning bidders, volume purchased and price per tonne... Transparent and readily-available details about payments by industry should be available for all jurisdictions.*

---

<sup>170</sup> Australia Institute, 2019, *Submission #69*, p. 15.

*It is worth noting that Norway has other taxes and fees on its salmon industry and is considering introducing more; the public benefit to Norwegians from the salmon industry is not limited to the perpetual biomass licences.<sup>171</sup>*

In relation to levies, the Australia Institute submission continued:

*Three levies apply to salmon farms in Tasmania. The Tasmanian Seafood Industry Council levy is \$442.40 per lease. The Salmon Industry Planning Levy is \$474 per hectare and the EPA levy is \$322.32 per hectare. This would represent annual levies of \$19,465 for the Seafood Industry Council, \$1,069,818 for the Salmon Industry Planning Levy and \$727,476 for the EPA levy – provided that all leases have current licences. The latest EPA Tasmania annual report (financial year 2017–18) gives the levy’s size as \$500,000 for that year, or 3.8% of EPA Tasmania’s operating budget.*

*The Seafood Industry Council and Salmon Industry Planning levies are primarily for the direct benefit of the industry. The planning levy is intended to help fund “the assessment of industry proposals, tactical research and scientific projects specifically focused on expanding industry production.”<sup>172</sup>*

The Australia Institute submission noted that Councils cannot charge Council rates on marine farming leases:

*After West Coast Council considered charging rates on salmon aquaculture leases in Macquarie Harbour, the Tasmanian Parliament legislated in 2017 to prohibit councils from charging rates on marine farms. Land-based salmon farms are still charged rates.*

*In June 2019, the West Coast Council significantly increasing (sic) council rates for the salmon industry’s on-land assets, especially Strahan’s “aquaculture hub”. The rates will go from “several thousand dollars” to about \$70,000 per year. In response, the Tasmanian Salmonid Growers Association called on the state government to “intervene in this immediately”, and may consider legal appeals.*

*Australia Institute polling shows that 70% of Tasmanians think that intensive fish farms should pay rates to local governments.<sup>173</sup>*

A number of witnesses supported changes to the leasing and licensing arrangements of the Tasmanian salmon industry.

The Bruny Sustainable Aquaculture submission stated:

---

<sup>171</sup> Australia Institute, 2019, *Submission #69*, pp. 15-6.

<sup>172</sup> Australia Institute, 2019, *Submission #69*, pp. 17-8.

<sup>173</sup> Australia Institute, 2019, *Submission #69*, p. 18.

*Under the current industry structure in Tasmania the only benefit accruing to communities is in employment, and this is relatively low, around 1% direct employment, and is likely to fall, due to automation, despite increasing production.*

*This contrasts sharply with the Norwegian model, where licences are put up for tender, with funds raised shared between the municipality and the government. As the Australia Institute summarizes the Tasmanian situation:*

*Over 5 years \$3.8 billion worth of fish were sold, but just \$64 million tax paid, while \$9.3 million in subsidies were received in 2 years. Changing generous leasing arrangements to the Norwegian model could raise \$2 billion for community development.*

*Such an approach, where the industry pays licence fees which are commensurate with the economic utility of the licence, would transform the impact of the industry on the community and the economy. Furthermore, the re-investment of these funds by both community and government would in turn produce more employment and economic growth - in other words an economic virtuous circle.<sup>174</sup>*

Adam Mollineaux's submission recommended:

- *An increase to licence leasing fees paid by marine farming operators to fund continuous independent testing and monitoring by the EPA of all fin-fish farming leases and the surrounding.<sup>175</sup>*

Professional fisherman Mark Bishop, in his submission, stated:

*The lease fees paid to the state for the use of our common property is a minute fraction of the dollar value of the industry.<sup>176</sup>*

Mathew Morgan, professional southern rock lobster fisherman, also pointed to the Norwegian model, and made comparisons to the rock lobster and abalone industries:

*Norway sets a very good example. The salmon industry here would claim that you can't pay Norwegian rates and still make a profit, so how do the Norwegians do it? The Australia Institute did a survey and 1000 of 1 per cent is what is paid to the government in fees by the Tasmanian salmon industry of its gross domestic product. The rock lobster industry, for example, pays 4.5 per cent in levies and fees to the Tasmanian Government and the Tasmanian Abalone Council pays 7.5 per cent.*

*In comparison they are very small industries, both under \$100 million, but they're contributing far higher. I call it corporate welfare. We as a state are providing corporate welfare to corporations for the benefit of shareholders. I think it's*

---

<sup>174</sup> Bruny Sustainable Aquaculture, 2019, *Submission #65*, pp. 13-14.

<sup>175</sup> Adam Mollineaux, 2019, *Submission #81*, p. 20.

<sup>176</sup> Mark Bishop, 2019, *Submission #82*, p. 2.

*immoral. I'm not against corporations making money but the amount of money they need to make and how they go about it is the public licence.<sup>177</sup>*

Ruben Alvarez, CEO Petuna Aquaculture, was asked about the varying rates of fees and levies across different fisheries:

**Mr ALVAREZ** - ... *We don't catch any fish. We produce our own fish all the time. It's a different business.*

**CHAIR** - *It's a difficult comparison to make.*

**Mr ALVAREZ** - *Yes. We work in the same area.<sup>178</sup>*

Dr Shea Cameron, an employee of Huon Aquaculture who made an individual submission, made an assertion that increasing lease fees may result in less expenditure on research and development:

**Dr CAMERON** - *I can only speak anecdotally, but I know that Tasmanian companies are braver. The only measure I have of that is that we took up a lot of net cleaning research and development before Norway. We bought remotely operated vehicles off the Norwegians and they weren't as ready to dip their toes into it.*

*There are a lot of new products. The wellboats we use here are more technological and better equipped than the ones they have in Norway until the Norwegians build the next generation. All I can say is from those observations is that here they are willing to try a different way of doing things. My worry is if we increase lease fees, we are going to become less brave and more conservative.*

**CHAIR** - *...You are making an anecdotal comment about Tassie being quite forward-looking, which is really great to hear, about R&D and about innovation. But is there anything you can tangibly point to that says that Australian companies, or Tasmanian companies, invest more in those things because they are given lower lease costs?*

**Dr CAMERON** - *Ultimately it is up to the companies to look at the economics of what happens and then what their financial ramifications are. I only work in the marine ops side of things.<sup>179</sup>*

#### **Findings:**

113. Fees for marine farming leases are specified in the *Marine Farming Planning Regulations 2016* and are based on fee units that are re-determined on an annual basis.

<sup>177</sup> Mathew Morgan, *Transcript of Evidence*, 24 February 2020, p. 10.

<sup>178</sup> Ruben Alvarez, *Transcript of Evidence*, 24 February 2020, p. 41.

<sup>179</sup> Dr Shea Cameron, *Transcript of Evidence*, 1 April 2020, p. 21.

114. Levies provide funding for fin fish farming compliance and monitoring staff in DPIPWE and the EPA, research projects and industry planning.
115. There was no evidence presented regarding the structuring of fees and levies in the Tasmanian fin fish farming industry, nor detail on the purpose, benefits and intended outcomes in the setting of fees and levies.
116. While fin fish farming has grown significantly, concerns were raised that returns to the State Government and Tasmanian community are insufficient, relative to the social and environmental impact of the industry.
117. In some international jurisdictions, fish farming fees and levies are set to provide a comparatively greater return to government and communities.

#### **Recommendation 40**

To ensure appropriate returns to the Tasmanian community, commission an independent review of fee and levy structures for fin fish farming, including:

- lease value and its reassessment over time;
- setting of lease fees;
- rates of levies required to fully fund regulatory monitoring, compliance and enforcement activities; and
- local government rates, as relevant to the industry.

#### **Recommendation 41**

Ensure any review of fee and levy structures for fin fish farming includes public consultation and examination of other jurisdictions.

#### **Recommendation 42**

Apply environmental bonds to the fin fish farming industry to ensure sufficient funds for any remedial work required due to the operations of the industry.

## C. MANAGEMENT OF FINFISH FARMING OPERATIONS WITH RESPECT TO THE PREVENTION OF ENVIRONMENTAL HARM

### DPIPWE Overview

The DPIPWE submission provided an overview of management controls to manage and mitigate negative environmental effects of marine farming operations:

*The Marine Farming Planning Act 1995 provides for the preparation of marine farming development plans which include specific management controls to manage and mitigate potential negative effects of marine farming operations.*

*Management controls relating to environmental monitoring and management of marine farming operations include provisions on a range of issues like:*

- *levels of unacceptable effect;*
- *nitrogen outputs;*
- *carrying capacity;*
- *monitoring requirements;*
- *chemical usage and reporting;*
- *waste;*
- *disease;*
- *visual effects;*
- *access and marking;*
- *odour;*
- *noise;*
- *marine farming equipment; and*
- *predator control.*

*In establishing a marine farming development plan or progressing an amendment to a zone or zones within an existing marine farming development plan area, targeted zone assessments must be undertaken. This environmental survey assesses substrate type, habitat distribution, bathymetry and benthic flora and fauna.*

*The Living Marine Resources Management Act 1995 (LMRMA) requires marine farming leaseholders to hold a marine farming licence to farm fish (under the LMRMA fish include a range of species). In addition, the Environmental Management and Pollution Control Act 1994 (EMPCA) requires marine farming leaseholders to hold an environmental licence to farm finfish.*

*A baseline environmental survey must be undertaken prior to the commencement of marine finfish farming operations. The provision of an environmental licence by the EPA for a lease area for finfish is contingent on assessment and approval of the baseline environmental survey report. Marine farming licences contain specific provisions in relation to the management of marine farming operations. In many cases licence conditions contain specific conditions that expand on the provisions of management controls, defining environmental standards and outlining reporting and monitoring requirements.*

*Should there be a need to modify licence conditions following consideration of monitoring, research or compliance outcomes, prescribed controls can be varied at any time in accordance with provisions of the Living Marine Resources Management Act 1995 or the Environmental Management and Pollution Control Act 1994, depending on which licence requires modification.*

*Following the environmental licensing of a marine farming lease area, ongoing operations are subject to a structured environmental monitoring and compliance assessment process, which involves ongoing review of monitoring and compliance reporting information against management controls, prescribed indicators and trigger levels. This framework ensures that the impacts on the marine environment from the production of salmonids with respect to both solid and soluble wastes are limited to a level that can be assimilated without unacceptable environmental harm.*

#### *Threatened and protected marine species interactions*

*Marine species are listed and protected under various pieces of Tasmanian legislation. The primary act is the Threatened Species Protection Act 1995 (TSPA). The TSPA lists a number of marine species including numerous coastal or oceanic bird species, four whale species, three seastar species, the Spotted handfish, the Gunn's screwshell and the Maugean Skate.*

*The TSPA sets out a range of measures to protect listed threatened species and makes it an offence to take a listed species without a permit. In addition, the Wildlife (General) Regulations 2010 (regulations made under the Nature Conservation Act 2002 (NCA)), list Specially Protected or Protected Wildlife. A large number of marine mammals and coastal or oceanic bird species are listed as either Specially Protected or Protected Wildlife. The Fisheries (General and Fees) Regulations 2006 also provides for the protection of a number of fish species. Species protected under these regulations include five shark species (of particular note being the Great White Shark) and all handfish of the family Brachionichthyidae (in effect all handfish species that occur in Tasmania).*

*The NCA and the TSPA are also components of the Resource Management and Planning System. Freshwater species are listed and protected under the TSPA and the inland Fisheries Act 1995. There are two species that are potentially impacted by freshwater hatcheries, the Australian grayling and the giant freshwater crayfish. The possession or take of these species is prohibited. Threatened species are explicitly covered in the EIS, which is a statutory requirement under the NFPA to accompany draft marine farming development plans and draft amendments/modifications to such plans.*

*When developing zone assessment surveys, baseline surveys or environmental impact statement documentation, there is liaison between the respective Divisions within DPIPWE and the Director of the EPA. This liaison ensures that survey requirements for threatened species are appropriate and that specific advice is*



*obtained on suitable mitigation measures to ensure that threatened and protected species impacts are reduced as far as possible.*<sup>180</sup>

## Environmental Issues Raised

A number of environmental issues were identified in the evidence presented to the Inquiry:

- Visual impacts;<sup>181</sup>
- Noise; <sup>182</sup>
- Light;<sup>183</sup>
- Marine debris/rubbish; <sup>184</sup>
- Ecosystem impacts;<sup>185</sup>
- Habitat modification; <sup>186</sup>
- Impacts on wildlife (birds, seals);<sup>187</sup>
- Cetaceans protection (impact on whales);<sup>188</sup>
- Impacts on native fish;<sup>189</sup>
- Impacts on threatened species;<sup>190</sup>
- Nutrient loading/effluent;<sup>191</sup>
- Water quality impacts; and<sup>192</sup>
- Cumulative environmental impacts.<sup>193</sup>

The Inquiry received evidence from a number of community representative groups highlighting the above issues.

---

<sup>180</sup> DPIPWE, 2019, *Submission #221*, pp. 20-22.

<sup>181</sup> For example: *Submissions #2, 14, 33, 34, 37, 43, 53, 56, 63, 72, 98, 105, 109, 118, 126, 133, 137, 145, 157, 176, 196, 198, 211, 213.*

<sup>182</sup> For example: *Submissions #2, 5, 7, 8, 11, 13, 14, 20, 23, 24, 25, 29, 33, 34, 35, 37, 41, 52, 53, 56, 59, 63, 72, 73, 81, 84, 89, 92, 98, 102, 103, 105, 118, 120, 133, 137, 138, 142, 144, 157, 165, 171, 176, 204, 208, 210, 213, 220.*

<sup>183</sup> For example: *Submissions #2, 5, 11, 19, 20, 23, 41, 43, 52, 84, 89, 102, 118, 133, 171, 176, 204, 220.*

<sup>184</sup> For example: *Submissions #5, 7, 10, 12, 19, 20, 23, 31, 40, 41, 48, 50, 53, 56, 58, 63, 65, 73, 84, 89, 93, 101, 105, 107, 109, 116, 117, 126, 138, 142, 154, 164, 167, 170, 174, 180, 187, 196, 197, 209, 211, 220.*

<sup>185</sup> For example: *Submissions #2, 7, 8, 40, 50, 120, 125, 153, 173, 201.*

<sup>186</sup> For example: *Submissions #220, 40, 50, 57.*

<sup>187</sup> For example: *Submissions #2, 18, 219.*

<sup>188</sup> For example: *Submissions #167, 2, 13.*

<sup>189</sup> For example: *Submissions #167, 213, 5, 6, 10, 18, 23, 25, 65, 68.*

<sup>190</sup> For example: *Submissions #7, 8, 12, 99, 164.*

<sup>191</sup> For example: *Submissions #6, 8, 42.*

<sup>192</sup> For example: *Submissions #91, 93, 130, 160, 170, 194, 196, 198, 203, 220, 6, 40, 41, 61, 67.*

<sup>193</sup> For example: *Submission #101.*

The Inquiry also received 120 submissions of similar format from concerned members of the community, many containing individual experiences and concerns regarding the environmental impacts of fin fish farming in Tasmania. A summary of the issues raised in these submissions can be found in Appendix E.

Trish Baily, Tasman Peninsula Marine Protection, summarised a number of community-raised issues relating to fin fish farming:

*These submissions express the anguish of issues such as loss of amenity, lack of social licence for the salmon companies to operate, the lack of transparency in the industry and poor public consultation. These issues include noise and light pollution, the endless debris problems along our shorelines, the algal blooms that have washed great roils of green filamentous algae up on our beaches, docks and shorelines, smothered healthy sea grass beds and seaweed colonies, compromising valuable habitats for marine life and destroying favourite recreational areas for swimming, fishing, kayaking et cetera.<sup>194</sup>*

The Bruny Sustainable Aquaculture submission asserted there has been insufficient scientific assessment in site selection for fin fish farming and a lack of appropriate regulation to prevent consequent environmental issues:

*Finfish farming is an intensive industry which requires the addition of significant nutrients and energy inputs resulting in substantial and often unintended environmental impacts. This has been only too visible in Macquarie Harbour and the D'Entrecasteaux Channel. Environmental impacts include:*

- *Nutrient loading and increase in algal growth and slimes;*
- *Build-up of organic material and algal mats in areas surrounding fish farms;*
- *Changes to sediment chemistry and the benthos;*
- *Dead zones underneath and surrounding pens;*
- *Escape of an introduced carnivorous species;*
- *Marine farming debris, nets, ropes and plastic pipes; and*
- *Loss of native fish.*
- *Loss of farmed fish, increased costs and reduced production from aquaculture;*
- *The frequent requirement for large volumes of fresh wafer to treat Amoebic Gill Disease is in conflict with the needs of community and agriculture;*
- *Negative impact on the increasingly-valuable Clean and Green image - both Tasmania's and that of the salmon it produces and attempts to sell at premium prices.*

*... A fundamental cause of these problems is that the current plan is not based on solid scientific assessment of the suitability and capacity of Storm Bay; of the impact on the environment and communities; and of the appropriate regulatory and operational regimes required to successfully manage such a complex undertaking in a shared public space.<sup>195</sup>*

---

<sup>194</sup> Trish Baily, Tasman Peninsula Marine Protection, *Transcript of Evidence*, 12 February 2020, p. 2.

<sup>195</sup> Bruny Sustainable Aquaculture, 2019, *Submission #65*, pp. 4-5.

**Findings:**

118. Concerns regarding environmental harm were identified in submissions made to the Inquiry, including visual amenity, noise, light, marine debris, ecosystem and habitat modification, impacts on wildlife, nutrient loading, water quality and cumulative environmental impacts.

## Regulation of Environmental Impacts

The Environment Tasmania submission expressed concern that the current regulatory regime is not adequate to manage the environmental impacts of the industry:

*Current regulations governing environmental impacts were written when the industry was a boutique fishery and have not been updated to reflect the footprint of Australia's largest fishery. For example, they allow fecal mounds and bacteria mats to develop under farms and 100% of marine life on the seafloor to be killed under salmon pens.<sup>196</sup>*

The Tasmanian Conservation Trust submission expressed concern regarding the legislative framework governing the finfish farming industry, including environmental and social impacts:

*The Tasmanian Conservation Trust first became involved with the fin fish farming industry in the mid-1990s when we made submissions on then draft Marine Farming Development Bill 1995. For more than twenty years we have responded to many specific marine farm proposals and made submissions to the state government on proposed changes to legislation related to marine farms.*

*Many of the issues the TCT raised in the early days of fin fish farming have never been addressed. Despite changes to legislation, most recently the Finfish Farming Environmental Regulations Act 2017, there has been little or no improvements in terms of addressing issues related to pollution of waterways, biosecurity, seal management, social and recreational impacts and the right of the community to have its say over major decisions related to fin fish farming.*

*The fin fish farming industry was relatively new in 1995 and there may have been a justification for providing an easier or simpler approval pathway for the industry in its infancy. However this cannot be justified any longer.*

*The industry has been going through a rapid expansion in recent years. The regulatory controls have proven to have been grossly inadequate and the state government and industry have failed to respond to community concerns.*

*In its unnecessary haste to expand, the industry came close to crashing the ecosystem of Macquarie Harbor. The industry started to expand into the east coast of*

---

<sup>196</sup> Environment Tasmania, 2019, *Submission #12*, p. 20.

*Tasmania, ignoring a massive and sustained community backlash. Most recently, the three major companies have moved to expand into Storm Bay, proposing a scale and intensity of farming that is unprecedented.* <sup>197</sup>

Chris Wells, aquaculture planning consultant, noted that initial environmental harm caused by the industry was low, however the regulation has failed to keep pace with the expansion of the industry:

*There was never any serious attempt in this State to address site selection criteria such as water depth, water movement, allowing to enable dispersal of nutrients loaded from farming activity. Instead legislation was passed fast tracking salmon farming development and bypassing normal planning processes. This very poor start to the industry did not immediately cause problems in the environment because farms were small, pens were small and stocking densities limited. Lease were granted in areas of little tidal movement, that were conveniently located for business owners and the business of salmon farming begun.*

*As years went by pens became larger, biomass of fish increased and companies invested on the ASX. As this occurred nothing changed in terms of regulation by State Governments and Local Governments were bypassed. The marine environments were compromised by large scale farming, overstocking became the norm to increase profits and the regulators at DPIPWE and later the EPA turned a blind eye to the problems.*<sup>198</sup>

The CSIRO submission made the following observations regarding the minimisation of environmental harm:

*Management of finfish farming operations with respect to minimising environmental harm is currently achieved by the EPA through exacting compliance regulation. More transparency in the reporting of industry compliance (and action taken when non-compliance occurs), would improve public understanding of this process. There are likely to be benefits in bringing environmental compliance reporting for aquaculture, agriculture and all industries using environmental services into a unified framework.* <sup>199</sup>

The EDO submission highlighted the lack of guidance for the EPA discretion in imposing biomass or nitrogen caps on leases and no mandatory requirement that these limits be set:

*While the MFP Act states that MFD Plans may provide for total nitrogen output and biomass caps, there is no clear guidance of how this is to be implemented. Currently, MFD Plans include provisions providing the EPA Director with complete discretion to set such limits.*

---

<sup>197</sup> Tasmanian Conservation Trust, 2019, *Submission #219*, p. 1.

<sup>198</sup> Chris Wells, 2019, *Submission #6*, p. 1.

<sup>199</sup> CSIRO, 2019, *Submission #90*, p. 7.

*...There is no guidance on, or limits for the exercise of these powers by the Director, EPA, notwithstanding that the decisions are critically important when it comes to the management of environmental impacts of salmon farming on the environment. It was biomass limits that played the key role in the environmental catastrophe that occurred in Macquarie Harbour in 2015, and yet, the most recent MFD Plan leaves a complete discretion to the EPA Director as to how biomass limits are to be imposed.*

*These two factors should be mandatory in all MFD Plans, as they have consequences for the licencing of marine farming and are the two factors that will most influence environmental outcomes from marine farming footprints.<sup>200</sup>*

Wes Ford, Director EPA, made the following comments regarding amending licence conditions:

*... at the moment we have a robust set of licence conditions across the environmental licences for salmon farming, but I can change those licence conditions tomorrow, next week or next month. We run the risk of lack of consistency if we are managing only by licence conditions. As people have commented on a number of occasions in relation to the question about transparency, there is no process that allows those licence conditions to be developed in an open and transparent manner.<sup>201</sup>*

Scientist Christine Coughanowr's submission, identified widespread concern within the community that aquaculture operations to date have not been managed to prevent environmental harm. She stated:

*This includes the full range of operational activities and inputs. in particular:*

#### *Hatcheries & smolt production*

*There are over a dozen hatcheries and smolt production facilities located along rivers throughout Tasmania. The original hatcheries were relatively small-scale, flow-through systems, with rudimentary wastewater treatment and limited regulatory oversight. As the salmon industries have expanded, these facilities have also grown but in many cases without improved wastewater treatment. At the same time, there has been a move towards producing much larger smolt, resulting in major increases in both biomass and associated pollution loading. Water use is extremely high: for example, in 2011 fish hatcheries in the Derwent catchment had a combined allocation of over 150,000 ML/year (39% of all allocated water), which was greater than allocation for irrigation (30%) or public water supply (21%) (Eriksen et al, 2011). More recent information is not readily available.*

*As a result, nutrient loading to our rivers has increased significantly over the past 20 years, including in areas directly upstream of major drinking water supplies. In the River Derwent catchment, for example, there are five large hatcheries; one on the Florentine, one at Wayatinah, two on the Tyenna, and a fifth located at Meadowbank - directly upstream from Hobart's main drinking water supply at Bryn Estyn. These industrial-scale fish farms discharge nutrient loads that are equivalent*

---

<sup>200</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 11-12.

<sup>201</sup> Wes Ford, EPA, *Transcript of Evidence*, 21 February 2020, p. 7.

*to those of small to mid-size sewage treatment plants, with maximum discharges typically occurring during late summer when river levels are low and waterways are at their most vulnerable. Wastewater treatment is generally poor, particularly with respect to nutrient removal, and nutrient levels below outfalls have been recorded at over 100 times the upstream levels. (Proemse et al. 2018)*

*Consequences include high levels of algae and bacterial growth in downstream waterways, and loss of ecologic and amenity values. Of perhaps greater concern is the risk of toxic or nuisance blue-green algal blooms in downstream Hydro lakes and public water supplies. The combination of increasing nutrients + still reservoirs + warming temperatures is a perfect recipe for nuisance and toxic algal blooms. Indeed, the on-going taste and odour issues experienced at the Bryn Estyn water treatment plant (Hobart's main water supply) started in the summer of 2015, following the construction of the large new hatchery at Meadowbank. This also coincided with severe filamentous algal blooms in the seagrass meadows of the upper estuary, that also commenced in the summer of 2015...*

#### *Use of scarce freshwater resources*

*Salmon aquaculture uses vast quantities of freshwater, both for smolt production and to limit amoebic gill disease (AGD) in sea cages. The salmon industry has stated that caged fish typically need to be bathed about 7 times, particularly when the smolt are first introduced to saltwater. How much water is required for this, and where does it come from? What does the industry pay for this valuable resource? Freshwater sources used include rivers, dams, groundwater and desalination plants, however no comprehensive audit or review has been undertaken.*

*There does not appear to be any information available on this from the State Government, and requests for information from the industries has not been forthcoming. This is clearly a major concern both for the industries themselves as well as for water-poor coastal communities in the southeast and eastern Tasmania. Conflict over water access is brewing and is likely to increase in the absence of a clear and equitable water strategy. The recent water pipeline fiasco at Orford is a perfect example of this, with a small council left holding the bag for a poorly planned water pipeline to benefit big industry.*

...

#### *Impacts of new wellboats*

*HAC has operated a large wellboat in Tasmania since 2015, and two more of the world's largest wellboats have recently arrived or are en route. These wellboats serve multiple purposes, including improved biosecurity, more efficient use of freshwater and production of desalinated water if required. These vessels have also been designed to streamline bathing, transportation and harvesting processes - significantly reducing labour costs. However it is unclear whether the potential impacts of these wellboats have been fully assessed by the EPA, and questions asked of Tassal at a recent community information session remain unanswered.*

...

### *Pollution from sea cages*

*Sea cages can cause widespread organic and nutrient pollution in our coastal waterways, particularly in poorly flushed bays, estuaries and harbours. Consequences of organic pollution can include accumulation of fish faeces and uneaten food in the vicinity of the pens, resulting in sludgy, low-oxygen 'dead zones' with bacterial mats and loss of bottom-dwelling fauna. In Macquarie Harbour, this oxygen depletion has extended up into the water column, causing or contributing to massive fish kills in 2015 and 2018, along with impacts on native species such as the protected Maugean skate.*

*Impacts resulting from nutrient overloading can extend to larger areas and are known to cause a whole cascade of problems, including run-away algal blooms, damage and loss of reef and seagrass communities, low oxygen levels, fish kills and rotting algae on beaches. The scale of nutrient loading associated with existing and proposed fish farms is enormous, increasing rapidly, and is not widely known. To put this in perspective: nitrogen loading from the 30,000 tonnes of salmon produced in 2010 was equivalent to approximately twice the nitrogen discharged by all sewage treatment plants in Tasmania; the current production of 55,000 tonnes is equivalent to nearly four times this sewage load. If the full Storm Bay expansion is implemented, this would bring the state total up to 135,000 tonnes, or nearly nine times the sewage load from the entire state - this is the equivalent of the sewage load produced by over 4 million people. These are massive loads, and both the existing and potential impacts deserve careful and independent scrutiny.*

*Concerns about nutrient impacts have been raised many times by the community as well as by recreational and commercial fishing interests, particularly in poorly flushed embayments of the Huon/Channel, Nubeena Harbour and Port Arthur/Long Bay. The planned expansion into Storm Bay also carries significant risks, particularly for the shallow, sheltered bays, fringing reefs and seagrass meadows of Norfolk and Frederick Henry bays, which are particularly vulnerable to nutrient damage. ...*

*In the Derwent Estuary, this is further compounded by heavy metal contamination. Studies have shown that when oxygen levels drop, heavy metals are released from contaminated sediments, and mercury can be converted to more toxic forms. See the 2015 State of the Derwent Report Chapter 10 for details. Storm Bay sets the overall water quality for the Derwent, which is already nutrient-stressed. Over 100 million dollars has been spent in recent years to reduce nutrient loads to the Derwent from sewage treatment plants - will this now be cancelled out by salmon production in Storm Bay?<sup>202</sup>*

---

<sup>202</sup> Christine Coughanowr, 2019, *Submission #67*, pp. 6-9.

Jane Gallichan, CEO TARFish, suggested that the Government Snapshot is deficient and does not provide an accurate indication of the health of waterways:

*The Government produced a snapshot for 2018-19. It is deficient - it does not report on the health of waterways, or on other matters of direct relevance to other users of shared waterways, like regulatory compliance, marine debris and safety incidents.<sup>203</sup>*

**Findings:**

119. Concerns were raised that the current regulatory regime is not adequate to manage the environmental impacts of the fin fish farming industry, and that regulation has failed to keep pace with the expansion of the industry.
120. Concerns were raised that expansion of fin fish farming has caused an increase in nutrient loading in the State's waterways, impacting on water quality and resulting in environmental harm.
121. There is no requirement that biomass or nitrogen limits be set on leases, and there is a lack of criteria for EPA discretion in imposing such limits.
122. Public confidence in effective prevention of environmental harm in the fin fish farming industry would be strengthened through improved public reporting of compliance and actions taken on non-compliance.
123. Concerns were raised regarding the environmental impacts of wellboats in the fin fish farming industry, and the lack of clarity in relation to the regulatory arrangements governing wellboats.
124. Concerns were raised in relation to the use of fresh water resources by the fin fish farming industry, the lack of a comprehensive audit or review of those resources used and the apparent absence of a clear and equitable water strategy for the State.

**Recommendation 43**

Conduct a comprehensive audit of freshwater requirements for the fin fish farming industry to inform the development of a policy/strategy on the allocation and management of these resources.

**Recommendation 44**

Conduct an independent review of the impacts of current fin fish operations on inland waterways, including drinking water supplies and remediation costs borne by TasWater/State Government.

**Recommendation 45**

---

<sup>203</sup> Jane Gallichan, TARFish, *Transcript of Evidence*, 9 September 2020, p. 21.



Require all new freshwater fin fish hatcheries/smolt production facilities to utilise Recirculating Aquaculture Systems.

**Recommendation 46**

Publicly release monitoring data relating to the operation of freshwater fin fish operations.

**Recommendation 47**

Through the data portal, provide improved public reporting of the environmental management of fin fish farming activities, including:

- the baseline environmental data underpinning Marine Farming Development Plans and amendments;
- fin fish farming licences, leases and associated management plans;
- individual lease monitoring data in regard to impact on benthic flora and fauna, water quality, marine life and threatened species; and
- details of compliance and enforcement activities.

## Enforcement

The EDO submission provided the following comments in relation to the adequacy of monitoring and enforcement actions, calling for clearer management controls, greater enforcement, increased penalties and the third-party ability to seek redress for environmental harm:

*The EMPC Act and the MFP Act contain offences that apply to finfish farming, however, in our submission the penalties for these provisions are inadequate and do not provide sufficient deterrent. Further, there is little public reporting on enforcement action taken, which means there is no transparency about the outcomes of complaints, consistent application of regulatory tools or how breaches are treated by regulators.*

*(a) MFP Act*

*The MFP Act creates offences for marine farm operators who fail to comply with MFD Plans, with penalties up to \$33,600 plus daily penalties. The LMRM Act provides penalties of \$84,000 or 2 years imprisonment who fail to comply with conditions of their licence plus daily penalties of up to \$8,400 for marine farm operators for continuing breaches.*

*The MFD Plans contain “management controls” under s24 of the MFP Act, which would be the control capable of enforcement. However, the drafting of these controls is such that – other than limits to the marine farming area authorised by the Plan – would be difficult to see how they are enforced or defer to directions made by the Secretary to DPIPW or the EPA Director. Any directions issued by either person are not publicly reported on as far as we are aware, and certainly there is no requirement for such reporting.*

*(b) EMPC Act*

*The primary enforcement tools exist in the EMPC Act. While there are offences under the EMPC Act for breaches of general environmental offences of causing serious or material environmental harm, with penalties up to \$1.68 million, there are statutory defences to these offences which in practice will enable an operator to rely on the existence of an environmental licence. For instance:*

- That the emission of a pollutant does not exceed a maximum quantity, concentration, emission rate, discharge rate or overall volume set in an environmental licence. This defence applies expect [sic] to environmental licence conditions that limiting (sic) the biomass, production, raw material or water and energy use for a finfish farm.*
- That an environmental licence states that compliance with specified provisions of it will satisfy the general environmental duty and those provisions were complied with.*

*In addition, any such prosecution needs to prove that the person causing the pollution did so “intentionally or recklessly and with the knowledge that serious [or material] environmental harm will or might result”. Further, the proof of “serious or material” environmental harm was caused by a marine farm operator necessarily depends on the veracity of baseline environmental surveys and monitoring undertaken and the EPA’s standards, for instance, to prove that there has been environmental harm, and that harm has occurred as a direct result of a particular marine farm or its stocking density.*

*There are strict liability offences (s50(2) of the EMPC Act), that do not require intention or recklessness to be proved. However, the penalty is also less. A breach of s50(2) has a maximum penalty of \$420,000 for a body corporate. Such a prosecution will therefore necessarily be complex, in particular, as proving intent or knowledge to the standard of proof is necessarily difficult and potentially prohibitive of successfully relying on these offences. These provisions have, anecdotally, rarely been used. In determining whether enforcement powers are sufficient, it is appropriate to look at the practicalities of using various enforcement tools. For these reasons, it is likely that any prosecution, if taken, would be for breach of conditions of environmental licences.*

*The penalties for a breach of a licence are considerably lower than the general environmental offences. The EMPC Act prescribes penalties of up to a \$168,000 fine for a body corporate or an \$84,000 fine or 2 years imprisonment for an individual found by a court to be contravening conditions of an environmental licence.*

*Our quoted penalties above are for the environmental licence breach. These are comparably low penalties for corporate and individual breaches in other jurisdictions. Penalties for breach of conditions are commensurate with the higher range of offences of the general environmental offences. For instance, penalties for breach of an EPA licence condition in NSW are:*

- For a corporation - \$1,000,000, and \$120,000 for each day it continues; and
- For an individual - \$250,000, and \$60,000 for each day the offence continues.

*The EMPC Act also empowers a court to impose a “special penalty” on an operator in relation to any contravention of a condition of an environmental licence regulating the amount of dissolved nitrogen produced or emitted. Currently this special penalty is set at \$168,000 per each extra tonne of nitrogen released over the cap. This is a welcome additional penalty. However, as currently no environmental licences impose any clear, enforceable caps on nitrogen, this special penalty is effectively redundant.*

*(c) Demerit points*

*Both the MFP Act and LMRM Act provide for the imposition of demerit points for each penalty unit imposed upon the conviction of a person for these offences by a court. The LMRM Act provides for additional demerit points where a person receives a term of imprisonment or suspended sentence, while the MFD Act was amended so that demerit points would be allocated to a marine farm operator for each penalty unit of an infringement notice for failing to comply with the MFD Plan, an emergency order or plan.*

*The existence of a “big stick” will only serve as a deterrent where the regulator is willing to wield it. While we support the reforms to penalties imposed on marine farm operators who do not comply with MFD Plans or licence conditions, the likelihood a marine farm operator would accrue the 200 demerit points required to be disqualified from holding a licence (either permanently or temporarily) are low. This is because of the approach regulators take to enforcement.*

*(d) Civil enforcement*

*There is capacity for third parties to take legal action where regulators fail to Act under the civil enforcement provisions of the EMPC Act. For instance, where communities are seeking to prevent serious or material environmental harm, where there is evidence of breach of environmental licences. The primary issue is a person’s ability to seek access [to] monitoring data and where caps are not set in MFD Plans or licences to establish whether there is a breach.*

*There are, however, no third party rights to enforce breaches of management controls of a MFD Plan or lease or licence issued under the LMRM Act.*

*Civil enforcement in an administrative tribunal is one of the components of public participation, enabling effective redress for environmental harm. The Tasmanian Resource Management and Planning Appeals Tribunal has jurisdiction in respect to civil enforcement of planning breaches where the planning authority fails to act.*

*It is unlikely that civil enforcement proceedings could be taken to argue for different environmental licence or management controls to be imposed or allow for an order of the Tribunal [to] be made setting, for instance, a different biomass limit.<sup>204</sup>*

Felicity Holmes stated in her submission:

*While we know that some infringements occur, it appears that repercussions are either inadequate or absent.<sup>205</sup>*

The WWF submission suggested the enforcement regime is not an adequate deterrent:

*While fines have recently increased, these are still insufficient to outweigh the commercial benefit delivered from non-compliance. A clear case in point was the non-compliance by industry in Macquarie Harbour. The cost to the environment in the case of the Franklin lease was denuding of the benthic environment under the lease. However the cost to industry was minimal. In fact while the EPA directed a de-stocking, the impact was known to be occurring months in advance of this, and the EPA should have directed de-stocking at that point. However, the need to (sic) the fish to reach market size was prioritised. Clearly, far more significant penalties than have even delivered with recent amendments are required, to incentivise responsible stocking decisions.<sup>206</sup>*

And further suggested:

*Direct the Auditor-General to undertake a review of penalties to ensure they act as strong deterrents to the mature and profitable industry that salmon aquaculture is, and reflect the significant and demonstrated opportunity for severe impacts to arise from non-compliance.<sup>207</sup>*

The Bruny Sustainable Aquaculture submission stated that current regulation and management of the industry is failing and that the EPA does not have sufficient resources to provide the appropriate oversight:

*The EPA must enforce its own regulations and take strong and timely action against companies which fail to comply with regulations, specified management regimes or relevant standards.*

*There is a lack of transparency across the Marine Farming Development Plans as they have been principally driven by and written by the industry without appropriate oversight and direction being taken by the EPA to set nutrient loading limits, areas available for farms and the future direction for the industry overall.<sup>208</sup>*

---

<sup>204</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 25-27.

<sup>205</sup> Felicity Holmes, 2019, *Submission #165*, p. 1.

<sup>206</sup> WWF, 2019, *Submission #94*, p. 23.

<sup>207</sup> WWF, 2019, *Submission #94*, p. 5.

<sup>208</sup> Bruny Sustainable Aquaculture, 2019, *Submission #65*, pp. 6-7.

According to the Environment Tasmania submission, penalties for breaches of regulation are inadequate:

*Currently penalties for breach of regulation fail to discourage ongoing, intentional regulatory breaches. It is more financially lucrative for operators to breach regulations than comply with them.<sup>209</sup>*

Penalties are discussed further under Term of Reference 3 in the context of marine debris.

**Findings:**

125. Penalties for breach of environmental regulations in Tasmania are set at lower levels than in some jurisdictions.
126. Concerns were raised that penalties applied to the fin fish farming industry for breach of environmental regulations are not adequate to act as a genuine deterrent.
127. Concerns were raised regarding the difficulty of applying the various enforcement tools relating to breaches of environmental regulations by the fin fish farming industry.
128. Legislation provides for a “special penalty” relating to the amount of dissolved nitrogen produced or emitted, however no current environmental licence imposes an enforceable cap on nitrogen.

**Recommendation 48**

Review the penalties and scope of liability in regulation of fin fish farming to reflect the serious environmental consequences that can arise from breaching regulations and to strengthen their deterrent effect.

**Recommendation 49**

The EPA to develop and publish an enforcement policy relating to fin fish farming, including clear guidelines which set scientifically-based performance indicators and a scale of actions.

**Recommendation 50**

The *Marine Farming Planning Act 1995* and the *Environmental Management and Pollution Control Act 1994* be amended to enable third parties to take legal action for environmental harm caused by breach of licence conditions.

---

<sup>209</sup> Environment Tasmania, 2019, *Submission #12*, p. 4.

## Environmental Standard

The Inquiry sought comment from Wes Ford, Director EPA in response to concerns raised in submissions regarding the rapid expansion of the industry:

**Ms FORREST** - *We have a sustainable industry growth plan. It has raised some concerns in the broader public about the rapid expansion - basically doubling the amount of fish in farms in some areas of the state. That is being proposed and somewhat progressed in the absence of a regulatory standard. Is that a fair statement?*

**Mr FORD** - *Yes, but it is an incomplete statement. You have to come back to a position that says we still have robust licence conditions in place, and the industry is regulated, and will continue to be regulated in the short term under a set of robust licence conditions - and those which I am responsible for under the environmental licence provide for a framework in which to regulate and continue to regulate the industry as it is today, but also the industry as it may expand in the near future.*

**Ms FORREST** - *As the Director of the EPA, do you believe the rigour around the environmental licence conditions, and the process around determining what they are, monitoring them and overseeing that is adequate? If you were to see the expansion continue, ... are you confident in your role that it is adequate to manage, until we get to a standard that will then apply to all finfish farms operating in Tasmania?*

**Mr FORD** - *The simple answer is yes, but in order to expand on it I need to take you back to the process in relation to creating the environmental licences, and where we stand with those environmental licences.*

*When royal assent occurred in December 2017, the legislation created a mechanism where the licences needed to be granted, and where those initial licences were granted by way of transferring the environmental conditions as they stood in the marine farming licences under the Living Marine Resources Management Act to be the licences and licence conditions under ... the Environmental Management and Pollution Control Act. That process started occurring in March 2018. We had to develop a licensing system before we could start issuing licences. The first round of those licences - which represents around 44 of the licences or so now - still have the conditions in them largely as they were when they were in the marine farming licences.*

*Since then, three new licences have been granted and, if you look at the progression of the conditions on those licences, the first of those were amendments I made to Spring Bay's licence at Okehampton Bay to allow Tassal to operate. I did that under delegation, so there was an amendment of the marine farming licence. Those conditions, in my view, are more onerous and have greater requirements on them than any of the other licences that came to us.*

*Then, when you look at the new licences that have been granted for Storm Bay - one to Huon Aquaculture in relation to Yellow Bluff, and the first of the package of licences to Tassal in relation to the West of Wedge leases - I contend that the conditions in those licences have lifted up again.*

**Ms FORREST** - *What I am hearing, Mr Ford, is they are not consistent.*

**Mr FORD** - *They are not consistent. The challenge in the consistency space is that when you are dealing with issues as they arise, and you are presented with them here and now, you develop conditions around the here and now, and that then informs you with the development of the next licences and the next set of conditions.*

*I cannot sit here and say we are at the end of a process of amending conditions of licences, because the reality is we are probably not. For me, that is what the standard means. The standard starts to codify not only the prescriptions, but also gives a clear reflection around how the discretion operates. My early thoughts on how this standard would operate is that it would be similar to a planning scheme where you have some prescriptive approaches, or you have some alternate approaches where you can clearly demonstrate -*

**Ms FORREST** - *Discretionary?*

**Mr FORD** - *Well, discretionary. If you look at a planning scheme at the moment, you can either take the permitted pathway, or if you can demonstrate a level of equivalence - so the onus is back on the proponent and the assessor - there is a mechanism to deal with alternates.*

*We have started looking at how you actually do monitor some of those, because a prescriptive monitoring regime across all marine farms - what you do in Macquarie Harbour and what you do in Storm Bay and what you do in the lower part of the Huon are not the same. The system has to be able to accommodate those changes. At the moment, it is just done on an individual licence basis. If you go through and do a careful analysis of licences, you will see there are differences between even the three new licences we have generated.<sup>210</sup>*

The WWF submission made the following comment in relation to the development of the Salmon Standard by the EPA:

*For over a year the EPA has been developing an 'environmental standard' for the salmon industry. It is understood that this will provide consistent standards for managing environmental issues across the industry. Again, while we have offered to be involved in the development of this fundamentally important process, environmental groups, possibly all groups, have been excluded. Being given the opportunity to comment on a well developed document which already has the buy*

---

<sup>210</sup> Wes Ford, EPA, *Transcript of Evidence*, 21 February 2020, pp. 9-10.

*in of significant politicians and bureaucrats, is not genuine inclusion, nor is it consultation.*<sup>211</sup>

Jane Gallichan, CEO, TARFish commented:

*The EPA director has flagged the development of a new environmental standard for regulating salmon farming in Tasmania. We would like to see that standard published and the industry performance reported on against that standard.* <sup>212</sup>

Environmental consultant Aquenal Pty Ltd commented on the potential for improvements:

*Aquenal is aware that the EPA has commenced development of revised Environmental Standards as part of the Growth Plan (see Section 10). As one of the specialists on the ground conducting field work, laboratory work and data analysis, we are acutely aware of the strengths and weaknesses of the current monitoring and baseline assessment programs. There are potential improvements for these programs to make them more efficient and maximise their ability to contribute to our understanding of the potential effect of finfish farming on the environment. Aquenal are enthusiastic to contribute our ideas to the EPA review of Environmental Standards.*<sup>213</sup>

In September 2020, Wes Ford, Director, EPA provided an update on the development of an environmental standard:

*The Minister for Environment has endorsed that there will be a regulated environment standard for salmon, the salmon environmental standard, what it has been exactly called has not been resolved yet. The exact form of that regulation has not yet been agreed to with the minister but I anticipate it will be one of two forms - either a standard made by the minister or the Governor in accordance with normal subordinate legislation processes or a standard made by the EPA board where the regulations set up the requirement for the board to make such a standard. There is a process to go through with the minister and the Governor on which of those it will be. Materially what it will do, in my view, will be the same thing.*<sup>214</sup>

Mr Ford made the following comments in relation to the progress of the standard:

**Mr FORD** - *In terms of a stepwise process, our first step will be to provide a draft of the standard to sit down with industry and talk to it about how it would impact on them. Our second step would be to then sit down with a broader community group of people we might identify through a range of processes who would have an interest in what is in the standard. The third step would be a public consultation process that is the statutory process for developing the regulation itself with the supporting documentation.*

---

<sup>211</sup> WWF, 2019, *Submission #94*, p. 7.

<sup>212</sup> Jane Gallichan, TARFish, *Transcript of Evidence*, 9 September 2020, p. 9.

<sup>213</sup> Aquenal, 2019, *Submission #85*, p. 5.

<sup>214</sup> Wes Ford, EPA, *Transcript of Evidence*, 8 September 2020, p. 61.



*At this stage we are hoping to get to the point of doing the first two steps this side of Christmas. Why we need to talk to industry first is that it needs to understand, particularly, the changes we are proposing in relation to the current arrangements. It needs some time to digest those. From a probity and transparency point of view, we will ensure we keep documentation and separate documentation so that we can demonstrate how a first draft might become a second draft and might become a third draft, should people be interested.*

...

*The first issue is that the environmental licence themselves should end up being less complex than they are currently, because there are a significant number of conditions in the environmental licences that tell people how to do things. For example, how to undertake a video-monitoring tow to determine what the visual impact is. All that material will move into the standard, and the licence will then call up that standard and say, 'You are required to undertake video monitoring in accordance with the environmental standard.'. There will be a clear link between the licence and the standard.*

**CHAIR** - *Therefore those environmental licences are all reviewed and rewritten once the standard is in place?*

**Mr FORD** - *That would be the intent. There are two powers within the act that deal with amending licences. There is a power where the operator can apply to have a licence varied, and there is a power where the director can impose variations of his/her own volition - so the director intent would be to use those powers under the act to then make the changes to the licences to ensure the licences then align with the standard. We would look at doing that over a relatively short period, just by doing all of them in a couple of groups.*

**Mr VALENTINE** - *That's with new licences?*

**Mr FORD** - *That is with the existing ones. There is also an opportunity to vary licences at renewal, but I would not wait until the renewal process to vary them. I would be starting to vary as soon as the standard becomes more -*

**CHAIR** - *They will all be reviewed against the standard once it is in place, and that will be within a fairly timely period. Is that what you are saying?*

**Mr FORD** - *Yes, that is right. Moving through them, we would look at it in terms of priority leases, and we would do some sort of triaging around where we start. We probably wouldn't do them all in one day, but we would process as many as we could in parallel. We would probably do them in chunks. We might do a plan area - for example, we might start in Macquarie Harbour, or we might start down in the Channel.*

**CHAIR** - *The expectation is that they then become more aligned and able to be compared, and similarly assessed after that standard has been put there and they have been aligned with it.*

**Mr FORD** - *Yes.*<sup>215</sup>

The following progress update was provided by Tim Baker, Secretary, DPIPWE on 15 April 2021 in relation to the salmon standard:

*I am advised by the Director of the EPA that the development of the Environmental Standard may draw on recommendations from the review of the benthic monitoring programs currently being undertaken by Professor Ken Black, which is anticipated to be finalised in April. A draft Environmental Standard will then be consulted on within Government and with industry. It is anticipated that the draft Environmental Standard will then be released for public comment, along with a draft regulation and regulatory impact statement in July 2021. Following a process of Ministerial approval, it is anticipated that Environmental Licences will be amended to reflect the Environmental Standard by the end of 2021.*

**Findings:**

129. To date, the planning, regulation, management and expansion of the fin fish farming industry has occurred in the absence of an environmental standard.
130. The EPA is developing an Environmental Standard to provide consistency in the management of environmental issues in the fin fish farming industry.
131. Concerns were raised that the community and some stakeholder groups were excluded from the development of the Environmental Standard for the fin fish farming industry.
132. It was anticipated that Environmental Licences would be amended to reflect the Environmental Standard by the end of 2021.

---

<sup>215</sup> Wes Ford, EPA, *Transcript of Evidence*, 8 September 2020, pp. 65-66.

## Adaptive management and ecologically sustainable development

The DPIPWE submission provided detail regarding ecologically sustainable development and the role of adaptive management:

*The National Strategy for Ecologically Sustainable Development is the policy within which Australian state and federal governments have agreed that aquaculture development is to be implemented. This strategy was endorsed by the Council of Australian Governments in 1992 and has three core objectives:*

- *to enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations;*
- *to provide for equity within and between generations; and*
- *to protect biological diversity and maintain ecological processes and life support systems.*

*The strategy is implemented under the guidance of a number of ecological and development principles. It emphasises that a balanced approach is required for ecologically sustainable development and these guiding principles and core objectives need to be considered as a package. No objective or principle should predominate over the others, Management judgments have to be based on the available scientific evidence of risk, and the levels of short and long-term impacts that are acceptable in the socio-economic as well as ecological context.*

*In Tasmania, an adaptive management approach that is consistent with Tasmania's Resource Management and Planning System, and ecologically sustainable development principles, is applied to salmonid marine farming. This approach enables effective and timely responses to the evolving issues that arise from a dynamic industry operating in a highly challenging environment.<sup>216</sup>*

Louise Cherrie, former member of the Panel, in her submission questioned the reliance on the adaptive management approach:

*Adaptive management means taking operational actions in response to unforeseen changes. All developments, whether land or marine based, are subject to some uncertainties based on the dynamic nature of environmental systems and there is a place for adaptive management. However, it cannot be the whole strategy and does not replace sound science and planning for foreseeable events. Adaptive management relies on:*

- *reasonable understanding of the receiving environment at the outset (e.g. collection of baseline data, applicable reference sites, biogeochemical modelling)*
- *understanding of what standards or natural values are to be protected*
- *monitoring on a frequency and scale necessary to detect deviations*

---

<sup>216</sup> DPIPWE, 2019, *Submission #221*, p. 21.

- *timely reporting and analysis of data so that management decisions can be made*
- *appropriate and timely operational response*
- *monitoring of recovery prior to any further site use; and*
- *acceptance (or at least tolerance) of issues when they do arise*

*Adaptive management can be used to allow flexibility of resource management where it is beneficial to proceed with an activity but not all information is known about the receiving environment or impacts. However, it has been used inappropriately to progress developments for which key aspects have not been resolved. In the case of massive expansion in Storm Bay, these developments have proceeded without: completed biogeochemical modelling; no biosecurity plan; no Regulatory standard to which operations will be held to; and no mapping of natural values to provide clarity on what needs to be protected.*

*Whilst operators identify and respond to issues throughout the life of their activities, adaptive management should only be necessary where adequate science cannot be completed and to address changes that were not reasonably foreseeable. In the case of Storm Bay, developers have advised that these proposals were many years in the making. The State has also issued the Salmon Growth Plan with clear objectives to expand. There was adequate time to address data gaps and develop plans to prevent or recover from plausible event scenarios (e.g. change in dissolved oxygen levels, major fish kills, jellyfish bloom, eutrophication). This has not happened. Despite clear and known scenarios for environmental harm and fish kills the operational plans have been non-existent or grossly inadequate. No plans were submitted that were of an adequate level of detail and, in the case of biosecurity and waste management, no plans existed at all. Regardless the developments have been approved. The question is why adaptive management is relied upon so much?<sup>217</sup>*

Christine Coughanowr's submission suggested that an adaptive management approach to the Industry is not the appropriate environmental management framework:

*The regulators and salmon industries are working on the assumption that our coastal and marine waters can absorb massive organic and nutrient loads, and that risks can be addressed using 'adaptive management' – which seems to be interpreted as dealing with any problems if and when they arise. This is simply not credible, as has been demonstrated via the Macquarie Harbour debacle. The production cycle from smolt to harvest is too long, and the value of the product is too high; no-one is going to pull the plug halfway through.*

*Adaptive management is not a substitute for careful planning. To be successful, adaptive management first requires good system understanding, including comprehensive baseline surveys. The baseline cannot be set after the expansion is already underway. This should then be coupled with predictive models that have been validated, and which can be used to estimate the system's carrying capacity. As production levels increase, a detailed monitoring program must confirm that the*

---

<sup>217</sup> Louise Cherrie, 2019, *Submission #55*, pp. 1-2.

*system can cope with the inputs as predicted, and that the models are accurate. This information needs to be shared with the community in a transparent and timely fashion, so they have confidence in the process. And finally - and most importantly - adaptive management must set the criteria, triggers and management response for when things go wrong. This cannot be done on an ad hoc basis.*

*In summary, this major expansion needs to be based on robust science, which is still several years away. In the meantime, the precautionary principle should prevail, and further expansion should be postponed until the necessary monitoring, modelling and management controls are in place. Without this - it is at best an educated guess, and at worst another exercise in crisis management.<sup>218</sup>*

According to the South East Marine Protection (SEMP) submission:

*The adaptive management approach adopted by industry and Government is a root cause of the catastrophic failings in Macquarie Harbour. The association between Industry and Government is one of partnership. The separation required between legislators, regulatory enforcement and industry is no longer sufficient to ensure the trust and social licence to deliver the confidence required that Salmon farming activity will benefit all Tasmanians. The “turn a blind eye” or adaptive management approach to many issues that are widely believed to have contributed to the negative impact on Tasmanian marine ecosystems in and around Salmon farm leases is a major concern. It is significant that lease conditions have been breached, mortality rates and escape numbers gone undisclosed and infrastructure loss has occurred; the reputational damage done to the industry has destroyed the requisite trust for regulation compliance responsibility to be left with industry. SEMP would like to see an efficient, predictable, transparent and enforceable planning and regulatory system be adopted.<sup>219</sup>*

Margaret Taylor, in her submission, stated:

*Adaptive management is not a substitute for careful planning. Adaptive management requires good understanding of the system with comprehensive baseline surveys. The baseline cannot be set after the expansion is already underway. This should be aligned with predictive models that have been validated, and which can be used to estimate the system’s carrying capacity.<sup>220</sup>*

The EDO submission provided the following comments on adaptive management:

*(c) Lack of scientific certainty and adaptive management*

*Decision-making under the MFP Act is underpinned by the objectives of the resource management and planning system, specified in Schedule 1 to the MFP Act. Those objects are:*

---

<sup>218</sup> Christine Coughanowr, 2019, *Submission #67*, p. 9.

<sup>219</sup> South East Marine Protection, 2019, *Submission #58*, p. 1.

<sup>220</sup> Margaret Taylor, 2019, *Submission #50*, p. 2.

- (a) to promote the sustainable development of natural and physical resources and the maintenance of ecological processes and genetic diversity; and*
- (b) to provide for the fair, orderly and sustainable use and development of air, land and water; and*
- (c) to encourage public involvement in resource management and planning; and*
- (d) to facilitate economic development in accordance with the objectives set out in paragraphs (a), (b) and (c); and*
- (e) to promote the sharing of responsibility for resource management and planning between the different spheres of Government, the community and industry in the State.*

*Sustainable development is defined in Schedule 1 as:*

***sustainable development*** means managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well-being and for their health and safety while –

- (a) sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations; and*
- (b) safeguarding the life-supporting capacity of air, water, soil and ecosystems; and*
- (c) avoiding, remedying or mitigating any adverse effects of activities on the environment.*

*Part of the function of sustainable development is to take a precautionary approach in the face of scientific uncertainty. It has been observed that ‘the precautionary principle has its origins in the “common folk wisdom that ‘it is better to be safe than sorry’ and ‘an ounce of prevention is worth a pound of cure’”.*

*The precautionary principle is explicitly adopted in the EMPC Act and the MFP Act, as one of the Part 2 objectives of the RMP System which underpin that legislation.*

*In an article on the application of the precautionary principle in Tasmania, His Honour Justice Estcourt of the Tasmanian Supreme Court cites the judicial decision about a mobile phone tower in Telstra Corporation Ltd v Hornsby Shire Council as the leading case on this principle, observing that it is “widely regarded as containing the most extensive judicial analysis of the principle of ESD and the precautionary principle in Australia”. He identifies the following as the “fundamental conclusion” from that case:*

*The application of the precautionary principle and the concomitant need to take precautionary measures is triggered by the satisfaction of two conditions precedent or thresholds: a threat of serious or irreversible environmental damage and scientific uncertainty as to the environmental damage. These conditions or thresholds are cumulative. Once both of these*

*conditions or thresholds are satisfied, a precautionary measure may be taken to avert the anticipated threat of environmental damage, but it should be proportionate.*

*The application of the precautionary principle has much relevance in the planning, assessment and operation of the marine farming industry.*

*The Panel has adopted what it describes as an “adaptive management” approach to assessments of MFD Plans and EIS, in place of regulatory controls. For example, adaptive management was explicitly endorsed in the Panel’s assessment of the draft MFD Plan for Macquarie Harbour.*

*This concept is not derived from marine farming legislation, nor is it otherwise defined. “Adaptive management” broadly is an environmental management tool that derives from academic literature, however what it means and how it is implemented can vary and is complex. It has been described as an “intuitive” approach, one that is “not always fully understood” and that “remains an ideal”.*

*Adaptive management is therefore only as good as its implementation. It is generally acknowledged that effective environmental management through an adaptive management process must involve each of the following:*

- Setting of clear objectives and measurable performance indicators for management;*
- Specifying multiple management options*
- Hypothesising how the system under management will respond to management interventions;*
- Implementing management action(s);*
- Monitoring the system response to see if it supports the hypothesis or otherwise;*
- Based on the analysis results, refining and adjusting management practice.*

*Baseline data and monitoring of the system’s change under management is critical to good adaptive management. “And without ongoing processes of monitoring and evaluation, there is no adaptive management.” Key environmental indicators must be identified up-front, baseline data of those indicators gathered, and monitoring against the system under management undertaken. In our opinion, this requires explicit triggers at which point management actions must be taken. For instance, once thresholds set in performance indicators are met or exceeded, this triggers identified management options to be introduced, action taken to enforce identified management responses, and monitoring to see if the management response is producing the desired effect. It also requires the flexibility to refine and adjust the management practice.*

*... The approach taken to adaptive management specifically eschews the precautionary approach. We recommend that the legislation require decision-makers to adopt a precautionary approach to scientific uncertainty particularly in*

*the planning and assessment stages, consistent with the objectives of the RMP System.*<sup>221</sup>

Further:

*(d) Adaptive management / nitrogen and biomass caps*

*Adaptive management can be a useful tool to allow for flexibility in management responses to unexpected environmental conditions. However, adaptive management is only appropriate in circumstances where sufficient baseline data is available to accurately set thresholds and predict environmental responses to proposed management controls. It does not lend itself to scenarios where the environmental impacts of the activities are potentially serious or irreversible (such as loss of critically endangered species) or where too little is known to reliably anticipate risks.*<sup>222</sup>

The IMAS submission made the following comments in support of an adaptive management approach in the prevention of environmental harm:

*Prevention of environmental harm requires a process that can predict, evaluate and respond to potential risks and threats. The Tasmanian Government's environmental monitoring and management protocols are informed by a significant body of research undertaken at UTAS/ IMAS over the last 20 years. This research has improved our understanding of the interactions between salmon farming and the environment, identifying risks and providing risk-appropriate monitoring and management strategies. The resultant research has provided baseline data and system understanding that has informed industry and government management and monitoring strategies and supports effective regulation. The research has established indicators of gradation in level of impact and also monitoring criteria for local scale organic enrichment associated with salmon farming. The Marine Farming environmental monitoring program is well established, and the environmental management protocols developed with respect to localised benthic impacts have been shown through review to be consistent with current best practice in aquaculture management both nationally and internationally (Woods et al. (2004), Keeley et al. (2014)).*

*However, adaptive management requires that monitoring and assessment approaches be reviewed at regular intervals: new technology may become available, and farming practices or background environmental conditions may change, as may community expectations. In the initial studies local scale benthic impacts were the key concern, and the research was focused on developing on-farm management controls. Concern then shifted to broadscale effects of dissolved wastes and research was undertaken to characterise the risks and develop a Broadscale Environmental Monitoring Program (BEMP) for the Huon Estuary and D'Entrecasteaux Channel. The BEMP clearly reflects the transition in our understanding of the interactions of*

---

<sup>221</sup> Environmental Defenders Office, 2019, *Submission #220*, pp. 9-11.

<sup>222</sup> Environmental Defenders Office, 2019, *Submission #220*, p. 11.



*marine farming (and therefore monitoring requirements) from a need to understand local-scale impacts, to a need to define broader-scale impacts, to the current situation whereby ecosystem interactions and multiple-use management are now the focus. The clearly stated intention of the BEMP was to provide “a monitoring program with the capacity to detect the effects of those processes judged to be most threatening to the ... ecosystem at the whole-of-ecosystem level ... to provide knowledge of how well the ecosystem is functioning with an increased nutrient load and to allow any significant temporal trend(s) in ecological indicators to be detected”. The key focus of the BEMP was on water-column and benthic effects on soft sediments within the system, the primary concern for this program being the potential for eutrophication. This need to understand how the broader ecosystem accommodates the additional nutrient load resulting from aquaculture inputs has seen broadscale environmental monitoring introduced as a system-wide monitoring requirement within the regulatory adaptive management framework. The BEMP has since been highlighted as world’s best practice; with few countries having anything comparable. It provides an important and highly reliable body of information on the conditions associated with salmon farming that has been independently authenticated and can therefore be used by regulators, industry, and other stakeholders to assess ecological condition and to support adaptive management strategies...*

*Current management and regulation require that operations be governed by the requirements of the Living Marine Resources Management Act 1995 and the Marine Farming Planning Act 1995. The implementation of the management expectations of this legislation is undertaken through a combination of marine farming development plans, leases and licences, with both development plans and licences having provision for specific regulatory and management requirements.*

*The adaptive management framework does allow for individual licences to include specific monitoring and reporting requirements. It is also possible to seek amendments to individual development plans to address specific issues of concern; this has been done in relation to the monitoring and management of dissolved nutrients in other Plan areas. Consequently, by amending the development plan and introducing specific licence requirements for this lease to include provision for a more recent baseline and additional broadscale water quality and reef interaction monitoring, it should be possible to address the key environmental management concerns.*

*It is worth noting that the scientific understanding outlined in this document represents two decades of accumulated knowledge and that this has been developed through a broad range of research collaborations both with other research providers (notably CSIRO) and in collaboration with industry, government, various not for profit organisations, funding agencies (particularly FRDC, Natural Heritage Trust, National Resource Management, various CRCs), and the community. Whilst the research has progressed incrementally, with each question answered leading quite naturally to further questions, there will inevitably be gaps in our understanding, and the need to address these will depend on the level of risk and*

*concern associated with each particular issue. In seeking to develop farming in new areas the regulatory context needs to be open and responsive to concerns and prepared to be informed by the science as it evolves. IMAS will continue to support all parties to better understand the issue and to find effective management solutions.*

*There have been some significant environmental management challenges for government with respect to the salmon industry, most notably in Macquarie Harbour. IMAS has been a key collaborator in a major research program in Macquarie Harbour supported by the FRDC. The Macquarie Harbour research program is a collaboration between IMAS, CSIRO, industry and a range of Tasmanian state government agencies, but particularly the Environmental Protection Agency (EPA). The resultant research has provided significant understanding of the hydrodynamics and ecological interactions in this unique ecosystem. The findings, outlined in a series of IMAS reports (e.g. Ross et al. 2015, Ross et al. 2016, Ross & Macleod 2017b, Ross & Macleod 2017a, Ross et al. 2017, Ross & Macleod 2018b, c, Ross & Macleod 2018a, Ross et al. 2018a, Ross et al. 2018b, Ross et al. 2019), have underpinned ongoing management decisions regarding salmon farming and the potential recovery of this important water body. Macquarie Harbour has highlighted that different water bodies can have different issues and sensitivities, and that as a result research (and monitoring) in each system need to be undertaken at the level most appropriate to address the specific issues and concerns.*

*There are many potential interactions of salmon farming with nearby wildlife and ecosystems. As noted above some of these are being investigated through reef interaction studies, where a risk-based assessment approach is being used to identify priority interactions and develop a tiered monitoring approach. Issues with threatened and endangered species are currently addressed through zone assessments and appropriate site selection, with specific risk assessments undertaken as required. In Macquarie Harbour, interactions between farming and the endangered Maugean Skate have been assessed (Bell et al., 2016, Weltz et al. 2017, 2018). Preliminary results suggest that there are no direct interactions between farming and the endangered Maugean Skate and whilst the indirect effects of low dissolved oxygen levels may have limited impact on juveniles and adults, the situation for the well-being of the skate eggs is less certain. In summary, research to support management of finfish farming operations with respect to the prevention of environmental harm is inherently part of the adaptive management process; with targeted research developed as required to address specific issues and concerns.<sup>223</sup>*

Dr Alistair Hobday and Dr Karen Wild-Allen, CSIRO, described the relationship between the precautionary principle and adaptive management, and on questioning, discussed the principles with reference to the situation in Macquarie Harbour:

***Dr HOBDAY** - ... There is a general feeling in CSIRO that the precautionary principle is one aspect to be taken into account when we are looking at how research should proceed and how research supports industry. The principle of adaptive*

---

<sup>223</sup> IMAS, 2019, Submission #100, p. 16.

*management is it is an iterative process of decision-making that can be refined as new information becomes available. The precautionary approach when it is applied to adaptive management should be no decision would be irreversible as you learn new information. Irreversible is a subjective term, Rob, but generally it is my feeling that you should not proceed with something like a development that would not be able to be reversed within some reasonable period of time.*

**Mr VALENTINE** - *So if you take an area like Macquarie Harbour, quite clearly it would seem that went too far to be able to effectively manage the fishery in that space from the evidence we have received, but maybe you might have a comment on that. Do you think enough work was done before Macquarie was put into operation as a finfish farming area or what?*

...

**Dr WILD-ALLEN** - *I can answer that and I will have a go. Certainly, it is easy in hindsight to say we could have done things differently. We have been modelling the system now for probably about four or five years and in that time we have been able to constrain the flushing times and the flushing times were not probably well understood when the fish farm operations were put in place.*

*They might have had sites from various observing monitoring programs or all sorts of different evidence which they pulled together when they made their decision. However, they did not necessarily have the sophisticated, quantitative model that allowed them to estimate the flushing times for Macquarie Harbour, which we now know is unusually long. If you filled Macquarie Harbour up with red cordial, it would take several months for that to be washed away. Because of that, any environmental change which changes the organic material entering the harbour has quite a strong effect on water quality and oxygen.*

*In the past, there have been different environmental changes due to the logging industry, due to the opening of the bar with the harbour wall some 200 years ago and due to changes in the hydrology due to the damming of some of the rivers and the flows down those rivers.*

*Those industries, as well as fish farming, have all had an impact on the loading of organic material into the harbour and each has impacted in the dissolved oxygen. The fish farming is the latest one we are aware of but it is not the only one.*

**Dr HOBDDAY** - *I think also the way you receive your adaptive feedback is by monitoring. Rob, your direct question was: was there enough monitoring going on in the harbour to detect that in time? Individual companies do their own monitoring and often they hold that commercial-in-confidence. Those companies are in competition with one another, which gives them good reason not to share their practices with one another, and there was very limited publicly accessible monitoring data that we could rely on to condition our models.*

*I think that in an environment where more data was being shared, you might have seen it coming quicker and you might have responded more quickly. However, in terms of feedback, it was really picked up within one production cycle that too much salmon was being loaded into the harbour. So that adaptive response took place, I think, in a reasonably fast period of time. One year's production cycle. That is how quickly you are able to take off the pressure.*

*It is now looking at how quickly that has recovered. That would tell you whether you were precautionary enough.<sup>224</sup>*

Dr Hobday continued:

*In order for the adaptive approach to work, you need to have monitoring in place, because the adaptive approach assumes feedback. If I discover an oxygen concentration of something, I will adjust something in my management, and so on. If there is not sufficient monitoring and collection of that data, the adaptive management is not possible at that scale.*

*With regards to whether the precautionary principle was followed sufficiently, you would want to set up your feedback system so you did not make a long-term change for the environment, for example, as the result of your lack of information. An example would be: if you remove that fish farm from a location, because the oxygen levels were declining, you would want those values to recover within a period of weeks or months.*

*If your recovery was going to take years, I do not think you have applied the precautionary principle. There is some judgment in what is precautionary. On our land outside, if we stop farming, it will take 100 years for forests to grow back. That still allows some recovery, but it is not very precautionary if we wanted that land to recover within weeks.*

*In the ocean, in very high energy environments, you can recover very quickly. For example, a pollutant going into the ocean will be mixed in very quickly. Benthic impacts in a high-flow environment can recover very quickly, but in a closed bay, it takes a long time for those habitat impacts to be reversed. That precautionary principle, I have given you a wishy-washy answer, is about the values you hold and how quickly you would like those to be recovered.<sup>225</sup>*

There is support from industry for the application of the precautionary approach.

According to Frances Bender, CEO Huon Aquaculture:

*I have heard a lot of comments about the need for industry to take a precautionary approach to expansion and we totally agree. While we have been farming in Storm*

---

<sup>224</sup> Dr Alistair Hobday, CSIRO, *Transcript of Evidence*, 1 April 2020, pp. 6-7.

<sup>225</sup> Dr Alistair Hobday, CSIRO, *Transcript of Evidence*, 1 April 2020, p. 12.

*Bay since 2014, which was based on the scientific monitoring that commenced in 2009, over the next few years we don't expect to use our full lease allocation.* <sup>226</sup>

Mark Ryan, CEO Tassal expressed support for adaptive management:

*We are having continual assessment of leases as we go. If that regulatory framework is set up - we always model on the fact that we need to embrace adaptive management because things change. It is getting warmer in the water. I do not think anyone is disputing that, so from that side of things, things will change. Like the way we grow our stock changes, the way we have our selective breeding program and what we are tailoring that for. Things change but as long as you can demonstrate that you have an ability to manage the lease you are on ...*

*...What you have to be careful of with stuff like is potentially you get people investing in doing something, and salmon leases are incredibly expensive and every five years replacing nets and pens, but if you change the goalpost and say, 'All right, it gets to the end of a lease and it is no longer there', you might struggle to get people to invest in the industry because they go, there is no certainty that if we are compliant with all the rules and regulations in place but at the end of that lease term, we cannot get renewal for whatever reason, people might not want to invest in it and then you do not have the jobs and opportunity. There is a balance there. I am not sure exactly what it looks like, but the rules and regulations should be able to be as they are farmers - adapt as we go to make sure that if things do go wrong, they are fixed, there are penalties and they are dealt with, but it need to be sustainable.*<sup>227</sup>

**Findings:**

133. A precautionary approach is specified in the *Environmental Management and Pollution Control Act 1994* as one of the Schedule 1 Part 2 objectives and as a principle involved in applying the Resource Management and Planning System.
134. The Department regards an adaptive management approach in the regulation of the fin fish farming industry to be consistent with Tasmania's Resource Management and Planning System and ecologically sustainable development principles.
135. Adaptive management is the approach which underpins the regulation of the fin fish farming industry however it is not specified or defined in the *Environmental Management and Pollution Control Act 1994* or the *Marine Farming Planning Act 1995*.
136. Concerns were raised that the current monitoring and reporting framework is not sufficient to support an effective adaptive management approach in the regulation of the fin fish farming industry.

<sup>226</sup> Frances Bender, Huon Aquaculture, *Transcript of Evidence*, 21 February 2020, p. 64.

<sup>227</sup> Mark Ryan, *Transcript of Evidence*, 30 November 2020, p. 19.

137. Public confidence in an adaptive management approach for the fin fish farming industry would be increased with the independent collection and greater sharing of data.
138. Each body of water in Tasmania is unique and each would require specific licence conditions, limits, monitoring and reporting requirements in order to effectively implement an adaptive management approach in the fin fish farming industry.
139. Concerns were raised regarding the reliance on an adaptive management approach in the approval of the fin fish farming Storm Bay expansion, in the absence of biogeochemical modelling, a biosecurity plan, a regulatory standard and no mapping of natural values to be protected.
140. Concerns were raised that the application of an adaptive management approach may be compromised in situations where measures required to address environmental harm are in conflict with fin fish farming industry's financial investment.
141. While the Industry expressed support for both precautionary and adaptive management approaches, some noted the need to preserve certainty in lease renewal for investment purposes.

**Recommendation 51**

Clarify the application of a precautionary approach in the *Marine Farming Planning Act 1995*, including in the approval of Marine Farming Development Plans.

**Recommendation 52**

Clarify the application of an adaptive management approach to regulation of fin fish farming in the *Marine Farming Planning Act 1995*.

**Recommendation 53**

Develop a framework for an adaptive management approach for the fin fish farming industry, which includes validated models, performance monitoring, clear triggers for management, regular review and transparent reporting. Until such a framework is adopted, ensure the precautionary principle is individually applied to fin fish farming operations.

## Measures taken by the fin fish farming operators to minimise environmental harm

According to the Tasmanian Salmonid Growers Association submission:

*We are highly regulated. Our industry operates responsible [sic] throughout Tasmanian regional communities and waterways in accordance with a diverse set of more than 70 federal and state government legislation; regulations; hundreds of license conditions; multiple company policies and practices; and third party accreditations that go above and beyond the regulatory setting.*

*These regulations protect the environment; support sustainable development; give effect to obligations under international conventions and treaties; implement specific national or state priorities; manage and prevent biosecurity risks; secure aquatic animal health; ensure food safety; open market access and trade; and responsible [sic] define domestic aquaculture production.<sup>228</sup>*

Petuna Aquaculture made the following comments on the company's approach to minimising environmental harm:

*Petuna's selective breeding program provides many examples of how we work to minimise environmental harm. The program aims to improve commercially relevant traits, such as size and flesh quality, but also improves the way fish grow and consume feed. Fish that grow faster spend less time in the water and consume less feed, therefore reaching a marketable size more efficiently. That easily translates into a reduced amount of feed to supply, and a lower requirement of raw materials needed to produce it, as well as a reduced amount of waste produced by the fish which would end up in the water. Not to mention the reduction in carbon emissions down the chain when considering all the activities linked to fish farming, due to this increase in efficiency. Overall, genetically improved stocks are critical for better utilisation of limited feed, land and water resources.*

*Nevertheless, Petuna also has in place numerous practices and policies aimed at minimising environmental impact such as the reuse of water – thanks to our recirculating aquaculture system (RAS) – and the waste treatment in our freshwater facilities. This is also driven by the international certifications we have obtained over the years which demand very high environmental standards.*

*A final thought goes to climate change. The climate has been unmistakably changing over the last few decades due to the impact of the human activity and the Tasmanian finfish farming industry must get ready and be prepared for it. As an industry heavily relying on freshwater and seawater for animal production, its future is strictly interconnected with water temperatures. Increased water temperatures will likely make the farming environment unsuitable for most of the finfish currently farmed, with possible catastrophic impact on a business that plays a critical role in supplying fresh food. This means that the industry must quickly come up with new strategies*

---

<sup>228</sup> Tasmanian Salmonid Growers Association, 2019, *Submission #49*, p. 3.

*to contrast these effects and protect its stocks. At the same time, the highest level of sustainability must always be pursued as that will contribute to the mitigation of the aforementioned effects in the long term.*<sup>229</sup>

Robert Wyvill, General Manager Marine Operations at Petuna Aquaculture, in his personal submission stated:

*There are many ways that we work to minimise environmental harm at the sites I manage in Macquarie Harbour and Rowella. We film under pens, to review and adjust processes, ensuring minimal impact on the environments in which we operate. Everyone is aware not to harm the environment around them. Our teams have clean ups around the shore to pick up anything missed. We are also audited by Best Aquaculture Practices (BAP), from which we have earned a four-star rating – meaning every step in our production chain, from hatchery and farms to feed mills and processing plants are certified to comply with the highest Best Aquaculture Practice standards. Our focus on sustainability is also demonstrated in the low pre summer Feed Conversion Ratios which we achieve, which means our fish are efficient users of feed – minimising wastage and environmental impacts.*<sup>230</sup>

Mark Ryan, CEO Tassal described his company's approach:

*The ongoing sustainability of our operating model is intrinsically linked to healthy regulatory frameworks, environmental conditions and informed communities. We truly do believe that a healthy environment equals healthy fish equals a healthy company. We acknowledge that strong and stable Tasmanian communities rely on responsible industries with sustainability at their core. Tasmanians enjoy living in a clean and unique part of the world, that the stability in jobs in regional communities is important, and we want to be a part of that now and for future generations to come. This is who we are.*<sup>231</sup>

According to the Tassal submission:

*As part of our commitment to minimising impacts to the marine environment, we go above and beyond requirements to collect and monitor a range of data relating to the health of the waterways in which we operate. This data collected exceed basic compliance obligation and provide a transparent repository from which regulators, scientists, environmental groups and the general public can assess the industry's actions. These data sets are robust, often publicly available, independently sources, longitudinal, peer reviewed and audited as part of our certification requirements.*

*They include:*

- *Wildlife interactions*
- *Benthic compliance*
- *Nitrogen cap compliance*

---

<sup>229</sup> Petuna Aquaculture, 2019, *Submission #28*, p. 30.

<sup>230</sup> Robert Wyvill, 2019, *Submission #88*, p. 2.

<sup>231</sup> Mark Ryan, Tassal, *Transcript of Evidence*, 30 November 2020, p. 2.



- *WHS figures*
- *Therapeutant use*
- *Water quality*
- *Marine Debris*

*Due to the large number of regulations, the complex compliance and legal framework at a local, state and Commonwealth level, the third-party global accreditations that are voluntarily maintained, and the sustainability reporting frameworks that are voluntarily released, it can be very difficult to comprehend the level of administration applied to a salmon farm.*

*To strike the balance of information that satisfies the general public and consumer that the level of regulation and compliance is acceptable (and that the operations are sustainable and appropriately managed), when the public, in the main, isn't immersed in the level and extent of regulatory requirements, becomes the challenge.<sup>232</sup>*

The Huon Aquaculture submission stated:

*The Tasmanian salmon industry is one of the most heavily regulated industries in the State:*

- *The industry intersects with hundreds of pieces of local, State and Federal legislation; a reality that Huon has always expressed its strong support and commitment to,*
- *Legislation, regulation and processes that underpin our industry are robust and most importantly, backed by science, as evidenced by the approvals process for our new lease, East of Yellow Bluff. The process behind the creation of this new farming zone and associated lease involved the preparation of an Environmental impact Statement, completion of a Section 40 response, and assessment under the Federal Environment Protection and Biodiversity Conservation Act 7999 (EPBC Act) which ensures that if any threatened or vulnerable species are present or migratory to the proposed area, that adequate measures are in place to protect them and their habitat.*

*We are also one of the most transparent industries. Huon heeded the messages from the 2016 Senate Inquiry about the need to provide more information about our farming operations:*

- *resulting in the creation of our online Sustainability Dashboard (when released it was the first of its kind across the worldwide agribusiness industry),*
- *the level of detail contained on our website where we publish environmental monitoring reports-the exact same reports we provide to the State Environmental Protection Authority (EPA),*

---

<sup>232</sup> Tassal, 2019, *Submission #83*, p. 11.

- *the hosting of numerous open-door community information sessions and consultations, plus open days in Hobart and at Port Huon attended by thousands of Tasmanians.*

*Finally, our lower risk tolerance and prudent management of all our farming sites is on the public record, as evidenced by numerous media interviews, community consultations and legal proceedings (in relation to Macquarie Harbour).*

*Just because we are a for-profit company, doesn't mean we forfeit our values which would be shared by most Tasmanians, as evidenced by our founders being named Farmers of the Year in 2018. We are focused on:*

*(a) protecting the environment that we all value and enjoy, as evidenced by our regular ROV monitoring surveys, our \$400m investment in capital and infrastructure improvements in past five years which include our patented Fortress Pens and world leading feed system; our precautionary approach to expansion and our sustainable farming practices including fallowing seabeds and moving offshore.*

...

*(c) protecting the welfare of our fish, as evidenced by our inclusion in 2018 as the only Australian seafood producer in the RSPCA Approved Farming Scheme; our commitment to vaccine development and our unwavering commitment to best-practice biosecurity principles; and ...<sup>233</sup>*

**Findings:**

142. The fin fish farming industry regards measures taken to minimise environmental harm to be highly regulated through federal and state legislation, supported by industry policies and practices and validated by third party accreditation.
143. The fin fish farming industry regards its collection and publication of data to be comprehensive.
144. The fin fish farming industry acknowledges the need for continual improvement to be sustainable and demonstrates a willingness to adapt its operations to minimise environmental harm.

<sup>233</sup> Huon Aquaculture, 2019, *Submission #87*, p. 3.

### TERM OF REFERENCE 3

#### ANY OTHER MATTERS INCIDENTAL THERETO

This chapter provides evidence in relation to matters that do not fit within the other terms of reference.

#### Recognition of community amenity in the *Marine Farming Planning Act 1995*

A number of submissions suggested the expansion of the Act to include management of community impacts; such as visual, social, lifestyle and recreational.

According to Anne Duffield:

*The Marine Farming Planning Act should require protection of social, recreation and visual amenity...<sup>234</sup>*

Mark Duncan raised the questions:

*Where is the protection under the Marine Farming Planning Act 1995 of the social values of the Tasmanian community, for example the impacts on recreational boating and fishing, visual impacts and noise pollution? Where is the amenity owed to communities?<sup>235</sup>*

He subsequently recommended:

*...amending the Marine Farming Planning Act to require valuation and protection of social, recreational and visual amenity and consideration of noise impacts on surrounding residents.<sup>236</sup>*

The Tasmanian Conservation Trust submission noted:

*Community concerns can generally be categorized as relating to lifestyle, recreation, amenity and environmental impact and includes:*

- *impacts of noise and lights on residences;*
- *visual impacts as viewed from residences and public places;*
- *marine litter;*
- *limiting access to waterways for recreational boating;*
- *increased boating hazards;*
- *impacts on recreational fishing;*
- *impacts on surfing;*
- *water pollution and biosecurity.*

<sup>234</sup> Anne Duffield, 2019, *Submission #23*, p. 2.

<sup>235</sup> Mark Duncan, 2019, *Submission #29*, p. 2.

<sup>236</sup> Mark Duncan, 2019, *Submission #29*, p. 4.

*There are a number of commercial fishers who have raised concerns about the impact of fin fish farming on commercial wild fishing resources.*

*While some people claim that the Marine Farm Planning Act allows the panel to consider a range of social issues, in practice they have been largely ignored or not adequately addressed.* <sup>237</sup>

**Findings:**

145. A number of submissions called for community amenity to be recognised in the *Marine Farming Planning Act 1995*.

Refer to Recommendation 11 which refers to inclusion of community amenity in the review of the *Marine Farming Planning Act 1995*.

---

<sup>237</sup> Tasmanian Conservation Trust, 2019, *Submission #219*, p. 4.

## Community Impacts of the Fin Fish Farming Industry

The Inquiry received submissions highlighting benefits to local communities, including employment, economic activity and support to local clubs and associations.

The Spring Bay Clay Target Club submission expressed support for the industry:

*Spring Bay Clay Target Club is pleased to provide some input to the Fin Fish Industry enquiry (sic) from the perspective of the effect that Tassal has had on the local community.*

*Our club would not have the 'all abilities' access that we recently installed without the generosity of Tassal in their social inclusion and well-being grant process. Tassal has provided employment in the local area for young people and families and in turn have supported the sporting and community groups with funds for their projects. The provision of employment has brought a greater level of volunteer hours into the community groups as family members remain working in the local area.*

*Tassal are to be commended for their continued operations in the Triabunna area. The fin fish industry has brought a level of prosperity to the community that has not been seen since the demise of the woodchip mill.<sup>238</sup>*

Neil Edwards expressed support for the Industry and outlined a number of benefits to the local community:

*I would like to express my delight at having a fin fish farming business in our local area. Having lived through the closure of the Triabunna chip mill, the Seafish plant and the algal bloom problems at Spring Bay Mussels it has been a Godsend to have a constant reliable employer in the town. The flow on effect to the local economy and the effect on people's well being has been amazing.*

*As patron of the Suicide prevention network, I have witnessed first hand the positive effect that employment has created in the town. The strict drug and alcohol policies have also had a very positive affect on some of the more vulnerable who now have meaningful employment. Besides this the support shown to our organisation in sponsorship has enabled us to supply life alarms to a number of elderly and vulnerable. These have been a life changing device for a number of people in the region.*

*As a past president of the Junior football club, it's not just the sponsorship but the fact that fly in fly out parents are now home at night with their families. This has given security to children, volunteers for the club as well as enabling us to have the cheapest enrolment in the league.*

*I am also a member of Rotary and the assistance of Tassal in supplying fish for us to raise money to donate to numerous causes has been greatly appreciated, I know the*

---

<sup>238</sup> Spring Bay Clay Target Club, 2019, *Submission #76*, p. 1.

*same is done for a number of other organisations including both Triabunna and Orford schools.*

*The Nippers surf life saving club and the local Orford pony club are two other organisations I am involved with which have benefited from Tassal support. It is not however the sponsorship that is the major benefit to the area but the long term substantial jobs. This has created a lift in business confidence in the area not seen for a decade. The local mechanic now has two additional employees, another electrician has moved to the area and a builder is impossible to get. Students from Triabunna school now see a career path and a future on the coast, not just in fin fish farming, but in the other industries that are benefiting from the increased spending locally. I have been doing interviews at the local schools for a bursary for a number of years, and have seen a marked change in attitude and confidence.<sup>239</sup>*

Glenn Arnol expressed support for Tassal's operations in the Triabunna area and its contribution to the local community:

*Having lived and worked in the Triabunna area for 40 years, and witnessing first-hand the demise of the timber industry in the area, I am pleased to provide a letter of support for Tassal and their position in our small rural community.*

*During that 40 years' I have recreational fished in this area and I have seen no demise in fishing that could be attributed in any way to Tassal's movement into Okehampton Bay. The level of economic activity that Tassal has provided to our community has been noticeable in that when you go to Triabunna there are cars parked in the street; there's activity in shops, grocery stores, coffee shops and above all there is a smile on people's faces.*

*The level of building activity and development in the area has increased to the point where trying to get a tradesman has become difficult and the only thing that could have possibility (sic) stimulated this activity is the Tassal injection of funding to the community.*

*This has been enhanced by the number of young people in the 18-35 age bracket that have secured work with Tassal. The level of upskilling that Tassal has given their employees has provided opportunity that wasn't available prior to their establishment of operations in the Triabunna area. The amount of financial support that Tassal have given our sporting and community groups is unprecedented since the demise of the woodchip mill.<sup>240</sup>*

Frances Bender, CEO Huon Aquaculture gave a number of instances where the company has contributed to the local community:

*I have been, and am still, involved with various community groups, to enhance opportunities for our communities. Many of my staff are also involved in a breadth*

---

<sup>239</sup> Neil Edwards, 2019, *Submission #38*, p. 1.

<sup>240</sup> Glen Arnol, 2019, *Submission #47*, p. 1.

*of areas that support the communities we work and live in, including being volunteer members of boards and advisory groups.<sup>241</sup>*

...

*Bruny Sustainable Aquaculture claims the salmon industry provides zero benefit to Bruny Island... Claims have been made that when our company makes philanthropic donations to local groups, it is creating community division. It saddens me that the community small grants scheme I founded some years ago, called Huon Helping Hands, which is specifically designed to help grassroots groups provide assistance in their own community and has funded projects such as community gardens, playground equipment and defibrillators, is viewed as inappropriate because it is classed as buying friends. Over the last seven years we have donated in excess of \$700 000 in cash grants, product and in-kind support to communities all over this state.<sup>242</sup>*

Huon Aquaculture's submission to the Inquiry outlined its contribution to local communities:

*Regional communities are the backbone of our farming operations; 75 per cent of our workforce have a non-urban postcode and coupled with the hundreds of contractors, suppliers and businesses we use across the Huon Valley, the Derwent Valley, the North East, the Latrobe municipality and the West Coast, we know the importance of regional Tasmania.*

*Aquaculture provides tremendous opportunities to create a critical mass of highly skilled, employed families that can keep regional communities alive and thriving and growing-something that should never be under estimated. Huon currently employs 720 people (every Committee member would know at least one) who earned more than \$55m in the past 12 months while the company paid \$3m in payroll tax to the State Government. These highly qualified, talented Tasmanians are passionate about this State and their communities; which is why they chose to develop their careers here, raise and educate their families and participate in community activities in rural and regional towns across the State. They spend their salaries here, paying personal income tax which is returned to Tasmania in the millions and also support the local fire brigade, the Lions Club and the next generation of athletes (like so many other people in regional communities).*

*We invest heavily in regional suppliers (most of which are Tasmanian owned); from transport companies to clothing manufacturers, to local trades businesses; in the past year, Huon spent in excess of \$140m purchasing goods and services from Tasmanian businesses; your neighbour (the plumber), to your daughter's footy coach (who drives the fuel truck), to the cafe down the road. In addition, we donated around \$120,000 last year through community grant schemes and small sponsorships most of which goes directly to small regional community groups that work so hard to build capacity and resilience in regional communities. This was in*

---

<sup>241</sup> Frances Bender, *Transcript of Evidence*, 21 February 2020, pp 69-70.

<sup>242</sup> Frances Bender, *Transcript of Evidence*, 21 February 2020, p. 72.

*addition to the thousands of dollars provided in product to schools, community organisations and fundraising events.*

*Ultimately the biggest thing our industry offers, much more than (sic) an economic contribution (which it does in spades), is that it offers our rural communities a lifeline, meaningful employment opportunities, sustainable and ethical food production, and the chance for our bright young minds to stay in Tasmania and that can only be good for the future of our state.<sup>243</sup>*

Tassal's submission outlined the contribution it makes to regional towns:

*Since 1984, our industry has become one of Tasmania's brightest economic prospects, generating employment and supporting local Tasmanian communities, while producing a product that is contributing to the global sustainable food platform. Our industry continues to play a major role in the many diverse and special regional communities across our state.*

*Our farming sector helps drive rural economic diversification by directly and indirectly creating jobs, further supporting small businesses and stimulating ongoing innovation and research in Tasmanian regional areas.*

*Our responsible farming represents a promising approach to help revitalise these regional communities and fill the gap left by traditional industries no longer serviced in Tasmania. We want to continue to be involved in creating vibrant communities that supports jobs and reverses the trend of young people leaving rural areas to work and live in larger urban centres or even interstate. A quality job is more than a pay cheque, it's the foundation stone for a family and community. Aquaculture jobs are secure, and most jobs are permanent. Our combined industry alone provides more than ~11,500 Tasmanian direct and indirect jobs.*

*As part of this, we are one of the largest employers in Tasmania. Tassal employs around 1,200 Tasmanians and support a further 6,000 FTE jobs in both Tasmania and across the nation. As well as employing a growing number of Tasmanians, our industry has a strong record of encouraging training and skills development, creating career pathways to attract and retain staff, especially in regional communities.*

*Our workforce is now more professional, capable and diverse in nature than ever before – we have come a long way since the first commercial harvest of 55 tonnes of Atlantic salmon in 1986. The industry's annual economic contribution to the Tasmanian economy is over \$1 billion and this will grow substantially if we are to meet the joint industry and Tasmanian Government's target of growing the value of the industry to \$2 billion by 2030. Demand for seafood protein is expected to more than double over the next 15 years. The wages of those employed as a direct result of our industry or supporting sectors drive local businesses, creating further*

---

<sup>243</sup> Huon Aquaculture, 2019, *Submission #87*, pp. 11-12.



*employment in other industries. They also underpin the viability of communities including services such as schools and medical facilities.*<sup>244</sup>

The Inquiry also received evidence questioning benefits to the local communities.

Dave Nelson in his submission stated the following in relation to industry contributions to the local community:

*Tassal do not make any real contributions to the community. There is a suggestion that the sponsorship of the local school is a good thing but this is a very questionable practice in my mind. They are attempting to purchase social license. There are no other benefits provided to the community as far as I know. There may be a few jobs provided by this enterprise but the community on the whole is against the farm. These jobs are only partly accounted for by local people. Many of their workers travel here from much further away. With increased automation it is likely that the number [of] jobs will decrease.*<sup>245</sup>

Terence Brumby and Trish Baily of Tasman Peninsula Marine Protection, raised concern regarding the perceived strategy of a company to buy social license through contributions to community organisations:

**Mr BRUMBY** - *It seems to be a strategy of the company to buy social licence by making grants to community organisations, particularly the school, access into the school and being put into curriculums and things like that. To my way of thinking, if those companies want to contribute, they should be contributing through a local body like local council, putting the funds there and letting the council make the decisions in consultation with the community as to how those funds are applied and not to be matters that are contentious across the broader community.*

**Ms BAILY** - *I will draw attention to a letter to the council, or one of the submissions I referred to that went to the council, from Angela Lowe regarding the social licence and she says -*

*It has come to my attention that certain members of the community are at risk of social exclusion due to their position in not being affiliated with the aquaculture industry.*

*So that does create a division. You have to be scared. We have people within the aquaculture industry who are employed by Tassal and the other companies who come to us giving us insider information. There is fear there. They are not allowed - they see awful things going on. They can't say anything. They've got a job. They'll come, we are not allowed to say who they are, where we got the information from. There is a lot of that fear and that does create the division.*

*Then Angela goes on to say this exclusion impacts not only members of the community groups and wider community, but potentially students, teachers and the*

---

<sup>244</sup> Tassal, 2019, *Submission #83*, p. 7.

<sup>245</sup> Dave Nelson, 2019, *Submission #204*, p. 1.

*administration of the local educational and government institutions. It impacts their health and wellbeing. There has been a lot of community discussion about the inappropriateness of Tassal pouring money into the school and the school programs. That is considered one of the divides. People are talking about that as being divisive in the community.*<sup>246</sup>

The Bruny Sustainable Aquaculture submission expressed concern about the limited economic return to Bruny Island:

*Bruny Island experiences all the environmental and social impacts resulting from the Salmon Industry yet it does not receive the corresponding economic returns. The industry employs few residents of Bruny Island and there is limited direct spend by the industry within the businesses of Bruny Island.*<sup>247</sup>

...

*Since job levels are decreasing with the ongoing development of the finfish industry, if Tasmanian's (sic) are to benefit, it is imperative to review existing arrangements so as to ensure that the State economy and affected communities receive adequate financial returns.*

*The waters in which the fish are farmed are a shared public resource. Internationally there is very little water available in which to farm fin fish, making these waters extremely valuable. Under the current arrangements the small rent received is nowhere near commensurate with the value and does not create proportionate economic benefits to Tasmania.*

*In addition to the question of the salmon industry's limited (and often overstated) positive contribution to Tasmania's economy, it is important to be cognizant of the negative economic impact which is now emerging.*<sup>248</sup>

The Australia Institute submission questioned claims made by the industry with respect to employment:

*The salmon industry is a small employer in Tasmania. While there are various estimates, the entire industry represents around one percent of the 216,547 Tasmanians in work at the last census. According to a 2015 report commissioned by the Tasmanian Salmonid Growers Association, written by KPMG:*

*The total contribution of the combined aquaculture firms to the Tasmania economy is 2.3% of State GSP and 1.2 % of State employment.*

*In other words, 99% of Tasmanians do not work in the salmon industry, according to the industry itself.*

---

<sup>246</sup> Trish Baily and Terence Brumby, TPMP, *Transcript of Evidence*, 11 February 2020, pp. 11-12.

<sup>247</sup> Bruny Sustainable Aquaculture, 2019, *Submission #65*, p. 2.

<sup>248</sup> Bruny Sustainable Aquaculture, 2019, *Submission #65*, pp. 2-4.

*In fact, this represents a substantial overestimate of the size of employment in the salmon industry. The 1.2% estimate refers not just to people employed in the salmon industry, but also includes jobs ‘supported’ in other industries:*

*The salmon industry provides support for approximately 2,786 FTE jobs (full time positions employed in, or supported by the industry.*

*By reporting jobs ‘supported’ rather than direct numbers of employees, the industry exaggerates its economic impact. If all industries added up the number of jobs they support in other industries this would double or triple count many jobs, giving a total far greater than the number of employees in the economy. While the impact of the salmon industry on other industries may be debated, the total numbers estimated by KPMG are of limited use as they estimate the impact of the entire industry, as if the entire industry’s presence or absence could be a subject of policy debate.*

*In reality, it is marginal expansions or contractions of the industry that are affected by policy decisions. With supply and marketing chains already established, marginal expansions are likely to have a minimal impact on ‘supported’ employment.*

*Because of its tendency to overstate employment impacts, the class of economic model used by KPMG has been described by the Productivity Commission as widely “abused”, “biased” by the Australian Bureau of Statistics and “deficient” by the NSW Land and Environment Court.<sup>249</sup>*

*While the modelled figure including ‘supported’ jobs is used in KPMG’s percentages, in its headline figures and executive summary, the report does include a figure of direct industry employees in Tasmania – 1,365. This represents 0.6% of Tasmanian jobs.*

*KPMG’s report is based on 2014 data. While the value of salmon production has increased by 20% since then, employment is unlikely to have had a similar boost. A 2018 report by the International Salmon Farmers Association, that Tasmania’s industry contributed to, says only vaguely:*

*The salmon and trout farming industry currently create over 1,500 direct jobs [in Tasmania].*

*While there has been growth in the salmon industry’s output since 2014, the trend towards automation in the industry is likely to have kept jobs numbers down. Tassal is investing in automated feeders and camera-based monitoring, and has a “completely integrated automation solution” for its new smolt tanks. Huon feeds its fish “from a central feeding room in Hobart”, with software adjusting feeding rates automatically based on on-site video feeds, and it is moving to “fully automated and unmanned feed barges”.*

*How this will affect salmon industry employment in the future is not clear. In 2017, Senator Peter Whish-Wilson revealed leaked documents from Tassal that showed*

---

<sup>249</sup> Australia Institute, 2019, *Submission 69*, pp. 3-4.

*that an automated feed method would allow them to employ one third as many feed staff as would be employed for their current method. Instead of feed staff numbers increasing from 65 to 105 by 2025, they would fall to 35.<sup>250</sup>*

The Australia Institute submission also commented on the salmon industry's contribution to Tasmania's Gross State Product (GSP):

*Tasmania's Gross State Product ("GSP") in financial year 2018 was \$30,266 million. Estimates of the salmon industry's contribution vary significantly, even between industry groups, at between 0.6% and 2.3% of Tasmania's GSP.*

*The most recent estimate of the salmon industry's contribution to Gross State Product is from the International Salmon Farmers Association, of which the Tasmanian Salmonid Growers' Association is a member. The International Salmon Farmers Association said in 2018 that the salmon and trout farming industry in Tasmania "currently" contributes \$190 million to Tasmanian GSP. This would represent about 0.6% of Tasmanian Gross State Product, or about 7% of agriculture, forestry and fishing's GSP contribution (\$2.7 billion).*

*By contrast, the KPMG report commissioned by the Tasmanian Salmonid Growers Association found the industry in 2015 had a "value added or net additions to GSP" of \$626 million, or 2.3% of GSP. The GSP contribution consists of \$264 million for "final demand", \$79 million for "industry effects" and \$283 million for "consumption effects". These latter effects are those "supported" in other industries, which suffer from the same problems discussed above. Even so, \$626 million would represent about 23% of agriculture, forestry and fishing's GSP contribution in 2018.*

*For context, Deloitte Access Economics calculated for Tourism Tasmania that tourism directly contributes \$1.4 billion to Gross State Product, which would represent about 5% of GSP. As Deloitte itself acknowledges, calculating tourism's economic contribution is difficult, but the satellite accounts allow for the general comparison: which shows that tourism's GSP contribution is twice or more larger than that of the salmon industry.*

*Overall, primary and secondary industries like mining, agriculture and manufacturing contribute 26% to Tasmanian GSP, compared to 54% from service industries.<sup>251</sup>*

**Findings:**

146. There is an appreciation for the fin fish farming industry and associated benefits it provides to local communities, including employment, economic activity, and support to local clubs/associations/schools.

<sup>250</sup> Australia Institute, 2019, *Submission 69*, p. 4.

<sup>251</sup> Australia Institute, 2019, *Submission #69*, p. 7.

147. There is a perception and concern from some community members that the fin fish farming industry 'purchases' social licence through contributions to local clubs/associations/schools.
148. Individual community members reported experiencing social exclusion as a result of their non-affiliation with the fin fish farming industry.
149. There are questions raised regarding the direct economic returns generated by the fin fish farming industry to both local communities and to the Tasmanian economy.
150. There are competing claims regarding the current and future employment numbers attributed to the Tasmanian fin fish farming industry.

**Recommendation 54**

Undertake and publicly release an assessment of the economic benefit provided by the fin fish farming industry to local communities in which industry operations are based and to the state overall.

## Marine Debris

### ***Safety and Environmental Impacts***

A number of submissions highlighted and witnesses expressed concern regarding the safety and environmental impacts of marine debris from fish farming operations.<sup>252</sup>

Susan Wardle:

*Debris is regularly collected, which we dispose of at our own cost, as there is no rubbish collection on Bruny Island. An economic concern for a lot of people, but also this raises environmental and safety concerns. As reported publicly, during a strong storm, a pen washed away completely. This would have been a danger for small craft and swimmers. Storm Bay is called Storm Bay for a reason. It is no longer acceptable to deal with pollution and debris by simply letting the tide take it away as seems the methodology here.* <sup>253</sup>

Paul Thomas:

*Over the years I, both as an individual and as part of a collective Coastcare group, have collected truck loads - no exaggeration - of pipes, buoys, ropes and other fish farm garbage that has clearly come from the local fish farm operations. Bigger items have been collected following storm events but the rest has become the responsibility of the local community. Not only is this an eyesore and environmental hazard but a safety hazard for boating enthusiasts.*<sup>254</sup>

Sheenagh Neill:

*Over the past two years during the course of my cruising SE Tasmanian waters, I have personally seen some extraordinarily large items of marine debris washed up on shorelines. These have included:*

- *A length of black plastic pipe 100 mm in diameter and over 100 m long at Fancy Bay, Bruny Island.*
- *A fish farm cardinal mark 2 m high washed up at Chuckle Head Bruny Island.*
- *A length of pipe, 150 mm in diameter and 70 m long, washed up at Burying Point, Barnes Bay, Bruny Island.*
- *A whole fish pen adrift near Snake Island.*

*Fin fish farm debris constitutes a clear environmental harm. Plastic is recognised as a hazard to marine creatures, including birds, fish, marine mammals and turtles. Recently a dead whale washed up in northern Tasmania was found to have died because a rope was tangled around its upper jaw. Plastics are long-lived in the marine environment and can be abraded and broken down into small plastic particles that may impact a wide variety of organisms. Not only does fin fish farm constitute a risk to the environment but also to those that use the marine environment. From tourist boats to rec fishers to surfers sailors and employees of*

---

<sup>252</sup> Submissions #5, 7, 10, 19, 20, 23, 31, 41, 48, 50, 63, 12, 84, 89, 93, 107, 109, 117, 116, 126, 138, 142, 154, 164, 167, 170, 174, 180, 187, 196, 197, 209, 211, 224.

<sup>253</sup> Susan Wardle, 2019, *Submission #20*, p. 2.

<sup>254</sup> Paul Thomas, 2019, *Submission #53*, pp. 1-2.

*farms debris floating below the surface or submerged can pose multiple issues for water users. Larger shipping vessels are also at risk and with the rise of tourist boats visiting Hobart and the channel the time will come when a prop or rudder is fouled and a catastrophe occurs.*<sup>255</sup>

Kerry Johnstone:

*I have retrieved items from fish farms which have escaped, often in difficult windy conditions and there is fear among vessel owners they will become entangled in or hit these objects causing danger to their vessels or even loss of life.*<sup>256</sup>

Wendy Armstrong:

*I am also distressed to find, on a daily basis, plastic debris from the intensive caged fish industry washed up on the beach. This I collect and photograph before sending it to landfill. The larger pieces of heavy black plastic are dangerous for marine sports and the plastic rope offcuts are visible in bundles and also broken down to tiny filaments that are spread throughout the beach and would clearly be damaging to any creature ingesting them.*<sup>257</sup>

South East Marine Protection:

*An ongoing feature of the salmon farm industry is marine debris. There is no centralised register of marine debris.*

- *How much debris from the salmon industry has entered our waterways? There is no transparency around how much debris has polluted our waterways.*
- *Micro plastics at a molecular level are entering our waterways – what information is there about this, again no transparency?*
- *With the current rapid expansion of the industry the quantity of plastic in our marine waterways will only increase.*<sup>258</sup>

Tasman Peninsular Marine Protection:

*The beaches are becoming littered with debris from the fish farms, many locals now go to the beaches armed with bags to collect the bits of rope and plastic washed ashore, literally trailer loads of the debris have been delivered back to Tassal on a regular basis. Not only is this trash unsightly, but the plastics that remain in the ocean are broken down into micro plastics which are consumed by marine organisms and hence enter the whole food chain and marine ecosystem. Very large pieces of debris including meters of plastic pipe and rope have been reported to MAST floating in storm bay and associated waterways, major hazards to recreational and commercial boaters.*<sup>259</sup>

---

<sup>255</sup> Sheenagh Neill, 2019, *Submission #31*, pp. 2-3

<sup>256</sup> Kerry Johnstone, 2019, *Submission #116*, p. 1.

<sup>257</sup> Wendy Armstrong, 2019, *Submission #197*, p. 1.

<sup>258</sup> South East Marine Protection, 2019, *Submission #58*, p. 3.

<sup>259</sup> Tasman Peninsular Marine Protection, *Submission #89*, p. 2.

## **Government Policy**

In the SIGP the Tasmanian Government identified the following in relation to marine debris:

- *a zero-tolerance approach to marine farming equipment being lost from marine farming leases;*
- *the mandating of best practice tracking technology for marine farming equipment; and*
- *simple, practicable ways to identify debris from marine farms.*<sup>260</sup>

The DPIPWE Submission provided detail on the 'Zero Tolerance' approach to marine debris:

*The 'zero tolerance' approach has been in effect since July 2018. Each instance of marine farming equipment found to be outside a marine farming lease area is considered and responded to, with the priority being safety and retrieval. Authorised Officers within DPIPWE and Marine and Safety Tasmania (MAST) have the authority to issue infringement notices to lease holders for such offences and several infringement notices have been issued since this approach was adopted. There are currently two MAST authorised officers and four DPIPWE authorised officers who monitor and respond to breaches in relation to marine debris. Marine farming operators are required under marine farming development plan Management Controls and lease conditions to both report any loss of equipment and make all reasonable efforts to recover marine farming debris as soon as is reasonably possible. This includes reporting any loss of equipment to MAST, which then issues a 'Notice to Mariners' regarding potential navigational issues. The finfish industry is taking proactive measures to prevent marine debris at the source through staff education and specific management protocols designed to better manage daily operations, including developing a voluntary marine debris Code of Practice that has recently been drafted by the Tasmanian Salmonid Growers Association (TSGA).*

*The finfish industry has developed gear marking and colour coding of equipment and registers for identification of individual company's gear and this information has been supplied to DPIPWE for collation into a single marine farming equipment register. Compliance staff in DPIPWE conduct audits of finfish marine farming leases to ensure that all relevant marine farming equipment has been included in these registers. In addition, the finfish industry is developing debris management partnerships with the community, environment groups and social enterprises. This includes regular shoreline clean-ups by the industry in finfish growing regions across Tasmania. The finfish industry through the TSGA have established an App and Hotline for reporting marine debris. Reports on the App and Hotline are followed up by the industry, with the debris retrieved and dealt with appropriately. Marine debris clean-up and reporting data is collected by the finfish industry and*

---

<sup>260</sup> DPIPWE, 2019, *Submission #221*, pp. 6-7



*reported to DPIPWE on a quarterly basis. This information is made available to the public through the salmon portal.* <sup>261</sup>

Tim Baker and Fionna Bourne, DPIPWE, were asked for comment during the public hearing regarding marine debris, zero tolerance and Department resourcing:

**Ms FORREST** - *In terms of the expansion plans, and this is what this is about, the growth plan particularly, it seems to me that if there is already a problem and the zero-tolerance approach is not being as effective as it needs to be for the safety of all water users, how are you possibly going to manage growth when you are going to potentially allow more marine farms to be put in the water?*

**Mr BAKER** - *We have upped the resources already in terms of compliance officers. I think it is a fair expectation that as the industry grows there will be a continued need to continue to resource it. That resourcing will have to continue as the industry grows, which Fionna will be very happy to hear me say, no doubt.*

**CHAIR** - *In terms of the allocation of resources with the MAST and DPIPWE authorised officers, is it your assessment that this is an adequate coverage of the state to undertake the role they are tasked with?*

**Ms BOURNE** - *My assessment is that the resourcing we have available is appropriate for a rolling and ongoing program that is, in effect, in partnership with industry as we go along. They are also increasing their vigilance as to what is on their farm and what is not on farm. The companies are also conducting regular shoreline clean-ups and publishing data on their individual websites as well. Marine debris is not solely a regulatory response. It is a partnership between the Government and industry to ensure that best practice is put in place to manage marine debris and to try to prevent it.*

**CHAIR** - *Action point 6 in the plan notes that in enforcing the zero-tolerance approach, the Government will establish deadlines for the universal adoption of best practice tracking technologies and simple ways to identify the source of debris. There is no mention of that in the review at the one-year mark. Have such deadlines been established for that universal adoption of the technologies?*

**Ms BOURNE** - *We are working with industry over a different range of various different technologies. Some are quite simple around the gear registers and identification. The policy document, it is fair to say, was envisaging using potentially new and emerging technologies that may be available to assist with tracking, GPS locators, et cetera. As that technology is developed, we will be working with industry to try to roll that out.*

**CHAIR** - *Are we no longer setting deadlines for this?*

---

<sup>261</sup> DPIPWE, 2019, *Submission #221*, pp. 6-7.

**Ms BOURNE** - *At this stage we are working as we go, when the technology becomes available.*<sup>262</sup>

## **Industry Approach**

The Tasmanian Seafood Industry Council's (TSIC) submission recognises the difficulty in managing marine debris:

*A continuing challenge for the salmon aquaculture industry is marine debris. While TSIC supports a 'zero tolerance' approach to marine debris, the reality is the marine environment is a challenging workspace, and from time to time, equipment will be lost. TSIC expects the salmon aquaculture sector to implement effective mitigation strategies to ensure equipment is not lost from a marine farm. TSIC also supports the salmon industry marine debris clean-up initiatives and further commends the TSGA for the development of the Marine Debris Tracker app as a mechanism for the broader public to link information about marine debris direct to the salmon industry.*<sup>263</sup>

The Tasmanian Salmonid Growers Association (TSGA) submission provided the Industry position on implementation of the zero-tolerance policy:

*Tasmania's salmonid industry continues to work to reduce the amount of marine debris that enters the environment in which we operate. Not only are we bound by our legal obligations to prevent debris from leaving our farming operations and entering the marine environment, but we have also established an industry code of practice as we work towards zero instances of marine debris originating from any of our operations.*<sup>264</sup>

Jen Fry, TSGA was questioned further on the Industry approach:

**Ms FRY** - *The TSGA is in the throes of developing a code of practice with industry members on marine debris. We, ourselves, have a target of zero debris and the idea is to stop the debris at its source. We do that at the moment through the code of practice, although it is yet to be ratified, and the operational practices the member companies are now undertaking, for instance, making sure that debris is a part of every daily operational meeting so that it becomes part of the culture we are aiming towards that zero degree.*

*How we are actually going to measure is part of that code of practice. Because it has not been ratified yet, I am not really in a position to give you details, but I hope to be shortly and would love to provide you with that answer.*

**CHAIR** - *... At the present time, then, how is it measured?*

**Ms FRY** - *At the moment we do have –*

---

<sup>262</sup> Tim Baker, Ms Fionna Bourne, DPIPWE, *Transcript of Evidence*, 17 February 2020, pp. 11-12.

<sup>263</sup> Tasmanian Seafood Industry Council, 2019, *Submission #93*, pp. 6-7.

<sup>264</sup> TSGA, 2019, *Submission #49*, p. 5.

...

**Ms FRY** - the hotline for reporting.

...

**CHAIR** - ... Tell me about the hotline - how does that function in order to indicate increases, reductions, measurement of debris?

**Ms FRY** - We have a third party, a contractor, who undertakes the receiving of the phone calls. It is open 24/7. They also have a radio room, which immediately alerts the community to debris, especially if it is large debris.

**CHAIR** - How is that done?

**Ms FRY** - Through the call radio, I think it is channel 16. All calls are recorded and those are used as reports for us to get a handle on what sort of debris, where it is, if there are any identifying marks. We also have the app.

**CHAIR** - ... If I ring the hotline to say I am walking on the foreshore and there is debris and I am going to report the debris, how then do I know what has happened as a result of my call?

**Ms FRY** - You can leave your details and we can get back to you or the member companies can get back to you if it is identifiable.

**CHAIR** - Then how is the totality of data collected through that hotline in terms of what was reported, where it was reported and all that made publicly available?

**Ms FRY** - ... I know DPIPWE has the portal. I know the companies have their own portals.

**CHAIR** - It appears the only things they report on are the shore clean-ups. I am interested, given that the hotline belongs to TSGA: how do you report on the data that comes through the hotline?

**Ms FRY** - I do not believe we are currently reporting on that at the moment.

**CHAIR** - Then the app?

**Ms FRY** - It is set for the member companies so they know where their debris is or isn't coming from.

**CHAIR** - Do you give them, say, an annual report in terms of what has come through the hotline relating to their company?

**Ms FRY** - The third party we contract does that.<sup>265</sup>

---

<sup>265</sup> Jen Fry, TSGA, *Transcript of Evidence*, 24 February 2020, p. 58-9.

Ruben Alvarez, CEO outlined Petuna's approach to marine debris:

**CHAIR** - ...The Government has what it is describing as a zero-tolerance approach and has apparently put some requirements on the industry to better track equipment and identify equipment that may end up as debris. Can you talk a bit about how your company has tackled that?

**Mr ALVAREZ** - The first one is about educating our people. To me, the main problem is just ourselves in the way that we behave in the farm. We did a clean-up in the Strahan area on the beaches there and 70 per cent of the things that we collected were domestic things. Only 30 per cent was connected with the salmon farm. Our people live in Strahan, so that is telling you that we need to educate our people better. For me, that is the number one priority.

The second one is about replacing all the old things we have in order that they are not going to collapse in the first storm. I think we have these two priorities in the company, but number one by far is to educate our people. <sup>266</sup>

The Tassal submission outlined the company's approach to reducing marine debris:

We are working hard to play our part in reducing marine debris. We have a Towards Zero approach to this challenge and are relentless in our focus, taking accountability for our actions. Our people undertake a range of practices to maintain our marine environment and ensure instances of debris entering the marine environment continue to be kept to a minimum.

In addition to this, our teams inspect the waterways checking for marine debris; we have on-land teams scouring the shoreline for debris; we undertake community clean-ups and through partnerships with community organisations we have regular clean-ups. Today, we are a net remover of marine debris. <sup>267</sup>

The Huon Aquaculture submission outlined the company's approach to marine debris:

At Huon we take the responsibility to manage potential and actual marine debris seriously. Maintaining the integrity of the marine environment and surrounding areas in which we farm is a major factor in the decision-making across the company which includes a focus on eliminating marine debris at the source.

To do this, a number of activities have been implemented:

- Our workforce is trained in knot tying which reduces the amount of rope offcuts inadvertently ending up in our waterways. We have also trialled having various bins/collection points on vessels and continue to look for ways to improve our operations. We have recently rolled out rope recycling

---

<sup>266</sup> Ruben Alvarez, Petuna, *Transcript of Evidence*, 24 February 2021, p. 34.

<sup>267</sup> Tassal, 2019, *Submission #83*, pp. 16-17.

*stations across our Southern operations. These stations provide a collection point for all rope offcuts which are sorted according to recycling category.*

- *We use technology to manage and track our on-water equipment. While we do everything we can to prevent equipment becoming loose, the use of GPS tracking devices ensures that our equipment can be immediately identified, located and removed if it strays.*

*At Huon, we have integrated multiple tracking systems for our diverse on-water equipment. For our cardinal and corner marks, we use an innovative GPS tracking software developed by a company called Sealite. For our mamba lines, we use a custom GPS tracking system that Huon designed and built in-house at our Marine Projects workshop at Pillings in Hideaway Bay.*

*The most recent development in our tracking innovations is the rollout of GPS tracking units for our grid cans (October 2019). Huon has proudly partnered with Tasmanian companies Definium and TasmaNet to develop and rollout this new GPS tracking technology which is currently being tested on grid cans moored in the challenging Storm Bay environment. We are still in the early stages of trialling these units, but the testing data received so far is encouraging, with the devices reporting that the grid cans have stayed in situ, and given the wave heights in Storm Bay, this is a huge achievement.*

- *Operating in extreme weather and high energy sites presents an ongoing challenge to ensure all equipment, ropes and general waste remains secured on our farms. Over the past few years, Huon has replaced all moorings, ropes and nets and has designed equipment to reduce the potential for marine debris. This requires continuous effort including a particular focus post weather events and collecting marine debris at the request of the community, regardless of source. Huon also participates in the industry-wide hotline and mobile phone App.*
- *In the interest of transparency, we also publish details on our website of our equipment markings and the types of ropes and netting (including photographs) that we use in our operations <https://www.huonaqua.com.au/identifying-our-equipment/>.*
- *Similarly, Huon regularly educates employees, reviews operating procedures and adopts new technology and practices to continue to reduce the potential for marine debris. In the rare occasion that an employee is found to be doing the wrong thing, action is taken in the form of formal warnings and/or dismissal.*
- *We also list results of our marine debris clean-ups on our online Sustainability Dashboard (<https://dashboard.huonaqua.com.au/environment/cleanups>), as well as provide social media updates. Our employees also participate in shoreline*

*clean-ups and a noticeable shift in employee behaviour has been observed after participation in this activity which directly drives positive change.*

*In 2018, Huon removed 63m<sup>3</sup> of debris through a number of shoreline and community cleanups, of which 29 per cent was attributed to Huon's operations. Earlier this year, Huon crews participated in NRM South's annual shoreline clean-ups at Charlottes Cove and Bruny Island. At Charlottes Cove, over 15km of shoreline was cleared with 9 cubic metres of debris collected (1.6m<sup>3</sup> attributable to salmon farming), while on Bruny Island 10 cubic metres of debris was collected over 20km of shoreline with 2.8m<sup>3</sup> attributable to fish farms. This data is published at <http://www.tangaroablue.org/> by NRM South.*

- *As all debris collected is assessed and measured, the level of "old" legacy debris is rapidly diminishing. Concurrent with those findings is that we are now consistently retrieving alarming and growing volumes of terrestrial rubbish (coming down the rivers and beaches from the land).*

*The industry is accused of either wantonly creating marine debris, not caring about creating it and not retrieving debris. All of these statements are completely false.*

*In the first instance we have invested millions of dollars into equipment, a valuable asset; secondly hundreds of staff work on the water every day and their safety, and those of waterway users are incredibly important, not to mention the moral, reputational or financial risk. The industry regularly collects equipment that doesn't belong to us however as responsible waterway users we feel it is our responsibility.*

*It is a fact that over the decades Huon has removed thousands of tonnes of logs and flotsam from our waterways particularly after floods as a caring sensible community service to assure both the safety of our staff and the boating community.<sup>268</sup>*

The Inquiry sought more detail in a series of follow-up questions to the TSGA including the following on the topic of marine debris:

- In relation to marine debris, how does the industry measure progress towards the target of zero tolerance?
- How long has the Marine Debris Hotline been in place? How is it being resourced to operate? How is it being promoted?
- What is the TSGA view on where the marine debris hotline would be best operated? (e.g. by industry, by government or independently)
- In regards to the Hotline, what reporting is done on the data collected? Is that reporting available in the public domain? Is the data collected through the Hotline broken down by location and by company?

---

<sup>268</sup> Huon Aquaculture, 2019, *Submission #87*, pp. 53-54.

- What was the process undertaken to develop the marine debris app? Which community or industry stakeholders were involved in the development of the app?

Julian Amos, Facilitator, TSGA provided the following answer:

*Marine Debris (Questions 14-18)*

*The obvious way to measure progress is by finding less discarded material. Much of the material that is being found these days does not come from fish farms. Our beaches are cleaner because of the work our industry does. In October – December 2020 our people walked over 47km of shorelines picking up rubbish – of this, 28% was attributed to fish farms. That means 72% of the waste we collected was general waste from other users of our beaches and waterways. This information is publicly available on the DPIPWE website’s salmon portal.*

*The Marine Debris hotline has been in place for many years. It is resourced by the TSGA through Golden Electronics.<sup>269</sup>*

### **Community Response to Zero Tolerance Policy**

Witnesses questioned whether the Zero Tolerance policy towards marine debris was being effectively enforced.

According to Sheenagh Neill:

*The Tasmanian government introduced a Zero Tolerance Policy towards marine debris in July, 2018. I lobbied for and so applaud the Zero Tolerance Policy to fish farm debris. This is a step forward in making the fin fish farms accountable for their practices. However, it is still unclear to the public how this policy is enacted in practice.*

*At present, a sailor who has observed marine debris that poses a potential hazard to vessels will notify Tas Maritime using a sécurité callout. The fish farms, on hearing this callout, will eventually collect the debris. After lobbying the fish farms have allocated responsibility for collecting debris in different areas of the Channel and Storm Bay. This sadly doesn’t not cover all areas debris can wash up and there is no clarity of process around reporting. The app was developed without community input and requires far too much information of the reporter rather than the onus bring (sic) on the company. Colour coding of rope is useful to identify the owners but not for whole pens or bigger sections of infrastructure which remain despite repeated requests for tracking devices or stamping, they remain unmarked.*

*My recommendation is that to further improve identification of debris, fin fish farms should be required to mark with their company name and use tracking devices (as oil rigs do) on all of the following:*

- buoys

---

<sup>269</sup> TSGA QON response, dated 14 July 2021, p. 2.

- pipes
- pens
- all rope (at present some rope is colour coded)
- cardinal marks
- walkways
- any other infrastructure with the potential to break away from their lease area.

*This is necessary in order to prosecute breaches of the Zero Tolerance Policy. At present this policy has no enforcement structure to make it work. Limitations in availability of the 7 allocated officers (the only ones who can impose a fine) has its own issues. The companies ability to argue under section 94 of the act that they were transporting the debris etc is to (sic) vague for zero tolerance. We need a clear reporting path and harsher penalties. At present none of the stakeholders are clear on this. Despite repeated requests for involvement the industry has refused to appoint a community member to the meeting held between marine farming branch and the industry around marine debris. Which is why the app they created has failed. For zero tolerance to be successfully enforced there has to be a clear pathway to prosecution which is mapped out. The onus should be on the fish farms to clean up their practices not on the innocent recreational boaters to notify others of their breaches.* <sup>270</sup>

According to Rebecca Howarth's submission:

*Copious amounts of marine debris are still being washed up on our shores. Residents regularly pick it up on the beaches. Yes, Tassal are doing regular beach clean ups now which is great. But they pat themselves on the back for it and use it in their PR. How much plastic waste from fish farms is still floating around in the ocean if only a proportion has washed up on beaches? Fish farms are the biggest importer of plastic in the state, so this use of plastic needs to be reduced dramatically. The Zero Tolerance stance the government claims to be taking on marine debris is not being enforced and it needs to be.*<sup>271</sup>

According to the Neighbours of Fish Farms submission, the issue of marine debris is not taken sufficiently seriously for the authorities to record the incidence and frequency of occurrence, or levy penalties for creating waste and hazard, nor for companies to institute rigorous methods that should prevent debris in the first place:

*After years of paying scant attention to an increasing problem, a policy of zero tolerance for marine debris was announced by the State government in 2018. In April 2019, it was revealed that there had been no fines issued at all between 2014 and 2016. In 2018 four fines were levied totalling \$2445 and in 2019, there were nine fines costing the companies \$5,928.*

*The fish farms report spending many working hours clearing marine debris from shorelines, which only accentuates the problem: proper control of marine farm*

<sup>270</sup> Sheenagh Neill, 2019, *Submission #31*, pp. 4-5

<sup>271</sup> Rebecca Howarth, 2019, *Submission #84*, p.4.



*equipment would obviate the need for so much time spent clearing debris that should not have escaped in the first place. Furthermore, no accounting of debris that escapes to sea seems to be in place although Hobart Marine Radio consistently reports floating hazards on its Notices to Mariners.*

*There should not be a boat ramp, beach or accessible waterfront fish farming area without clear signs advertising where to report marine debris. Further, there needs to be a system that makes it easy to report debris on water or on shore to an authority that collects statistics and reports regularly to parliament and the public. How otherwise can the public even start to monitor the size and extent of the problem of marine debris, and how can government and regulators effectively monitor and manage the problem?<sup>272</sup>*

TARFish provided the following comments on marine debris:

*It is TARFish's view that very little verified data has been compiled and published at an industry or local area level by government relative to recreational fishers and waterway users generally. Of particular interest are interactions with marine farm equipment, marine debris and waterway health. The EPA data portal provides generic information on marine debris, the amount collected and the percentage attributable to marine farming and basic compliance data.*

*The salmon plan states the Government will establish deadlines for the universal adoption of best practice tracking technologies and simple ways to identify the source of debris. I am not aware of any government-produced publicly available information that -*

- (1) Details the deadline for the universal adoption of tracking technologies.*
- (2) Provides simple ways to identify debris.*

*We accept that not all marine debris is produced by salmon farms; we also accept that it is the responsibility of a vessel operator to keep a safe lookout under Rule 5 of the International Regulations for Preventing Collisions at Sea.*

*What we do not accept is that recreational fishers have access to information about marine debris in a publicly available, consolidated and meaningful way. For example, there is no information on the adoption of technologies and what equipment those technologies are applied to. There is no information on identification to source found debris. It is not clear about the obligations to report the interactions with marine debris that are occurring.*

*This means we do not know the extent of the problem.*

*As the peak body representing recreational fishers, we regularly hear about incidents with marine debris from fish farms. Items like feed pipes that sit low in the water and are dark in colour making them difficult to see as well as hitting rope - so propping the rope, in particular, are things we hear about. For the community and recreational fishers specifically to have confidence that the safety risks posed by*

---

<sup>272</sup> Neighbours of Fish Farming, 2019, *Submission #41*, p. 18.

*marine debris interactions are being well managed, we need to be assured and shown that two things are happening continuously - prevention and management.*

*Prevention means how items like feed pipe are prevented from breaking away in the first place; and management means what systems and processes exist to ensure if they do, it is identified early and actioned immediately. Whilst overall it is generally agreed the salmon farms have made efforts in this area and the amount of debris is reducing, the risk posed to recreational fishers and boaters remains relatively high. TARFish believes it requires swift and immediate action.<sup>273</sup>*

### **Reporting of Marine Debris**

According to Glenn Sanders, Neighbours Of Fish Farms:

*Largely because of that, we thought there really should be somewhere - one single point - where you can get on the phone and say, 'Hey I've got a problem' and not only report it, but actually get feedback. There are no guarantees on any of the sites I found about any feedback whatsoever. We worked from there saying, 'Okay we are proposing a single organisation, a single point of contact for that aspect of it. Why not also make that the single point of contact for setting up the standards and making sure the data is collected and presented in a way that suits various target audiences and is standardised so that you can find stuff?'<sup>274</sup>*

Ms Fionna Bourne, DPIPWE was questioned in relation to data collection on marine debris:

**Ms FORREST** - ... a lot of debris doesn't get to the shore or it might not for a while in transit from wherever... Do you actually collect data? If someone reported their propeller being fouled with a rope or some other pipe or something like that, do you collect that data as well?

**Ms BOURNE** - Yes. That data is collected through the marine hotline and also now through the marine debris app developed by industry. So that data would be available through those two mechanisms.

**CHAIR** - Is that data reported publicly?

**Ms BOURNE** - I will have to take that question on notice; I'm not sure.

**CHAIR** - ... I'm interested in the app and the hotline. Why would the app not be something that's facilitated independently or by government? The reason I ask is that when I've gone on to look at the app - and I would be required to sign in and give my personal details including contact details ... I would probably prefer to report it to an independent or government-related entity, especially if I have to give

---

<sup>273</sup> Jane Gallichan TARFish, *Transcript of Evidence*, 9 September 2020, p. 20.

<sup>274</sup> Glenn Sanders and Peter George, NOFF, *Transcript of Evidence*, 11 February 2020, p. 75.

*my contact details. Could you comment on the decision made not to have that be independent?*

**Ms BOURNE** - *It's my understanding the marine debris reporting app was an initiative of industry to address the issue of marine debris. The exact nature and contents of that app - you would have to ask the industry around why it chose to develop it that way.*

**CHAIR** - *How does that then correlate into your system in terms of collecting the data from the app and publicly reporting on the data from the app?*

**Ms BOURNE** - *I would have to take that on notice, I'm sorry.*

**Mr BAKER** - *... if a member of the public felt any concern whatsoever about reporting via the app, they can contact the department directly and they can do so in an anonymous way.*

**CHAIR** - *Then would there be a follow-up process back to them in terms of the response to their report?*

**Ms BOURNE** - *We don't individually report back to an individual who makes a complaint about marine debris. We are more focused on collecting the marine debris and making sure it no longer stays in the environment and conducting any necessary compliance action that needs to be done as a result of that marine debris. We don't then report back to the individual to say it's been collected. However, if it is marine debris that has resulted in the need for a notice to mariners when it is no longer in the marine environment, that notice to mariners is cancelled and that is a public process.*

**Mr VALENTINE** - *In submissions we're receiving, there are calls for a one-stop shop, if you like, for reporting. People get the run around a bit - 'Oh, no, there's not much point talking to us, you need to talk to this body or you need to talk to that body'. ... Has there been any discussion about having that one-stop shop?*

**Mr BAKER** - *Yes. To be honest with you, Mr Valentine, it's feedback that the department has received, but it's not uncommon in a complex regulatory environment, whether it be finfish or it could be a range of other industries across the state.*

...

**Mr BAKER** - *What I would say is that it is very complex. It's multijurisdictional and it is an issue, but the fact that it is multijurisdictional and complex is also a strength of the regulatory environment we've put in place. What I would say is, yes, there has absolutely been discussion about the one-stop shop and how we could do that in the department. Equally we have found that the community wants to communicate with the department in different ways. Some want to write the letter, some want to call the number, some want to speak directly to the person in the EPA, others want to do it via the app. I think the one-stop shop makes sense but as the acting secretary, I'm*

*also very keen to ensure there are multiple channels so that if someone has an issue, they are able to get to us.* <sup>275</sup>

Tim Baker, Acting Secretary, appearing before the Sub-Committee in October 2020 clarified this matter:

*The first thing on my list is that all floating marine equipment is now required to be uniquely marked and can be traced back to the operator and - based largely on a conversation we had here - we have established a single point of reference for responding to notifications of marine debris and that system was developed in consultation with MAST, Friends of Bruny and the companies themselves.* <sup>276</sup>

In relation to reporting protocols:

**Mr BAKER** - ... industry identified this as an issue, as did the department, and a power of work has been done in order to, as described really well by Graham. The other thing is they are not the only occupants of the water and there is an element that we need to be a bit careful, that if a piece of debris is found it does not necessarily mean that it was one of the salmon companies.

*... The department, MAST, and the companies are on a pathway of continual improvement here. Even looking at stats, the stats will make a lot more sense over the next few years now that we have everything well-marked. We will get a much better indication about how well they are doing or otherwise.*

...

**Mr WOODS** - Last time there was a debris app and a 1300 DEBRIS number which were run by industry. The way that was managed was essentially industry would communicate to the department and to MAST following any notification and would provide industry with an opportunity as it was their reporting mechanism, to respond and get out there and deal with any issues that were reported. Since then we have established a single point of contact, that being the MF Ops email address. We have worked through that with community groups. TAMP is aware of that and they have actively communicated to their members that it is a good mechanism for reporting or making any notifications on marine debris. Now we receive notifications direct to our email address. Any person making a notification receives an auto-response message acknowledging their report. In cases where it relates specifically to marine farming debris, marine farming equipment, then we follow up on that. That may involve contacting the company to retrieve the gear or, if it is subject to an official investigation, then we will respond to that, collect the gear and

**CHAIR** - How will that be reported on or documented in the public domain so that people can see?

---

<sup>275</sup> Tim Baker and Fionna Bourne, DPIPWE, *Transcript of Evidence*, 17 February 2020, pp. 13-14.

<sup>276</sup> Tim Baker, DPIPWE, *Transcript of Evidence*, 20 October 2020, p. 31.

**Mr WOODS** - *That is a good question in the sense of broadening the scope of the portal. At the moment we might have 'yes or no', or a compliance action, but now that we are getting those metrics we can now provide more clarity and detail on the nature of those reports and the number of instances of where compliance action has been taken.*<sup>277</sup>

In relation to marine debris and the data portal, Mr Woods and Mr Baker, DPIPWE, stated:

**Mr WOODS** - *I guess in terms of the information that is on the portal, it all aligns with information that's reported or required to [be] reported through statutory reporting under marine farming licences and environmental licences. It all aligns. The only, I guess, difference would be with marine debris reporting information*

**Ms FORREST** - *Through MAST?*

**Mr WOODS** - *No, it's voluntarily supplied by the companies. That relates to all their shoreline clean-up activities and all metrics around the amount of gear that's collected.*

**Ms FORREST** - *Have there been barriers then because this legislative gap, if you like, in publishing data that rightly should be out there?*

**Mr BAKER** - *I would say that certainly the act will allow for more data to be published. It was no small feat by Graham and his team to get the data portal up and running to begin with. You mentioned COVID-19 and it's probably the only time I would mention COVID-19 in terms of slowing down our progress in finfish farming.*

*If you're asking me will that change to that act allow for more data to be put up, yes it will, and it will be welcomed when it's passed.*<sup>278</sup>

The Department provided the following response to a question taken on notice in relation to reporting of marine debris data.

---

<sup>277</sup> Tim Baker, Graham Woods, DPIPWE, *Transcript of Evidence*, 20 October 2020, p. 42.

<sup>278</sup> Tim Baker, Deidre Wilson, Graham Woods, DPIPWE, *Transcript of Evidence*, 20 October 2020, pp. 36-7.

**Figure 4: DPIPWE QON response 1/4/2020**

**2. What percentage of shore based marine debris collected is tracked back to the salmon industry?**

Finfish farmers monitor and remove marine debris from nominated shorelines across Tasmania. A consistent set of metrics are measured and form a marine debris collection record, including the 'Length of Coastline Surveyed', 'Time Spent Surveying', 'Volume Collected', and '% Attributable to Fish Farming'. This data is available on the Salmon Portal, within the 'Operational Compliance' section for each farming region (aggregate for MFDP area).

Below is a summary of the '% Attributable to Fish Farming' for 2017 – 2019 for each MFDP:

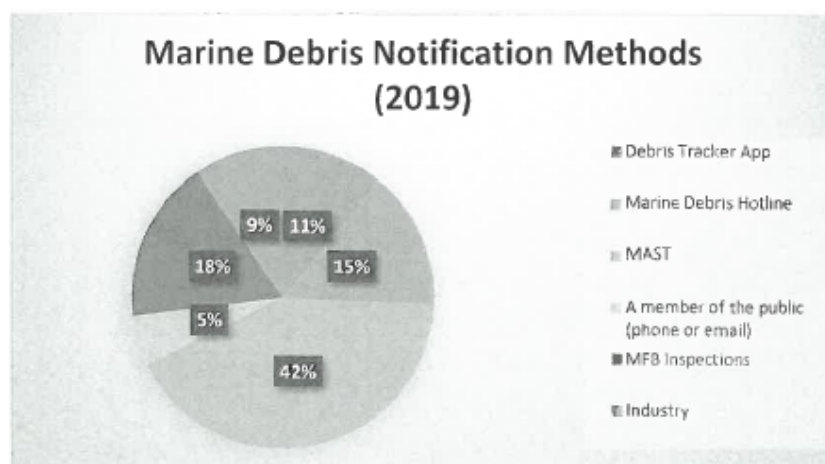
	<i>D'Entrecasteaux Channel &amp; Huon</i>	<i>Great Oyster Bay &amp; Mercury Passage</i>	<i>Storm Bay off Trumpeter Bay North Bruny Island</i>	<i>Tasman Peninsula &amp; Norfolk Bay</i>	<i>Macquarie Harbour</i>	<i>Tamar Estuary</i>
2019	27.81	1.19	44.07	15.99	61.60	80.00
2018	35.18	29.00	34.00	39.50	32.83	80.00
2017	21.91	28.30	37.00	59.50	NA	NA

**Table 1.** Percentage (%) of marine debris collected by companies during shoreline surveys that is attributable to the Finfish industry.

**3. Is the marine debris data collected through the app reported publicly?**

The Debris Tracker App, is part of a system for reporting, recording and removing marine debris in Tasmanian waters. It is an initiative of the Tasmanian salmon industry and contributes to the safety of mariners and the Tasmanian Government's zero tolerance approach to marine debris. The App is managed by the Tasmanian Salmonid Growers Association (TSGA). Data collected through the App is not reported publicly by Government.

In 2019, the Debris Tracker App accounted for 11% of the 74 marine debris notifications received by the Department. It should be noted that these notifications were not all attributable to the salmon industry operations.



Proportion of Marine debris notifications by reporting method for 2019.

## ***Infringement Notices***

At a public hearing in September 2020, Lia Morris, MAST made the following comments in relation to infringement notices:

**Ms MORRIS** - ... *If we can identify the marine farming equipment, we can issue an infringement notice.*

**Ms FORREST** - *If it is washed up, you can't.*

**Ms MORRIS** - *No, that goes back to section 6 of our legislation in terms of safe operation of vessels. In terms of safe operation of vessels, it is not just recreational vessels we are worried about, it is also the marine farming vessels. They are out there 24/7 so they need to be mindful of debris in terms of safety.*

*Our authorised officers have issued 10 infringement notices since August 2018. The penalty for these breaches is \$688. We receive reports of marine debris via phone, Facebook, email and the Salmonid Growers Association hotline and mobile app. Where required, we issue a notice to mariners to alert mariners of the dangers posed by the debris if it is floating in the water and can't be found. That is a summary of our position in how and where we get involved with marine farming.<sup>279</sup>*

In relation to questions on the frequency of infringement notifications, Ms Morris provided the following responses:

**Mr VALENTINE** - *You talk about infringement notifications. Can you give us some understanding as to the number of notifications that go out per month?*

**Ms MORRIS** - *The notice to mariners?*

...

**Ms MORRIS** - ... *We have had 27 notifications this August [2020].*

**Mr VALENTINE** - *Do you have something you can provide in terms of the frequency of those notifications that we can table?*

**Ms MORRIS** - *Yes, definitely. We could go through our notices to mariners and provide that for you. [see Appendix F].*

**Ms FORREST** - *And are you able to break down the source of the debris?*

**Ms MORRIS** - *That's not always possible because sometimes you can guess that it might come from a finfish farm but it's not always identifiable and that's because -*

**Mr VALENTINE** - *It's not your role to do that?*

---

<sup>279</sup> Lia Morris, MAST, *Transcript of Evidence*, 8 September 2020, p. 2.

**Ms MORRIS** - We don't set the rules in terms of the marking of equipment for the finfish farm - that's DPIPWE. They're working on a register and trying to move the farmers to have everything identifiable, but there is equipment out there that is still not marked.<sup>280</sup>

And further:

**CHAIR** - You mentioned you've issued 10 infringement notices since August 2018. What then elevates something to going from putting a notice out to mariners to issuing an infringement notice?

**Ms MORRIS** - The key is to be able to identify the equipment. If we can identify the equipment and trace it back to an owner, that is when we will issue an infringement.

**CHAIR** - How would that identification come about? Do you go and look at the piece of whatever it is?

**Ms MORRIS** - Yes, and sometimes we have found it ourselves when we have been out there doing audits.

**Mr HOPKINS** - It could be identified on the register as well. We have, for instance, issued an infringement because a boat off Point Home got a substantial amount of rope caught around its propeller. We were able to identify that particular rope from the gear register and we issued an infringement accordingly to the company involved.

We know that the Huon Aquaculture Group - HAC - is only using white feed pipe now - the majority is white feed pipe - whereas the other company, Tassal, has a black feed pipe with a blue or green stripe through it, which is quite identifiable. There is still equipment on the marine farms that is not in the register. I know the Marine Farming Branch is working to update that register all the time.<sup>281</sup>

Ms Morris was also questioned regarding data reporting and publication in relation to marine debris:

**CHAIR** - Can I ask you more about the way you report on these things? You mentioned you have the two officers who are doing the infringement notices. DPIPWE also has officers who are doing that. Is there a common data source and reporting source for the totality of those infringement activities?

**Ms MORRIS** - We let DPIPWE know what we've done. I imagine they'd keep a central source of information.

---

<sup>280</sup> Lia Morris, MAST, *Transcript of Evidence*, 8 September 2020, p. 8.

<sup>281</sup> Lia Morris, MAST, *Transcript of Evidence*, 8 September 2020, pp. 9-10.



**CHAIR** - Do you report in some public way? Obviously you provide it to DPIPWE but do you make publicly available your data on notifications received, notices given, infringements given?

**Ms MORRIS** - No, we haven't at this point but we're happy to do it if anybody asks.<sup>282</sup>

**Findings:**

151. Concerns related to marine debris associated with the fin fish farming industry included the safety risks, the environmental impact and the potential for marine debris to increase with rapid expansion of the industry.
152. Extreme weather and high energy offshore sites present an ongoing challenge to ensure all equipment and waste remain secured on fin fish farms.
153. It is acknowledged that not all marine debris is produced by fin fish farming operations.
154. The Salmon Industry Growth Plan identified a Zero Tolerance approach to marine debris, employing best practise tracking technology for equipment and simple/practical ways to identify debris from marine farms.
155. The fin fish farming industry, via the Tasmanian Salmonid Growers' Association, developed a voluntary Code of Practice in relation to marine debris, but was unable to confirm how its effectiveness would be measured.
156. Fin fish farming operators identify and reduce marine debris through the use of tracking technology, colour-coding, marking of equipment, staff education, rope recycling stations, collection bins and shoreline clean-ups.
157. DPIPWE maintain a centralised marine farming equipment register to assist with identification of marine debris.
158. An industry-developed marine debris hotline and Debris Tracker app facilitates reporting of marine debris by members of the public and coordination of its retrieval by the fin fish farming industry.
159. Concerns were expressed in relation to the Debris Tracker app: including lack of input from the community into its development, the appropriateness of its operation by industry and no requirement to report the data collected, either publicly or to Government.
160. There is a lack of public information and promotion of mechanisms for reporting marine debris.

---

<sup>282</sup> Lia Morris, MAST, *Transcript of Evidence*, 8 September 2020, pp. 11-12.

161. Concerns were expressed regarding the lack of effective implementation and enforcement of the Government's marine debris Zero Tolerance approach.
162. Marine debris infringement notices can only be issued where ownership of debris can be identified leading to a limited number of infringement notices being issued.
163. Marine debris infringement notices are not publicly reported and the penalties are regarded by some as insufficient to act as an appropriate deterrent.
164. There is a lack of comprehensive data collection and publicly available reporting on all aspects of marine debris management.

**Recommendation 55**

Develop a fin fish farming industry marine debris policy, in consultation with the community and other stakeholders, that can be effectively implemented, monitored, enforced and reported on publicly.

**Recommendation 56**

The Government to assume responsibility for operating the marine debris hotline and Marine Debris Tracker app, including related promotion and public education.

**Recommendation 57**

Review penalties associated with fin fish farming industry marine debris to appropriately reflect the potential environmental and safety risks, and provide an effective incentive for behaviour change.

## Noise

A number of submissions raised concerns regarding the operational noise caused by fin fish farming.<sup>283</sup>

Susan Wardle, North Bruny Island:

*The diesel engines (which are not particularly environmental) and equipment used are invasive in the lives of many residents, causing much distress. I know there have been many professionally measured reports on the unsafe levels of noise pollution from these sources, which would not be permitted or tolerated for any land industry. Everyone is entitled to feel safe and comfortable in their home. The industry was not in operation where these houses are, when folk chose their location for a home.*<sup>284</sup>

Gerard Castles, Killora Bruny:

*We think of social impact being about our ability to enjoy the unique amenity offered by the Killora coast. The residents were there before Tassal and Tassal should accommodate the residents not the other way round. I have major concerns.*

- *Breaches still occurring – multiple noise complaints from Killora residents concerning lease machinery, attendant vessels. We have fought hard over nearly 20 years to limit the noise and light pollution from Tassal’s Shepherds lease, yet breaches continue. The system relies too much on residents complaining before action happens rather than Tassal ensuring that ALL machinery is silenced before it comes near the site.*<sup>285</sup>

Kim Murray, Lunawanna Bruny Island:

*We complained to the EPA about the noise coming from the newly leased Ronja Huon and officers made the illusion of conducting an inquiry, complete with sound recording devices.*

*We were asked to keep a log, which we did, and after a month or so the equipment disappeared and so did the officers. To this day we have never heard anything personally about it.*

*The EPA did put up a report on its website that said the inquiry concluded that the noise allowed so many metres from the boat was at acceptable levels. We still suffer a constant irritating background hum from the operations and when the hapless fish are pumped from the pens into and out of the wellboat to cleanse the snot from their gills, the sound is increased and is like a subterranean pulsing that on still nights makes sleep difficult.*

---

<sup>283</sup> For example: *Submissions #2, 5,7,8,11,13,14,20,23,24, 25, 29, 33,34, 35, 37, 41, 52, 53, 56, 59, 63, 72, 73, 81, 84, 89, 92, 98, 102, 103, 105, 118, 120, 133, 137, 138, 142, 144, 157, 165, 171, 176, 204, 208, 210, 213, 220.*

<sup>284</sup> Susan Wardle, 2019, *Submission #20*. P. 3.

<sup>285</sup> Gerard Castles, 2019, *Submission #52*, p. 3.

*This at times goes on all night and often in daylight hours. The operation of the automatic feeders also adds to the noise level.*<sup>286</sup>

Rod Hartvigsen, Conley Beach North Bruny Island:

*Noise and light is a big problem. The closest farm to my house is 2.5km away. It is operated by Tassal and has approx 50 pens. Motor, generator or boat noise is penetrating and goes on often 24hrs per day. Curfews should apply.*<sup>287</sup>

Ian Locke, North Bruny:

*My neighbours and I are repeatedly being impacted by the noise from marine fish farm service vessel movements transiting between the D'Entrecasteaux Channel, North West and Storm Bays.*

*The noise (a low drone or deep throbbing) can be heard during quiet periods of music and during the muted ads on the television, even with the windows and doors closed. It penetrates habitable rooms and disturbs sleep. The opening between the Channel and Storm Bay is 1.6kms narrow. Vessels are therefore in close proximity to residential houses at Dennes Point and Tinderbox. Vessels are often within 300m of the shoreline. ... Many incidents occur at anti-social hours between 6pm and 7am.*<sup>288</sup>

Lynda House, Middleton:

*We have experienced boats towing pens up and down the D'Entrecasteaux all day and night. Sometimes the boat will seem literally not to move - it travels so slowly and noisily. We have timed the boats, they can take up to 6 hours to pass by our place, it's worse at night when it is quiet and the throb of their engines keep us awake.*<sup>289</sup>

Tony Mahood, Middleton:

*My major concern is the noise. The fish farms are continually towing their fish pens up and down the channel. They are towed by noisy tug boats and can take up to 2 to 8 hours to pass by. Depending on which way the tide is running. They tow the pens at 1 kilometre an hour to clean out the fish. And 50 percent of the time they are traveling late at night.*

*Anywhere from 10pm to 5am. And in the worst times when they have an outbreak of disease or jelly fish infestation there can be 4 tug boats a day. The noise is like having a revving tractor on your front lawn. It is impossible to sleep without earplugs and white noise.*

---

<sup>286</sup> Kim Murray, 2019, *Submission #208*, p. 1.

<sup>287</sup> Rod Hartvigsen, 2019, *Submission #171*, p. 1.

<sup>288</sup> Ian Locke, 2019, *Submission #37*, p. 1.

<sup>289</sup> Lynda House, 2019, *Submission #24*, p.1.

*I have kept records of exact times and durations that they pass our house. And have given these figures to the Enviromental (sic) Protection Authority.<sup>290</sup>*

John Redgrove, Eggs and Bacon Bay:

*The peace and tranquillity of this area (which was one of our main reasons for moving here) is regularly disturbed by noise made by watercraft both large and small which frequently attend to a range of activities including feeding, harvesting, maintenance and towing pens up and down the river.<sup>291</sup>*

Paul Thomas, Huon River:

*The industrial noise emanating from these 24-hour, 7-day, 52-week operations is a horrible injustice for those of us living in their wake. Again in the middle of the night just last night my partner woke saying 'what's that noise?', I answered simply "Fish farm"!<sup>292</sup>*

Dr Sharon Moore, Lower Huon/Channel:

*As a resident of the lower Huon/Channel area, I have been kept awake for hours at night and woken in the very early hours by the noise from the Huon Aquaculture wellboats. I am quite a distance away from the route taken by the boats and know of people who live much closer to the route; their lives would be a misery. I have not complained as I know it would be futile and do not suffer as much as others. The adverse health impacts of exposure to noise and light pollution are well documented. With both Huon Aquaculture and Tassal about to introduce much larger vessels, I know the problem will only get much worse.<sup>293</sup>*

Melinda Huck, North West Bay:

*Huon Aquaculture has assured us on many occasions that their vessels operate within noise regulation guidelines, however the low frequency drone of the engines and hydraulic equipment that can go on for hours is very distressing. It can be heard through our double glazed windows and has on occasion caused the windows to rattle and pictures on the wall to shake. During the warmer months we prefer to have the windows open which causes much more distress. The vessel movement can occur at any time of the day or night. Recently a vessel towed a pond liner into the jetty at midnight. Bright light from the vessel shone in through our windows and was accompanied by shouting and loud engine noises.<sup>294</sup>*

Miranda Howie, Huon:

---

<sup>290</sup> Tony Mahood, 2019, *Submission #25*, p. 1.

<sup>291</sup> John Redgrove, 2019, *Submission #5*, p. 3.

<sup>292</sup> Paul Thomas, 2019, *Submission #53*, p. 1.

<sup>293</sup> Dr Sharon Moore, 2019, *Submission #72*, p. 2.

<sup>294</sup> Melinda Huck, 2019, *Submission #210*, p. 1.

In the DPIPWE paper “A discussion of the Management of Noise from Marine Farming Activities” [2012] notes that;

*“Outside the Requirements for the Control of Noise Emissions from Marine Farms [RCNEMF] there are some other legislative points that are potentially important. In particular, Section 53 of EMPCA is referenced in the RCNEMF but is probably side-stepped because a marine farm is not being operated ‘unlawfully’ – i.e. it is being operated under some form of planning permit, and the permit is not silent on the issue of noise. This essentially means that, in relation to the operation of Section 53, the specifics of the permit take over from the more general requirements of Section 53.”[p.5]*

*The permit [licence] for the marine farm at Brabazon Point [near my home] was silent on the issue of noise until 2019. No days or hours of use for specific items are/were specified in any regulatory instrument. No maximum noise emission levels were set while the farm operated, expanded, and added numerous activities for thirty years. In 2019 noise emissions were set, based on rural Victorian noise regulations without any noise modelling.<sup>295</sup>*

Dr Robert Watson, Tasman Peninsula:

*But with the expansion of Tassal in Parsons Bay (kilometres left of this heading) a different, intensely infuriating, constant factory machinery noise now invades the natural peace and quiet. At my current distance from the expanding factories, is a needling constant hum from expanded operations. And this unhealthy sound intrusion is set to massively increase once floating machinery enters and covers this view West of Wedge. It would drive any citizen nuts who had purchased in good faith a coastal sanctuary in order to avoid living in an industrial zone.<sup>296</sup>*

Adam Mollineaux, Port Arthur area:

*The noise emanating from the lease site is noticeable, particularly at night, and is a constant source of irritation. Whereas once residents only heard the natural noises of wildlife such as frogs, nowadays a constant droning hum, various thumps, crashes, bangs and other noises that are clearly not natural are heard coming from the fish farm. I am advised that visitors to the Port Arthur Caravan Park have complained to park management regarding the noise emanating from the fish farm. Soon TASSAL will begin to moor the wellboat Aqua Spa at the site; this vessel is some 84 metres in length and will sit directly in the line of site from practically any position for kilometres. One can only speculate at this stage as to the noise levels this vessel will emit as it conducts its operations.<sup>297</sup>*

---

<sup>295</sup> Miranda Howie, 2019, *Submission #227*, pp. 4-5.

<sup>296</sup> Dr Robert Watson, *Submission #92*, p. 9.

<sup>297</sup> Adam Mollineaux, 2019, *Submission #81*, p. 181

Dave Nelson, Nubeena:

*My main point is the loss of amenity especially in regard to noise. There has been a dramatic increase in industrial noise. A persistent, intrusive, pulsating very low frequency hum emanates from the farm for a large proportion of the time. Often during the day but also at night. Sometimes more obviously than at other times. It is clearly coming from the direction of the fish farm. Other people I know are also affected and although they are in different areas they assure me that the noise is coming from the direction of the farm. Sometimes I wake in the early morning and the noise is very obvious. When I come inside my house during the day away from the ambient sounds I can hear it clearly. I suspect it is from the vessels they use although some have suggested it may be generators or compressors. I know many people who complain that they are affected by the noise. It is maddening. It cannot be good for any biology.<sup>298</sup>*

Benjamin Dean, Nubeena:

*Noise: I currently live in Nubeena, (about 2km from the Tassal fish farm) and have been monitoring the noise emanating from the fish farm, Parsons Bay, over a 9 month period, up to Nov 2019. The noise is most noticeable on still nights and days, and is of a level that is irritating to me and to others I have talked to. The noise is of a low frequency and I have discovered by investigation it is emanating from diesel engines both land and sea based. Although noted on many times, on four occasions, driven by the negative effect of not being able to escape the noise, I have traced the source. On two occasions I have traced the source of the noise at night.*

*On March 21 2019 I noticed the noise from 11.30pm (20/3) and continued until 7.45 am (21/3). The source was a boat towing a fish pen across Storm Bay and docking at 7.45 am. Indicative of the distances on water the sound will carry. On the night of April 10, the noise was coming from the land based operations of Tassal. On the 4th of April '19 the noise was evident from morning until 2.50 pm. On this occasion, the noise was noticeable in Nubeena, White Beach, and half way to Roaring Beach. Including in the surrounding foot hill adjacent to Nubeena.*

*The degree of nuisance I experience from this low frequency noise has stopped me from purchasing property in the area. And it is warning I give others interested in purchasing property in the Nubeena, and White Beach area.<sup>299</sup>*

Trish Baily, Tasman Peninsula Marine Protection made the following comments regarding light and noise:

**Ms BAILY** - ... there is a submission by a guy called David Nelson, who lives at the ecovillage there [Nubeena]. He is actually a sound engineer. ... He talks about the problems of the noise and how invasive it is on the community. There have been mentions of how that is also a public health issue. Tassal is remaining under the

---

<sup>298</sup> Dave Nelson, *Submission #204*, p. 1

<sup>299</sup> Benjamin Dean, 2019, *Submission # 157*, p. 1.

*decibel levels that by law you cannot go above, but those are not the levels of sound that are invasive in people's life. It is a lower level. It is just a hum so legally Tassal is not doing something illegal.*

*There has also been the sound issue. I believe when they put the reverse osmosis [RO] plant in at Port Arthur the council required that there was some muffling of the sound from that plant, but that has not been sufficient either to mitigate the noise that people complain about from that RO plant.<sup>300</sup>*

Peter George, NOFF made the following comments with regard to the impact of light and noise:

**Mr GEORGE** - *Noise and light is the main component of complaint for anyone who lives, as you heard from the Bruny Island people, near the fish farms. When I say 'near,' I talk about within 4 to 5 kilometres. As you would all know, the noise of a generator or an outboard motor carries very, very far across the water, as does light. Go down to Eggs and Bacon Bay or Randall's Bay and you will see there is plenty of light at night-time. It means that when you sit outside having a barbecue, as I do with friends, on a nice quiet night, what you hear is the very deep thrum of generators and lights in the sky which, as I said, light up a house even at night-time.*

...

**Mr GEORGE** - *We talked to Huon Aquaculture a year or two back and there was an attempt and, to some extent, a successful attempt, to try to refocus those lights so they wouldn't be so intrusive. We have had a talk to them. As I understand it, I don't think it was necessarily the result of our approach to Huon Aquaculture, but I understand they have replaced their two-stroke motors from the tinnies to four-stroke, which are quieter, and they have told their workers that they shouldn't be taking off at a large rate of knots at 3 o'clock in the morning. It has ameliorated the issue to some extent but it has by no means overcome it. I know a couple of people I would not want to put before you as witnesses who have been driven so close to what I would consider insanity by the noise, for instance, of pens being towed past their house at night-time. They tow the pens at one knot so that thrumming, deep noise - which is below the level at which they would break regulations because the decibels are not that high - has driven this particular person really to the point of insanity, so much so that I think they will eventually have to move. They moved to the Huon River because they wanted peace and tranquillity, and they found an industrial zone, a factory zone, right outside.*

...

**Mr GEORGE** - *... this was imposed on them after they moved. This came to their front door. It wasn't a matter of moving to an industrial zone that was already in operation.<sup>301</sup>*

---

<sup>300</sup> Trish Baily and Terence Brumby, TPMP, *Transcript of Evidence*, 12 February 2020, pp. 6-7.

<sup>301</sup> Peter George, NOFF, *Transcript of Evidence*, 11 February 2020, pp. 78-9.



Glenn Sanders, NOFF suggested an Aquaculture Ombudsman as a focal point for reporting noise complaints:

*One of the main reasons we use the term 'ombudsman' - ... it has a connotation of an organisation that you could complain to - is the other point we made in our submission is that at the moment there is no clear single point of contact for when something is going wrong. I have spoken to so many people who say. 'Look there is a lot of noise. Who do I report the noise to? I tried the Huon council and they said it was not them. Who do I go to next?' Our submission points out the confusion, for example, on the DPIPWE website as to exactly how you report noise.<sup>302</sup>*

Pene Snashall and Frances Bender, Huon Aquaculture provided the following information regarding operational noise:

**Ms BENDER** - .... *If you look at the way we actually farm now, in 2000, and certainly completed well and truly before 2005, every outboard in our fleet was changed from a two-stroke to a four-stroke. There are two reasons for that. One is they are so much quieter and, second, they are much more fuel efficient.*

**Mr VALENTINE** - *Is the next step battery-operated maybe?*

**Ms BENDER** - *Well possibly. The Ronja Huon and now the arrival of Ronja Storm - those two vessels enable us to now take the water in these vessels instead of the old-fashioned way of us towing water to leases to bathe fish. They are all diesel over electric motor and are very, very quiet and go to the sites. The amount of tows, I think we have cut out is on our dashboard; I cannot remember the number, so we are not towing cages any more at 1 knot everywhere like we used to years ago. We could not manage to run our business utilising that old-fashioned technology any more.*

*As our company has developed, we have brought in these systems that have flow-on benefits to the community of not having noisy towboats sitting there outside your house doing 1 knot for three hours going against the tide.*

...

**Ms SNASHALL** - *In our written submission there is a fact sheet about the issues around noise and about the new Ronja. The noise that she makes is pretty much comparable with a dishwasher....*

...

**Ms SNASHALL** - *Myself, my team, we have regular conversations, meetings; I go down and have site meetings in terms of people's homes to talk to them about some of the issues they have about noise and lights. The primary issue is that we always*

---

<sup>302</sup> Glenn Sanders, NOFF, *Transcript of Evidence*, 11 February 2020, p. 75.

*operate within our regulatory framework. We always operate within what our EPA licence is or council permit conditions in terms of noise and those sorts of things.*

*Having said that, there has also been instances where we have been able to tweak our operations to make it more compatible with being on a public waterway. That is the other thing you always have to think about - it is a public waterway. Last year we had a discussion with some Dennes Point residents. They were concerned about the lights from the Ronja Huon as it was going past Tinderbox/Dennes Point. We were able to talk to the skippers and they have come up with a standard operating procedure which is essentially anything other than non-essential navigation lights when they go through a part of the waterway. We do that, we have done it, but I will stress we always operate within our regulatory framework. I have had conversations with people, many residents, who are frustrated. I get that. My point is we are not in breach of the requirements placed on us, and we are doing an enormous amount of work through the introduction of vessels like the Ronjas, the fact that we are offshore, all those other things, to minimise the impact that we have socially.<sup>303</sup>*

Angela Williamson, Senior Manager Responsible Business, Tassal, provided the following information regarding operational noise:

*There were noise complaints, for example, around Killora with some of the gear, one of the barges in particular, and I was told it had a different hum to it than it previously did. I'm not an expert so we hired a noise expert to assess that, to measure that noise, to look at additional mitigation measures and we spent money rectifying that. That was a voluntary measure because at the same time we were still operating within our licence conditions, our regulatory setting of what those noise conditions are.*

**Mr VALENTINE** - *Does your licence condition have a noise limit?*

**Ms WILLIAMSON** - *We have, we think - for the Shepherd's lease, you're talking about or all leases?*

**Mr VALENTINE** - *Any of them, yes. ...*

**Ms WILLIAMSON** - *Between our management plans and licence conditions and letters from the government there are noise limits and conditions across our leases. Some are generic, some are more tailor-specific because there might be a nearby residence or something along those lines.*

*Those licence conditions can mean that activities can't happen at particular times of the day. The Aqua Spa, for example, we don't use that at particular leases where that licence condition doesn't allow for that. But where the licence condition does allow for that noise at that particular time, we would be using the Aqua Spa.*

---

<sup>303</sup> Pene Snashall and Frances Bender, *Transcript of Evidence*, 21 February 2020, pp. 83-4.

**Mr VALENTINE** - What sort of noise level are we talking about?

...

**Ms WILLIAMSON** - We have a variety of some of these - for example, in some areas it might be that the daytime limit is about 45 decibels; evening limit, 37; and night, 32. In others - nights, 35 and others don't have a daytime limit, so it does vary depending on where that lease is with regard to what is happening around that area.<sup>304</sup>

Wes Ford, Director EPA made the following comments on the inclusion of noise as a licence condition in the Environmental Standard currently being developed:

*We are certainly looking at noise in terms of how to incorporate noise into the standard because noise is part of the current licence conditions incorporated in the old marine farming licences. We are revisiting noise in terms of a condition within an environmental licence.*<sup>305</sup>

Mr Ford made the following further comments in relation to noise:

**Mr VALENTINE** - In terms of monitoring and the like, and fish farms' compliance, have you ever had the need to enforce operating hours on leases anywhere across the state?

**Mr FORD** - No is the simple answer, if you're talking very specifically about noise.

...

**Mr FORD** - ... As the industry has grown and more operations are occurring, night-time noise is becoming more of an issue for a number of residents, particularly in the northern part of the Channel where they're in close proximity.

*In somewhere like Macquarie Harbour or Storm Bay, noise is hardly going to be a problem for anyone because they're so far away.*

*The issue around noise is two- or threefold. One is the equipment they're using to keep either the lights going, because the fish need light at certain periods of time, or the air compressors, to move the feed through the feeding mechanism. You have noise associated with harvesting; you have noise associated with bathing; you have noise associated with towing the pens - and depending on where you are and what time of year and what time of day, various people will be concerned about noise.*

...

**CHAIR** - Let's talk a bit about the EPA role in relation to setting up requirements around noise, and then monitoring and compliance around that.

---

<sup>304</sup> Angela Williamson, *Transcript of Evidence*, 30 November 2020, pp. 24-7.

<sup>305</sup> Wes Ford, EPA, *Transcript of Evidence*, 8 September 2020, p. 68.

**Mr FORD** - *If you go back a decade, probably about 15 years, noise was identified as a concern to a number of residents, particularly in the northern end of the Channel - so the Marine Farming branch engaged the EPA for some advice about noise and noise-monitoring, and looking at the sort of limits that might be appropriate from an EPA regulatory point of view.*

*The marine farming process incorporated those sorts of requirements into some of their conditions at the time. Now that environmental management is our responsibility, noise is one factor that we need to revisit as we move through the development of the standard process.*

*One of the challenges with noise is determining what sort of limits are appropriate. If you look at other activities we regulate, we are in the media today about doing an abattoir in Scottsdale, so what are the appropriate night-time noise limits for operating an abattoir in a rural setting?*

*For the EPA, our standard set of noise requirements for night-time noise is generally 35 decibels, and for noise on the shoulder of the evening and morning can be 40 decibels - and this is at the nearest residence. General daytime noise can be around 45 decibels at the nearest residence - but that gets really quite complicated if you are in a rural setting. When the EPA did approval for Tassal for the hatchery at Hamilton, night-time was considered an issue, so there was a restriction of 32 decibels on that area. People will talk to you about needing to get to 19 to 20 decibels, but from a regulatory point of view that is not something we would impose. We would determine a reasonable wind will give you a reading of 25 to 30 decibels.*

*The challenge in managing noise, as Mr Valentine said, is that noise travels easily over water. People on north Bruny can hear people on the Shepherds lease talking at 1 o'clock in the morning on a still night.*

...

**Mr FORD** - *... We might impose some regulatory limits from a noise production point of view, but many people will find those limits unacceptable, and that is a tension in terms of level of noise is acceptable in the community. If you are living in a house right on the uphill stretch of the Brooker Highway, the night-time noise you experience might be 40-plus decibels. You might have chosen to live there, or you might not have chosen to do that, but you are there and that is the noise, and you adapt to the noise.*

*The problem with noise is that it is not just how loud it is - it is the tone, the frequency, the irregular nature of it. This is why Sydney has curfews on flight paths. It is all about noise, to try to minimise its impact on people. The challenge for industry - in this case the salmon industry - in particular locations is managing noise...*

...

**CHAIR** – [With respect to the setting of decibel limits] ... *For example, as you said, it might be quite acceptable to have that on the Brooker Highway, but in somewhere that would be regarded as a deeply quiet place, it is obviously going to have a lot more awareness around a noise, be more intrusive and have more of an impact, so do you adjust that according to the situation or context?*

**Mr FORD** - *Yes, to an acceptable level. As soon as you start having other inputs of noise that are going to add and are additive, it becomes challenging. It has been proposed there should be a limit of 19 decibels set on the marine farm operation north of Bruny.*

...

**Mr FORD** - *On the basis of that is what somebody thinks they were promised or is what somebody desires. In practical terms, you probably would not find an industry anywhere in the world that has a regulatory limit on noise that low at night because, yes, it is a quiet area, but there are lots of other quiet areas. The challenge in this area is ultimately you end up with a discussion about a resource allocation issue. The resource allocation issue governments have to address is do you remove noisy activity from an area so the people in close proximity have amenity to that area.*

*From an EPA point of view, our task is to look at what is a reasonable limit. What [is] a reasonable limit might not be acceptable to a number of residents, but it might still be a reasonable limit from a statutory environmental nuisance point of view in terms of what would stand up in court as an environmental nuisance.<sup>306</sup>*

On questioning Mr Ford regarding general noise complaints and noise complaints associated with the salmon industry, the following comments were made:

**Mr FORD** - *... Noise comes back to an issue around who is impacted and where they are impacted. You made a number of comments about people being there before the activity; that may well be the case, but there are other people who moved into the area knowing the activity was there, so it plays both ways in that sort of sense.*

*If you look at noise and noise problems in society - people on trail bikes, people with chainsaws, people on jet skis, rock music, loud parties - we see all of them. In terms of complaints, noise complaints make up the biggest number of public complaints the EPA receives.*

**CHAIR** - *What proportion of those complaints would be related to private activity versus commercial activity?*

**Mr FORD** - *The vast majority we receive are complaints about commercial activity because people generally do not complain to us about private activity.*

---

<sup>306</sup> Wes Ford, EPA, *Transcript of Evidence*, 8<sup>th</sup> September 2020, pp. 73-6.

*It would be fair to say in this state there is no complete database of noise complaints compiled. People complain to the police, so if you are having a loud party at 11 o'clock two houses up, you do not ring the EPA or the council, you ring the police.*

*If you have motorbikes tearing around near your neighbours, you ring the police. A lot of private noise ends up being complained to the police.*

**CHAIR** - *Of the noise complaints the EPA receives, which are, as you say, more likely to be commercially-related. Do you provide or collect data and report it, so it can be seen whether there are changes more or less over time and different areas and newly emerging issues and things like that?*

**Mr FORD** - *Yes, we do look at our complaints. We look on an annual basis where our complaints are coming from. We look to see what has changed. It can be the change of a few individuals.*

*The number of complaints two-and-a-half years ago against Nyrstar went through the roof and are still reasonably high. That was because one individual who had moved to Lutana was aggrieved by the noise of Nyrstar. We are tracking those complaints.*

*The person who established their glamping business at Beauty Point starting getting complaints from their patrons when the Bell Bay industrial site went up.*

*We respond to complaints. If you look at the aquaculture industry and back to what we are talking about, over a number of years we have had complaints about particular activities. The operation of the Ronja Huon vessel when it first came to Tasmania - there was no power source available on the Port Huon Wharf. It took them some months to get a dedicated power source, so it was running its generators at night to keep power to the vessel and the constant generator noise was causing problems.*

*We have had complaints about a number of the operating sites. We have had complaints about both companies in the Channel. Uses of forklifts at night, loading vessels at night - they can be episodic so you can have one or two individuals in an area who will complain, but not broadscale complaining.*

*If you look at the noise in the north of the Channel or the assertions about noise coming from the Tassal's operation of the Aqua Spa vessel, we have a couple of people complaining to us about what is happening. We do not have tens or lots of people. We do not have a community complaining. It is always a challenge around who complains and why because some people will accept it, some will tolerate it and some are highly impacted by it at an individual level. When we get complaints information around what is happening at a particular time, we will follow it up with the company to try to ascertain: was there a problem; what was the noise; what is the characterisation; can they do something about it to try to minimise the impact?*

**CHAIR** - *In terms of other than having a decibel limit, are there other times you might say you cannot do that particular activity at night-time anymore, regardless of the decibel measure?*

**Mr FORD** - *If it came to a view that said this particular activity is not compatible with operation at night, can we impose controls? Yes, we can. How we get to those is going to be a process we have to step through. One of the challenges we have as a state is we have very few noise experts in this state and very limited.*

...

**Mr FORD** - *We have two or three decent consultants and ourselves, and our noise consultant's about to retire. Noise modelling and noise monitoring is a real physical science we in this state really struggle to have the capacity to do on a significant basis. We do it well with a very small amount of resources and the companies are the same. We ask the companies to go and do some noise monitoring and to even find anyone who can actually do it or the modelling, there are very few experts in the state that can do this. One of the challenges over the last six months is no-one has been able to bring anybody in from interstate as well.<sup>307</sup>*

**Mr VALENTINE** - *What weight would you put on whether it is actually interrupting tourism, for instance? ... Do you take these sorts of things into account as well? Or is it simply that you stick to a metric of some sort and go with that?*

**Mr FORD** - *It becomes very difficult from an EPA point of view when we start to pick one commercial business and favour it over another commercial business.*

**Mr VALENTINE** - *So the economics do not come into it?*

**Mr FORD** - *You go back to our glamping question. That operation knew that there was a heavy industry at Bell Bay, yet they expected some relief because they were setting up a high-value tourism industry.*

*In society there is a real challenge about unpacking: who came first and who has some proprietary right over impacting on - in this case, a noise space, the air shed associated with noise, and who makes those decisions and who makes decisions about whose business should prosper and whose should not.*

**CHAIR** - *Who does make those decisions?*

**Mr FORD** - *Ultimately, that is what governments are for.<sup>308</sup>*

In a subsequent hearing, Mr Ford responded to questions on noise and the expanding industry:

---

<sup>307</sup> Wes Ford, EPA, *Transcript of Evidence*, 8 September 2020, p. 76-7.

<sup>308</sup> Wes Ford, EPA, *Transcript of Evidence*, 8<sup>th</sup> September 2020, pp. 77-8.

**CHAIR** - Say, in terms of the operations of a fish farm in an area which may have been of a certain size when it first went through an approval process and was put in place, and people in that vicinity may have come to terms with that. But then, there is growth, development. Something that may have happened one night a week is now happening four or five nights a week. In putting some constraints around that or assisting with public amenity to be acceptable - and again it might not come back to pure decibel levels. It might be either that activity is not appropriate at that time of day or it is only appropriate two nights a week. Have you implemented those sorts of controls in any situations where you have moderated the activity because it might have changed over time or increased over time? Not just about decibels but about frequency or presence.

**Mr FORD** - Not in a statutory licensed-condition sense. We have sought to negotiate with companies to make changes to their behaviour to reduce an impact. The challenge in those sorts of things is: How long do they last? Or what happens when the next group of people moves in and has a different view of the world? How do you find the balance? The challenge for us in that process is ultimately where you find balance.

I have to start with a position that says that a government has authorised this activity to occur. So my role is to find balance in terms of the environmental management, recognising that not everyone will get what they need or want out of that process. People will be disaffected by a business, whether it is the salmon industry or any other industry in Tasmania. The challenge as a regulator is how you find that balance and in what circumstances.

If you take the Aqua Spa operating at the north of Bruny - its recent introduction has had a number of complaints about its operations. How many nights a year should that vessel be allowed to operate in that vicinity? If it were to operate 35 nights a year out of 365 and cause impact, is that acceptable when it is not operating 90 per cent of the year?

**CHAIR** - Looking at that example, there were already fish-farming activities there prior to the Aqua Spa coming, which would have gone through a process of approval. Was there an additional process whereby the Aqua Spa was added to that business environment and farming activity, during which there would have been community consultation, opportunity for input, communication about expected activity and noise levels with the local community? Or did that just get added into the mix as a forgone conclusion?

**Mr FORD** - There is no approval process required for the Aqua Spa, or the Ronja Huon or the Ronja Storm to operate as vessels.

As a consequence of those three vessels operating in the channel area, there is now less towing of pens and there is less noise. There are less vessel movements for the medium-size vessels. Part of both companies' strategy in using those large vessels is that you need to retire other activity. The whole purpose of bringing them in was to replace activity. They used to have to tow pens of water to bathe the fish in. By and



*large that activity doesn't happen. It will have to happen, in Tassal's case. If Aqua Spa stops working, they need to be able to revert to their traditional methods bathing fish, which means they will go back to towing pens of water.*

*The challenge in these processes is there are trade-offs. In order to change a practice in one way, a new practice is introduced. That new practice may have a different noise characteristic than the old practice; it may be less noisy. Certainly, the two large vessels, the Aqua Spa and the Ronja Storm, were both built with very high noise specifications.*

**Mr VALENTINE** - *Noise reduction.*

**Mr FORD** - *Noise reduction. Inherently those vessels are quieter than many other similar vessels worldwide.*

*That was because both companies came to talk to us beforehand. We said that you have to build these things in a manner that the noise from the vessels when they are operating within close proximity to a premises is going to be under 35 decibels. To have a vessel that is going to be measurably noisier means that you are automatically setting yourself up from a regulatory failure point of view. If the monitoring data was showing that these vessels were operating at 40 dba at the residence, the companies are going to have a much more significant regulatory hurdle to get over.*

*One of the challenges we have at the moment is, because they operate periodically, trying to align getting the data, when we have relatively small sets and relatively small capacity in the state to do the monitoring. You have to be there when the vessel is there. With noise monitoring, you have to monitor for two or three or four weeks continuously and you have to have people there to be able to hear it. We are requiring the companies to look at their monitoring. They are undertaking noise monitoring so that we can validate the actual noise footprint, particularly again at North Bruny. What is the noise footprint at North Bruny at two o'clock in the morning on different occasions? What the weather is doing and so on? So we can say, what it is in terms of a noise level.*

**Mr VALENTINE** - *You would look at the constancy of the noise as well.*

**Mr FORD** - *Yes. It's not just the loudness of the noise. It is the frequency's physiology. A lower frequency noise will vibrate your windows. You may not even hear it, but you feel it lying in bed, and you feel your windows shuddering. You may not even hear the noise. That obviously annoys people.*

*Higher frequency noise. Typically, if a bearing fails in something, you will get a high-pitched squealing noise.*

**CHAIR** - *To pick up on your monitoring. There is an active concern in that area, presently, as you would be well aware, and we have heard through submissions. Why aren't you effectively monitoring there at the moment? So you can say, yes there is*

a problem, and here is what needs to happen. Or no, there is not a problem. Everyone needs to calm down.

**Mr FORD** - Yes, it is our intent to monitor when they start again. I had spoken to one of the complainants about undertaking monitoring, and within about three days the activity had ceased, because my understanding is that there are currently no fish at the Shepherds lease, so they've fallowed the lease. That means there is limited noise from compressors - they run some things, even though they have no fish there - but the Aqua Spa is not there, so there's no point racing out and putting in noise-monitoring equipment for two or three weeks when the vessels are not going to be there.

We need to align our monitoring activities to when we know when the next period of activity is going to occur, because we have to get real data.

**CHAIR** - You have that plan in place, for when they resume activity. When was the last time you monitored in that area?

**Mr FORD** - In my time in the EPA, we haven't monitored in that particular area.

**CHAIR** - That is a period of how many years?

**Mr FORD** - Five-and-a-half years. I am not aware there was any substantive monitoring in the north of Bruny for more than a decade.

**CHAIR** - Across that time, you would have been receiving complaints about noise?

**Mr FORD** - They have come and gone. Over the course of five-and-a-half years we've received a number of complaints from a number of individuals, and they tend to be very episodic, particularly with what's happening at the Shepherds lease. They have changed since the Simmons lease was recommissioned. This is one of the challenges -

**Ms FORREST** - The complaints have changed, or the activities?

**Mr FORD** - The number of complaints has increased, because now you have two leases on that -

**CHAIR** - Additional activity?

**Mr FORD** - Yes.

**CHAIR** - When did that begin?

**Mr FORD** - About 18 months ago. I think they re-established -

**CHAIR** - Complaints have been fairly regularly received from that area for the past 18 months?

**Mr FORD** - Tassal has had far more complaints than we've had, because a number of individuals on North Bruny have spent a number of years trying to negotiate outcomes with Tassal, so they concluded that -

**Mr VALENTINE** - Directly with the company?

**Mr FORD** - Yes. They're more likely to get a positive response by positively engaging with the company, rather than just ringing us - whereas in the Port Huon area for a time, particularly when the Ronja Huon arrived, we got a spike in complaints around the Ronja Huon, but that's settled down again.

The challenge in trying to deal with those sorts of things is unravelling how many individuals, where they're located, and what might be driving any particular complaint on any given night. Why does one person complain, and the other 20 or 50 people who live nearby not complain? We don't know the answers to those sorts of things.

**Mr VALENTINE** - Do you consult with them when you're setting up where you measure?

**Mr FORD** - We have engaged with certain individuals about where we set up equipment. This equipment is expensive, and we tend to want to set it up somewhere where we know someone's going to want it to be there.

**Ms FORREST** - How big is the unit?

**Mr FORD** - It's a few boxes, the size of a briefcase.

**Ms FORREST** - It's not overly intrusive in itself?

**Mr FORD** - No, but it's portable and attractive - so going and doing clandestine noise monitoring possibly will result in the equipment disappearing if somebody doesn't want it to be there. Tasmania is not a very big place. When people turn up to start noise monitoring, everyone in the community knows about it. It is one of those things that has to be done openly and transparently with the support of the community, because if we need to put the equipment on someone's place -

**Ms FORREST** - Is that a barrier, Wes? When you look at some of these places, for example in the Huon, there are groups of people who are really supportive and don't want anything to interrupt the activities of the industry because of the employment it creates and so on, and then you have others who are vehemently opposed to it.

**Mr FORD** - At a general level, some of those things are barriers to any government monitoring - it doesn't matter whether it's this sort of monitoring. In a previous life, when I worked in water, we had similar challenges with establishing water monitoring or groundwater monitoring. Some people were reluctant to have the government traipsing over their property and coming in collecting data for a variety of reasons. Some people may have been pressured, some people may have just not wanted us there.

*We are looking at our air monitoring arrangements in the state. We have many of those air monitoring arrangements on private land, where we have entered into some specific -*

**Ms FORREST** - *Has this discontent, or differing views if you like, meant that you haven't been able to undertake monitoring in response?*

**Mr FORD** - *No, it has not impeded us in any way.*

**CHAIR** - *Just to clarify, for the past 18 months or so, there have been more complaints around North Bruny because of the two sites operating. The EPA hasn't done any monitoring during that time?*

**Mr FORD** - *No.*

**CHAIR** - *You pointed to the fact that the local community were perhaps engaging more directly with the company with their complaints and interactions, rather than with the EPA. It would appear this hasn't delivered an outcome they are happy with. Is it a preferable course to deal directly with the EPA, then? Would that result in a more definite outcome in terms of a commitment to monitoring, and then resolving?*

**Mr FORD** - *Not necessarily. We need the information, and our first response will be to work with the companies to try to understand what the problem is, and what has caused the problem.*

**CHAIR** - *Do the companies need to tell you when complaints have been made to them?*

**Mr FORD** - *The companies are required to keep complaints registers; that is one of the general licence conditions. It doesn't matter whether it's TasWater, Nyrstar, Tassal or Huon Aquaculture. How well they do, and how valuable that information is, is variable.*

*From my engagement with both Tassal and Huon Aquaculture, I think they do have pretty good complaints registers for noise complaints - in Tassal's case, in the north of Bruny, and in Huon Aquaculture's case, all around Port Huon. They have been dealing with these issues, so they do have good records of them.*

**CHAIR** - *Having to share those records with you, we can effectively regard people having complained directly to the company to also have complained to the EPA, because you eventually receive that information through the complaints register - so, the EPA has been aware of the level of complaint in that area for some time. What stopped you monitoring to actually ascertain the validity of the complaints?*

**Mr FORD** - *First of all, you need to have a capacity to respond. Take North Bruny, where activity has increased since about January with the Aqua Spa. In terms of equipment, skills and individuals, we are very limited in our capacity - and overlay that with COVID-19, we have not been able to work in the field for a whole variety of reasons. We have not been down monitoring that site. That is just the reality.*

**Mr VALENTINE** - In the absence of COVID-19, you would be doing those measurements? It wouldn't be the company doing those measurements and giving them back to you?

**Mr FORD** - It would be both, because long-term monitoring has to be undertaken by the companies.

*If the Government wants us to do long-term monitoring programs of anything - whether it's noise, water quality, air quality - it has to be resourced.*

*If we turn to air for a minute, we run the smoke network that monitors air quality in the state. We have about 37 air monitoring stations. In order to resource and manage that - because there is a national commitment required under the national environmental protection measure for air, for monitoring smoke or air impact - it is our most intensive monitoring activity. It's very resource intensive, so you replicate that across noise, water and all sorts of other things, and our workload, our resourcing, would go up by 20 to 30 staff, plus all the equipment. At the end of the day we do what we can with the resources we have and balance those resources around the state. We work on a basis of trying to deal with noise as a complaints-based issue.*

**Mr VALENTINE** - Do you have the arrangement where industry contributes financial resources as opposed to them doing the measurement. You are actually undertaking the measuring, but it is being contributed to by industry.

**Mr FORD** - If you look at entire state of Tasmania, we regulate not only the salmon industry - we just did some analysis for the EPA board at its last meeting and we recover less than 80 per cent of our direct costs of management, let alone the indirect costs of management. We recover less than 80 per cent of the direct costs of management from industry in Tasmania for environmental regulation.

*You overlay that and look at salmon from an environmental point [of] view where recovery is closer to a 100 per cent. From an environmental point of view, we recover more from salmon than we do from any other industry.*

**CHAIR** - Yet you do not have the resources available to be able to fully respond necessarily to the complaints made or the situations being faced out there.

**Mr FORD** - That is a general challenge with all government services. There would not be a government service in this state that would not say they do not have adequate resources to do the work required.

*I have a document if you would like me to table that summarises our complaints against the industry from 2016 to 2019. This provides a summary of all complaints which were received associated with aquaculture industry if you are interested.*

**CHAIR** - Does it also indicate the responses made?

**Mr FORD** - A bit of yes and no in that. It talks about what the complaints are. In tabling this it has private names on it, so if you were going to publish, I would request you redact the name column of the complainant.

**CHAIR** - Absolutely, we will take that into consideration we will not put private information into the public domain.

**Mr FORD** - There is a bit of both in those sorts of things about how we resolve. There is some summary on how we have resolved some of these things and a list of the complaints and a summary of them. Out of session if you want to follow up on any written questions about this, I am happy to also provide a response in writing.

**Mr VALENTINE** - For the record, the cooperation you do or do not get from the industry when it comes to these sorts of things?

**Mr FORD** - By and large it is positive generally. Their staff do not like getting calls at 3 o'clock in the morning saying the thing is noisy again, particularly if it is something they can immediately address, then they respond generally positively. If it is the mere presence of a vessel being there, it is a bit harder for them to respond. Regarding the Aqua Spa, if there was a discussion about a reasonable sharing effectively in how long is the Aqua Spa allowed to operate at Shepherds over the course of a year - I do not know the answer to the question, but is 35 days reasonable or unreasonable. The people being impacted by it may say it is unreasonable, Tassal might say 35 days is what we need.

**CHAIR** - The people impacted might quite like to be asked and be participating in that conversation. Would I be right in thinking they have not had an opportunity to participate in such a conversation about what might be or not be acceptable?

**Mr FORD** - I would respond to say there are different views about the engagements between the companies and the private individuals. Different people have different views about how those engagements have been both through time and directly associated with Aqua Spa.

**CHAIR** - Potentially, then would that point to an appropriateness to that conversation and negotiation being facilitated through the EPA or through a government agency such that it can be had in an accountable way, can be well resolved, and arrive somewhere where everyone can -

**Mr VALENTINE** - Live with it.

**CHAIR** - That is right, and feel they have been involved in that process in an equitable way. That also has not occurred to date?

**Mr FORD** - It has occurred spasmodically around particular issues, but it is not resulted in a defined licence condition. We would take a view these sorts of things should be able to be managed by agreement and not have to be codified into a licence condition.

*The underlying process in that would be if a company reaches an agreement with a community and that company fails to honour the agreement, that might be a trigger to say there needs to be a condition put on that licence in order to bind the company to what it is committed to.*

**CHAIR** - *How would that trigger be pulled? For example, we may look to the situation in that area at the moment, and it may be the community feels those interactions and negotiations have broken down to such an extent they are not going to resolve things in a fruitful way. Has that trigger been pulled at North Bruny and should there then be a process facilitated that looks at ultimately licence conditions?*

**Mr FORD** - *What might seem like a cop-out answer, one answer might be, well, they are the sorts of things you would actually start to look at codifying in the Standard, to actually go back to that question around what is the certainty, what is the expectation. So, when (a) happens, (b) is the response.*

**CHAIR** - *Your expectation is that it would be something relating in that sense to noise in the standard.*

**Mr FORD** - *I would be looking at dealing with those sorts of things in a standard that actually gives a community a better understanding as to what they might be able to do and what the consequences might be.*

*Also, from the company's point of view, it starts to give them a conversation around saying, 'Well, how are we going to manage this?'. I would reasonably hope and start to require the companies to start looking at things like operational management plans around particular leases.*

*Trying to work out does this particular lease have a particular set of characteristics that says we should not be operating on this lease, or we will not operate in this lease area between x and y sort of thing.*

*The companies need to work those sorts of things out, because us telling them a fixed set of hours becomes a last resort.<sup>309</sup>*

**Findings:**

165. Concerns were raised regarding noise from fin fish operations and its impact on community amenity, health and well-being.
166. Noise generated by certain fin fish operations causes significant distress and has a negative impact on the health and well-being of some community members.

<sup>309</sup> Wes Ford, EPA, *Transcript of Evidence*, 8 September 2020, pp. 71-85.

167. In relation to noise, the fin fish farming industry is required to operate within the regulatory framework legislated by Government, monitored and enforced by the EPA.
168. While decibel levels are set in regulation, the impact of noise may also be related to its tone, frequency, regularity and time of occurrence which are not regulated.
169. The EPA reports it does little monitoring of noise generated by fin fish farming operations in response to complaints and would require additional resources to increase its monitoring function.
170. There are various avenues for making fin fish farming noise complaints, however there is no central collation or public reporting of those complaints.
171. In response to complaints, fin fish farming operators report they have made efforts to reduce noise through adjustments to operations and improvements to equipment.
172. The EPA regards matters relating to noise could be further codified in the Environmental Standard currently being developed.

**Recommendation 58**

Establish a central point of contact for information, complaints, and feedback in relation to noise associated with the fin fish farming industry.

**Recommendation 59**

Increase the funding of the EPA to ensure it has the capacity to undertake comprehensive monitoring, assessment and enforcement of noise impact and noise complaints in relation to fin fish operations.

**Recommendation 60**

Set and enforce site-specific regulated limits in relation to noise generated by fin fish operations and include, where relevant, decibel level, tone, frequency, regularity and time of occurrence.



## Lights

A number of submissions from community members expressed concern regarding the impacts of lights from fin fish farming operations.<sup>310</sup>

Dave Nelson:

*At night there are many lights and sometimes enormous bright lights are used as well as flashing lights from time to time.*<sup>311</sup>

Rod Hartvigsen:

*Light pollution is generally intense. Huon Aquaculture generally harvest at night and having bright lights shone around the channel, onto houses etc should be controlled.*<sup>312</sup>

Helen Stone:

*Tassal has also in recent times, introduced bright lighting during the night hours, which presents light pollution to a previously pleasant dark vista. The lights are driven by generators, the noise from which drifts across the bay in a low drone all night long. Such light and noise pollution overnight would not be allowed on land adjacent to a residential area, so should not be allowed on the water! Local residents were never notified or even asked if they would object to this activity. The local quarry would not be allowed to operate with this level of light and noise overnight!*<sup>313</sup>

Helen Hussey:

*I am frequently woken by lights and noise of vessels servicing the fish farms around the corner of Bruny Island. The lights shine directly into my bedroom. I have been emailing Pene Snashall from Huon regularly as the large vessels pass and wake me at all times during the night. Mostly the vessels are Huon's, very rarely they are not. I have retained many emails with dates and times of unreasonable hours...*<sup>314</sup>

Rebecca Howarth:

*Residents of the Tasman Peninsula are suffering regularly with noise and light pollution, particularly in Nubeena and White Beach. Some renters are reconsidering buying in the region because of the constant noise, and some residents are considering selling their homes and moving away. Some complain of lights every*

---

<sup>310</sup> For example: *Submissions #2, 5, 11, 19, 20, 23, 41, 43, 52, 84, 102, 118, 133, 176, 204, 220.*

<sup>311</sup> Dave Nelson, 2019, *Submission #204*, p. 1.

<sup>312</sup> Rod Hartvigsen, 2019, *Submission #171*, p. 1.

<sup>313</sup> Helen Stone, 2019, *Submission # 133*, p. 1.

<sup>314</sup> Helen Hussey, 2019, *Submission #102*, p. 1.

*night and a low drone noise that never goes away. If the Storm Bay expansions goes ahead, I dread to think of the incessant issues of noise and light we will face.*<sup>315</sup>

Simon Allston and Dr Janeil Hall:

*The greatest disappointment about the Huon Aquaculture development is the intrusion into what we regard as really being a wilderness area. This may seem like hyperbole, but until then Storm Bay had very little boat traffic, mainly because of its challenging conditions. And there was a wonderfully wild view out across the bay from the crest of the road between here and Dennes Point, which is now marred by the pens and, probably worse, lights on and around the pens at night, particularly the flashing of navigational lights close by, at the edge of the lease.*<sup>316</sup>

John Redgrove:

*I am aware that Huon Aquaculture recently, although unsuccessfully, attempted to reduce the visual impact of their work lights at Police Point; however, the glare of these lights can still be seen across the river throughout the night and is most annoying especially to residents who live by the river. Yet another reminder of what has become an industrial zone from what was once an idyllic and pristine place of beauty that encouraged residents to live here.*<sup>317</sup>

Susan Wardle:

*I am also concerned that the lights that are on for 24 hours a day and the effect it has on local wildlife and birds, not to mention residents who are woken by extremely strong beams of light which causes distress and fatigue.*<sup>318</sup>

Bob Brown:

*I am a photographer but can take no sellable photographs of the natural beauty of this riverine region because of the dominant intrusion of fish farming infrastructure. This includes at night when the lights from fish farming make useful photographing of the Aurura (sic) Australis, for example, impossible. Every fish farm emplacement removes that beautiful site from Tasmania's fame for its natural scenery.*<sup>319</sup>

Similar concerns were reinforced by representative community groups through submissions and the public hearing process.

Tasman Peninsula Marine Protection:

*Light and noise from the farms and associated infrastructure and boats are not only disturbing for the community who chose to live in this rural area to avoid these*

---

<sup>315</sup> Rebecca Howarth, 2019, Submission #84, p. 4.

<sup>316</sup> Allston and Dr Hall, 2019, Submission #43, p. 1.

<sup>317</sup> John Redgrove, 2019, Submission # 5, p. 3.

<sup>318</sup> Susan Wardle, 2019, Submission #20, p. 2.

<sup>319</sup> Bob Brown, 2019, Submission #2, p. 1.

*industrial pollutants, but affect tourist potential at many sites and property values.*

320

Neighbors of Fish Farming (NOFF):

*Of all the concerns that NOFF committee hears about, the most frequent are for light, noise, and marine debris and waterfront fouling. Central to this is the lack of a single central point of contact for reporting problems (especially urgent issues), requesting information, and obtaining feedback.*

*These issues have been ignored for far too long and have caused considerable distress to many residents in the Channel and Huon regions... They must be addressed with urgency, and we have suggested ways of doing so...<sup>321</sup>*

...

*As with noise, external lights at night such as those experienced by residents in communities with very low ambient light, such as Eggs and Bacon Bay, can have long-term negative health effects. Many residents in the Huon and Channel purchased their properties prior to the rapid expansion of the fish farm industry. Their location choice was premised on the peace and tranquility of the environs and the 'deep peace' of the region. Even newcomers have reported being astonished and have sometimes been driven away by the intrusion of noise and night-time light into their homes.<sup>322</sup>*

Peter George, Neighbours of Fish Farming:

*I have had conversations where people express a general sense of concern that tourism is going to suffer as a result of fish farm expansion and their operations and noise. I know someone who runs a bed and breakfast who says that people can get up in their B&B house at night to go to the toilet and they don't need to turn the lights on because the Huon Aquaculture boat is out there with its very bright lights.*

...

*Noise and light is the main component of complaint for anyone who lives, as you heard from the Bruny Island people, near the fish farms. When I say 'near,' I talk about within 4 to 5 kilometres. As you would all know, the noise of a generator or an outboard motor carries very, very far across the water, as does light. Go down to Eggs and Bacon Bay or Randall's Bay and you will see there is plenty of light at night-time. It means that when you sit outside having a barbecue, as I do with friends, on a nice quiet night, what you hear is the very deep thrum of generators and lights in the sky which, as I said, light up a house even at night-time.<sup>323</sup>*

---

<sup>320</sup> Tasman Peninsula Marine Protection, 2019, *Submission # 89*, p. 2.

<sup>321</sup> Neighbours of Fish Farming, 2019, *Submission #41*, p. 4.

<sup>322</sup> Neighbours of Fish Farming, 2019, *Submission #41*, p. 17.

<sup>323</sup> Peter George, NOFF, *Transcript of Evidence*, 11 February 2020, p. 78.

Alex Matysek, Bruny Sustainable Aquaculture:

*My group is north Bruny-centric and I am the junior member of this alliance because I am north Bruny as opposed to all of Bruny; however, we are probably at the epicentre of the industry's expansion in that the Bruny group is surrounded by water, we are centred on Dennes Point, the northernmost point of Bruny, and we suffer the majority of the problems the industry can deliver for the community's benefits. That is largely associated with the industry's massive traffic and noise and light pollution that we have to suffer as foreshore communities, and I remind you that all Bruny's communities are foreshore communities and therefore can suffer from the issues that come with massive industrialisation, especially in our waterways.<sup>324</sup>*

Industry operators provided information regarding how they respond to community concerns such as noise and light.

Pene Snashall, Huon Aquaculture described the company's approach:

*Myself, my team, we have regular conversations, meetings; I go down and have site meetings in terms of people's homes to talk to them about some of the issues they have about noise and lights. The primary issue is that we always operate within our regulatory framework. We always operate within what our EPA licence is or council permit conditions in terms of noise and those sorts of things.*

*Having said that, there has also been instances where we have been able to tweak our operations to make it more compatible with being on a public waterway. That is the other thing you always have to think about - it is a public waterway. Last year we had a discussion with some Dennes Point residents. They were concerned about the lights from the Ronja Huon as it was going past Tinderbox/Dennes Point. We were able to talk to the skippers and they have come up with a standard operating procedure which is essentially anything other than non-essential navigation lights when they go through a part of the waterway. We do that, we have done it, but I will stress we always operate within our regulatory framework. I have had conversations with people, many residents, who are frustrated. I get that. My point is we are not in breach of the requirements placed on us, and we are doing an enormous amount of work through the introduction of vessels like the Ronjas, the fact that we are offshore, all those other things, to minimise the impact that we have socially.<sup>325</sup>*

Angela Williamson, Senior Manager Responsible Business, Tassal described the company's approach:

*... what drives us in our engagement is our third-party accreditations, who we are and the communities we operate within.*

*We have additional steps like Good Neighbour, concepts that sit around what we do in addition to the regulatory setting just because in 30 years of operating in some of*

---

<sup>324</sup> Alex Matysek, Bruny Sustainable Aquaculture, *Transcript of Evidence*, 11 February 2020, p. 59.

<sup>325</sup> Pene Snashall, *Transcript of Evidence*, 21 February 2021, p. 84.

*these areas, we have come to know the neighbours quite well. We acknowledge that new people come on board and that we have to establish new relationships, but we have particular areas where we are able to respond in real time to a query. Someone might text me and say, 'Hey, I've got a light going in here.' I can say, 'Turn a boat around, do a this, or that', and it's done. They're very grateful and thankful, and that allows us to do that trial with new additional equipment or infrastructure.<sup>326</sup>*

Dr Dom O'Brien, recently retired marine biologist who had worked in the industry, also discussed issues around noise and light:

*I have been involved with noise and light in the past. I haven't for the last two or three years. It's an area that you have to closely work with the community about. If there any ways, reasonably, that as a company - this is how I've understood Huon has worked at this - then you try to make corrections to whatever systems you have to try to decrease the noise, the lights, anything that might be disturbing people. Especially out of work hours' time.*

*There's a great effort being made in that regard. The only way that you can really step through that process is to do as much community engagement as you can. But there has to be a stage that you have to accept.<sup>327</sup>*

Wes Ford, Director EPA, when questioned in relation to the inclusion of light pollution into the Environmental Standard, responded:

*Lights are a bit more problematic in terms of how to actually regulate it. Anyone who lives on a busy road or something and gets lights of cars, trucks and so on would understand it is not an easy thing to be able to regulate.<sup>328</sup>*

---

<sup>326</sup> Angela Williamson, *Transcript of Evidence*, 30 September 2020, p. 27.

<sup>327</sup> Dr Dom O'Brien, *Transcript of Evidence*, 20 October 2020, p. 19.

<sup>328</sup> Wes Ford, EPA, *Transcript of Evidence*, 8 September 2020, pp. 68-9.

**Findings:**

173. Concerns were raised regarding lights from fin fish farming operations and its impact on community well-being, wildlife and property values.
174. In response to complaints regarding lights, fin fish farming operators report they have made efforts to address the issues.
175. The EPA identified that lighting is difficult to regulate and it is not clear whether lights will be included in the Environmental Standard currently being developed.

**Recommendation 61**

Establish a central point of contact for information, complaints, and feedback in relation to light associated with the fin fish farming industry.

**Recommendation 62**

Consider the inclusion of the regulation of light in the Environmental Standard and setting site-specific conditions on the use of lights in fin fish farming operations.

**Recommendation 63**

Increase the funding of the EPA to ensure it has the capacity to undertake assessment of complaints regarding the use of lights in fin fish farming operations.

## Seals

A number of submissions raised concern regarding the impact of the Industry on seals.

Dr Dain Bolwell and Dr Lisa Gershwin stated:

*Salmon pens are strong attractors of native predators such as seals. While these protected mammals were formerly shot in Tasmania, beginning in the 1990s this protected species was instead caught and transported overland to remote parts of the state, tagged and released by the state primary industry and environment department (Barraclough 2006). This expensive practice ceased in 2017 (DPIPWE 2017, p.3) and other ways of reducing seal impact have been implemented, especially better-designed stronger pens, which were earlier regarded as impractical. These double-walled pens nevertheless have the downside of double the cleaning and hence debris, as well as reduced water flow (Denholm 2016).<sup>329</sup>*

In relation to seals and their management, the WWF submission stated:

*The ongoing issue with seal interaction and management of this interaction has not been adequately resolved. Given that seals will naturally look for the weakest point in the industry's net to seek to feed on salmon, clearly an industry wide approach it (sic) needed.*

*All of industry have had sufficient time now to implement verifiable seal proof nets in all areas where seal interactions exist. Government should now mandate that all of industry to have introduced these nets by June 2020.*

*Further Government should commission an independent review of all 'seal management' devices & processes. This review should be used to identify and abolish the use of any devices which use violent methods or have the ability to cause harm. Government should also abandon seal relocation activities as this merely reallocates the issue to other industries and is at best a short-term fix.<sup>330</sup>*

In relation to the management of seals, the Tasmanian Conservation Trust submission stated:

*The fin fish farming industry has been far too slow to implement proven methods for avoiding inter actions between seals and their work force and farmed salmon and other fin fish. In 2018 the state government introduced the 'Seal Management Framework' in response to criticism of the massive increase in translocations and ongoing euthanasia of seals. However, the framework, which we note did not get released for public comment and can be changed by government at any time, transitioned to methods that are arguably just as bad.*  
<https://dPIPWE.tas.gov.au/Documents/Seal%20Management%20Framework.pdf>

---

<sup>329</sup> Dr Dain Bolwell and Dr Lisa-ann Gershwin, 2019, *Submission # 18*, pp. 6-7.

<sup>330</sup> WWF, 2019, *Submission #94*, pp. 23-4.

*The industry currently uses bean bag guns and fire crackers as seal deterrents and can capture, corral and release seals into nearby waterways. These are unjustifiable and may be very cruel to seals. The industry can still obtain approval to have seals euthanized in [a] circumstance that is not justifiable.*

*The problem of seals being attracted to and eating salmon and other penned fin fish can largely be addressed by using pen systems that have been in use around the world for many years and are currently in use in some Tasmanian farms. Seals are simply suffering because companies want to delay spending money to fix the problem and the government allows them to do so.*

*While there are a number of variations of fish pen design, the key principle involves building an inner and outer net, the inner net stopping salmon from escaping and the outer net stopping seals from entering. It is vital that nets are kept tensioned to prevent seals from pressing against the nets and catching or injuring salmon. Nets will form holes for a range of reasons, not just related to seals, and must be regularly checked and repaired. In addition to pen design and maintenance fish farm managers must maintain procedures to minimize the release of salmon when they are moving them from pens. While these measures cannot guarantee there will be no problems, it is sure to reduce the problem to negligible levels. Seals do not instinctively know that salmon and other farmed fish are a food source, they must learn this. Over time, as seals are born and raised that do not have easy access to farmed salmon, fewer seals will be attracted to fish farms and the problem should largely disappear.*

*The other major problem is the interaction between seals and fish farm workers. Again, the solution is a combination of infrastructure to defend workers, good farm/fish management and use of technology to replace human labor for more risky tasks. Seals need places to haul out of the water and fish farm pens are ideal for them. Some Tasmanian farms have learnt that hauling out can easily be prevented by putting a simple wire barrier around the outside of the pens to act as a fence. Workers must also stop attracting seals by properly disposing of dead salmon and not throwing them into the water around farms. When in the water doing pen maintenance or other work, workers are unlikely to be at risk from seals and much of what is interpreted as threatening behavior is harmless. Farm workers need to learn to understand seal behavior and about how to behave around seals to limit provoking them. Increasingly, technology is being used to prevent workers needing to be in the water e.g. some companies in Tasmania use remote cameras to check for holes in nets.<sup>331</sup>*

The Marine Life Network submission stated:

*The recovery of seal numbers has led to growing numbers of interactions with seals. Large seals, especially males, can threaten injury to farm workers as well as causing damage to nets and stock. Relocation of 'problem' seals was attempted without great success, and recaptured seals were being killed in unknown numbers. Although we*

---

<sup>331</sup> Tasmanian Conservation Trust, 2019, *Submission #219*, pp. 7-9.



*have no updated information, it would appear that seal exclusion technology, sprays and firecrackers have reduced the need for shooting, but the issue tends not to be publicly discussed very often. Current statistics of seal deaths from entanglement and control measures are unknown to us.*<sup>332</sup>

A number of submissions from community members expressed a range of concerns regarding the attraction of seals to fish farms.<sup>333</sup>

Margaret Taylor stated:

*Fish farms are attractants for our local protected marine wild life. Seals will go to them for an easy meal. As the pressure and expansion grows incidents with seals are going to increase. The Industry has not provided an eco-sensitive solution.*<sup>334</sup>

Stephen Froelich stated:

*Another unmentioned issue is, - unquestionable- fish farms attract seals, and with them – large predators. A development that scale will undoubtedly attract more of them, which will impact on the recreational surfing beach at Roaring. It is one of Tasmania's most consistent surf beaches, and attracts lots of Tasmanian's, traveler's, competitions, even the Australian junior titles. Can anyone accept the threat of this renowned recreational beach due to regular shark sightings, warnings and attacks? Will Tassal be responsible for people getting attacked? Will we be able to sue them for the first eaten surfer/diver out there??*<sup>335</sup>

The Huon Aquaculture submission stated:

*Like all farming operations we work hard to keep both our fish as well as the local wildlife safe. We believe the solution to this is good barrier technology and our industry-leading Fortress Pens and nets protect seals and birds by restricting access to the pens above and below the water line.*

*Seals are one of the oceans natural inhabitants and we have a responsibility to minimise any impact we have on them. The best way to protect them and keep them safe is by preventing them from entering our pens in the first place. Seals are very intelligent and naturally curious. Before the Fortress Pens were implemented, the seals could see the fish through the net so it was commonplace for seals to climb up the above-water net wall to gain entry. They were also known to ram the nets in an attempt to bite fish swimming past as well as chew on nets to create holes (bear in mind that male seals can weigh upwards of 500kg!).*

...

---

<sup>332</sup> Marine Life Network, 2019, *Submission #22*, p. 8.

<sup>333</sup> For example: *Submission #10*, 20, 22, 23, 39, 50, 56, 133, 142, 144.

<sup>334</sup> Margaret Taylor, 2019, *Submission #50*, p. 2.

<sup>335</sup> Stephen Froelich, 2019, *Submission #56*, p. 2.

*We report all wildlife and predator interactions to relevant authorities and release regular updates via our Sustainability Dashboard. Huon also has a dedicated Wildlife team who actively work to minimise animal interactions on our farms. This team spend a lot of time checking equipment and pens making sure everything is maintained to a high standard.*

*Huon also works closely with the RSPCA in relation to protecting the welfare of both the stock and native wildlife. This relationship was instrumental in Huon ceasing to use some types of seal deterrents (bean bags and scare caps).*

*Our use of seal deterrents has significantly reduced in 2019. From January to 30 June 2019, we used zero bean bags, zero scare caps and our use of scare crackers was around 15 per cent of total industry usage. Details around deterrent use is publically available here: <https://dipwwe.tas.gov.au/Documents/RT1%20010%20-2019-0%20%28State%201%29>.*

*Our Fortress Pens were instrumental in us being able to cease relocating seals in August 2016, more than a year before the State Government banned the practice (September 2017).*

*We are also working with local company Taz Drone Solutions who have developed a drone with thermal imaging that enables us to safely identify seals on our leases. Seals like to haul out of the water onto any infrastructure available so one thing that we can do to minimise our interaction with them is to come up with innovative ways to spot them from a distance.<sup>336</sup>*

According to the Tassal submission:

*Wildlife management is important to us. Diversion of wildlife from their normal foraging behaviours creates increased risk to the welfare of our stock, our staff and the wildlife.*

*The foundation of our approach to wildlife management is exclusion through adoption of the ocean sanctuary pen concept and design and we have invested \$70 million to deliver this. Additionally, we employ specialised wildlife officers at each farming zone to implement all aspects of wildlife management according to internal policy and state legislation.<sup>337</sup>*

Tim Baker, Secretary, and Dr Kris Carlyon, Section Head Natural and Cultural Heritage Division DPIPWE, provided detail on the management of seals:

**Dr CARLYON** - *Under the seal management framework and the minimum requirements that sit underneath that companies have, it provides for access to seal deterrents to manage adverse interactions. When we're talking about interactions, we're talking about risk to farm workers and damage to stock and infrastructure. The framework provides options. We issue permits to the companies, to individual*

---

<sup>336</sup> Huon Aquaculture, 2019, *Submission #87*, p. 51.

<sup>337</sup> Tassal Group, 2019, *Submission #85*, p. 17.

employees, to use those deterrents following application, and we also provide training in the use of those deterrents. That covers animal welfare aspects, it covers how they use those deterrents in an appropriate manner.

...

**Dr CARLYON** - Currently there are a range of deterrents. One is what we call 'seal crackers'. It is a small explosive device that is thrown into the water and emits a loud sound and is designed to scare the animals away from that activity.

**Ms FORREST** - What's the debris left behind from that?

**Dr CARLYON** - They're biodegradable. They're made from a cardboard paper and sand, essentially, so they are biodegradable. There are two other deterrents - seal 'scare caps' and beanbag devices. The scare caps are like a 'bear scarer', fired from a rifle. It's a small dart and when it hits the animal a small charge goes off so it's another scare tactic - a loud noise, essentially.

**Ms FORREST** - And the little dart that hits the seal, that ends up in the marine environment?

**Dr CARLYON** - It does, yes.

**Ms FORREST** - And that's not biodegradable?

**Dr CARLYON** - As far as I'm aware no. It is something that we're looking into. Beanbags are the other one. So, basically the same as what is used on other wildlife around the world but also by police in riot situations, for example. Once again it's designed to scare that animal in the moment and deter it from interacting in that activity.

**Ms FORREST** - What are the beans made of?

**Dr CARLYON** - They are small bags of lead shot.

**Ms FORREST** - And lead stays in the environment?

**Dr CARLYON** - Yes. They're the three that are available. The companies will trial new options on occasion, so the companies are definitely looking at trialling new options that might be improved, less cost for example and humane for the animals.

**Ms FORREST** - High pressure water and things like that?

**Dr CARLYON** - That's one that is being trialled at the moment and it looks like it's going to have some positive results. We're really hoping that the trials will come up trumps there and we'll have another option to go with.

**Ms FORREST** - Clearly, getting a seal in the eye with a high-pressure jet could be quite harmful? This is not an approved use as yet, as I understand from what you said? How is that being managed to ensure animal welfare for the seals?

**Dr CARLYON** - *It's a good point. So that's one of the aspects we considered when we were assessing the applications to undertake the trial. That trial proposal went through DPIPWE's Animal Ethics Committee and received approval from that committee to go ahead, and that risk was identified and a range of mitigation measures put in place to avoid that happening. There were conditions on the strength of the water stream. A vet had to be present and observing. Video was taken during the trial, for example. A whole bunch of checks in place to try to make sure that didn't happen. One of the points of the trial is to demonstrate that this is safe and effective for use.*

*Any new deterrent goes through that same process, and ideally with animal ethics approval in place as an additional check.*

...

**Dr CARLYON** - *... As far as deterrent usage goes, companies under the seal management framework are required to provide monthly returns on deterrent usage. After every usage event - it's not necessarily every deployment of a device, but if they were deterring seals, for example, during a bathing operation they might deploy five crackers - that would go as a line item on their return sheet and we receive them every month from each company.*

**Mr VALENTINE** - *It surprises me that lead shot would be used. How would that ever be considered to be environmentally-friendly? It seems an odd thing to include in a trial?*

**Mr BAKER** - *I would say to be clear it's not a trial. It's been a management technique for quite some time - probably 10 years or more. It's one of the options available. I guess the point is that Kris hasn't mentioned that there is an escalation process, isn't there, Kris, in how on-farm the companies under the framework are required to use the deterrent. Do you want to talk about that briefly?*

**Dr CARLYON** - *Yes. I guess when we are talking to the farms - and they are very across this as well for good reason - is that deterrents are the next step above exclusion. When we are talking about managing seal interactions, or managing wildlife interactions in general, those exclusion measures, so the pen design essentially, is the number-one best option.*

*So, you get your exclusion measures right, your deterrent usage is going to go down. You're always going to need access to some sort of deterrents, these are really smart animals. You put in place an exclusion measure that excludes it here, it's going to target and try out something else.*

**Ms FORREST** - *They go to the next company and see if they've implemented it.*

**Dr CARLYON** - *You're absolutely right. When one company gets ahead of the game perhaps another company sees more seal pressure. It's definitely something we've seen.*

**CHAIR** - *To follow up on the monthly reporting that you talked about that comes through. Is that then on the data portal? ...*

**Mr WOODS** - *No.*

**Mr BAKER** - *It is on the company's website.*

...

**Ms FORREST** - *...Can you give me an update on what the relocation of seals framework or practice is? What is allowable, how it is done if it is done, what was the situation with that particular incident?*

...

**Dr CARLYON** - *Currently that's an easy question to answer. Relocation is no longer provided for under the framework. Relocation was phased out in 2017. Companies are no longer trapping and relocating seals.*

...

**Dr CARLYON** - *... The framework allows relocation on a very specific basis if approved by DPIPWE. It provides a little window there for relocation if there is a certain animal, or a certain situation, where relocation might be an appropriate management tool.*

...

**Dr CARLYON** - *Let's say we have a particular animal with a particular problem and we want to try to break that behaviour.*

...

**Dr CARLYON** - *...Often with deterrent use, for example, and other management, we are trying to break a pattern of behaviour. Having said that, since relocation ceased in 2017, we have implemented that provision twice. It has been quite a local movement.<sup>338</sup>*

Mr Baker confirmed he has the authority to issue special permits to industry to capture, hold and relocate seals under the Act:

*I make the point that trapping seals is part of the overall seal management framework. That happens now. It does work as exclusion in a similar manner, probably not quite as dramatic as relocation, but it is used as a time out. The other*

---

<sup>338</sup> Dr Kris Carylton, Tim Baker and Graeme Woods, DPIPWE, *Transcript of Evidence*, 20 October 2021, pp. 48-53.

*point I make is this was designed to hold seals prior to relocation, which [is] something we do not do en masse, but we did back in 2016.<sup>339</sup>*

**Findings:**

176. A Seal Management Framework outlines how seals are managed and identifies permitted deterrent strategies.
177. Fin fish farming operators are required to provide monthly reports on seal deaths and seal deterrent usage, however only information on seal deaths is published on the data portal.
178. Concerns were raised that current permitted seal deterrent measures have caused harm to seals and trials are underway to test other safe and effective options.
179. While the fin fish farming industry continues to improve the use of barrier technology, e.g. fortress pens and nets, to prevent seals from entering pens, concerns were raised that this technology is not mandated industry-wide.
180. The practice of seal relocation in the fin fish farming industry has been phased out since 2017, however the Seal Management Framework allows for special permits to be issued to capture, hold and relocate seals in certain circumstances.

**Recommendation 64**

Commission a review of the Seal Management Framework, including the efficacy and safety of all 'seal management' devices and processes allowed under that framework.

**Recommendation 65**

Publicly report seal deterrent usage by fin fish farming operators, including special permits granted for the capture, holding and relocation of seals.

---

<sup>339</sup> Tim Baker, DPIPWE, *Transcript of Evidence*, 20 October 2021, p. 48-53.

## Tasmanian Brand

The Inquiry received a number of submissions stating the salmon industry is impacting on the Tasmanian Brand,<sup>340</sup> clean 'green' image<sup>341</sup> and on tourism.<sup>342</sup>

Charles Stubbs, King Island expressed the following concern on the impact of the Industry on the King Island 'brand':

*The island's economy is absolutely dependent on the King Island brand. The basis of our brand is our clean and green image, our minimal industrialisation and our pristine and unpolluted air, land and seas. This brand powers our value added products from the land and the sea and is a major factor in our promotion of King Island as a unique tourist destination. If the King Island brand was tainted by an association with industrial fish farming then the damage to our economy would be far reaching if not catastrophic.*<sup>343</sup>

Mark Duncan stated:

*Put simply the planned expansion of the salmon industry into Storm Bay without proper process is a HUGE threat to our island lifestyle and indeed to the current Government's vision regarding "Brand Tasmania" as a clean, green destination. Tourism Tasmania's "Come Down For Air" campaign, fully funded by Tasmanian taxpayer's money, includes visuals of native seafood products (lobster, oyster, scallops, sea urchins, abalone and trout) and many, many images of folk enjoying our coastal waterways both in and on the water - no vision of salmon pens or visuals of the introduced species Atlantic Salmon to be seen!*<sup>344</sup>

Cheryl Cushion stated:

*The behaviour and actions of both the fin fish industry, and the government belies a gap between reality and our expectations as Tasmanians of what the aquaculture industry should strive to be. This risks damage to Tasmania's reputation on the global stage and as such, is incompatible with the brand of Tasmania.*<sup>345</sup>

The SEMP submission stated:

*As members of South East Marine Protection (SEMP) we believe that the salmon industry in Tasmania lacks adequate legislative protection of our marine environment; lacks social licence and overall is detrimental to the Tasmanian way of life. We believe it is not sustainable, is not best practice and risks damage to brand Tasmania.*<sup>346</sup>

---

<sup>340</sup> For example: *Submission #10, 29, 48, 58, 65, 174.*

<sup>341</sup> For example: *Submission #65, 82, 174, 184, 195, 201.*

<sup>342</sup> For example: *Submission #7, 24, 29, 41, 56, 65, 68, 81, 118, 137, 213.*

<sup>343</sup> Charles Stubbs (Keep King Island Fish Farm Free), 2019, *Submission #10*, p. 1.

<sup>344</sup> Mark Duncan, 2019, *Submission #29*, p. 3.

<sup>345</sup> Cheryl Cushion, 2019, *Submission #48*, p. 1.

<sup>346</sup> SEMP, 2019, *Submission #58*, p. 4.

The Bruny Sustainable Aquaculture submission stated:

*Consumer awareness of environmental issues and desire for safe, unadulterated natural foods is increasingly driving choices and behaviour. This is well known to play a large role in the growth of tourism and export of Tasmanian foodstuffs. However, the salmon industry is already having a negative impact on Tasmania's reputation and brand image. The Australian Marine Conservation Society has recently created Australia's Sustainable Seafood Guide as Australia's "independent guide to sustainability of seafood found in Australian fishmongers, supermarkets, fish and chip shops and restaurants".<sup>347</sup>*

A number of submissions expressed concern regarding the impact of the industry on Tasmania's clean green image.

The Bruny Sustainable Aquaculture submission stated:

*Negative impact on the increasingly-valuable Clean and Green image - both Tasmania's and that of the salmon it produces and attempts to sell at premium prices.<sup>348</sup>*

Jane Griggs stated:

*I am a surfer, sup paddler and general ocean lover who feels very privileged to be able to enjoy the pristine Tasmanian water. I want Tasmanian children to be able to continue to enjoy this privilege. I have seen the Channel undergo massive changes and all life drained from this environment. I feel that the sight of fish farms in our waterways does not fit in with our clean green promotion of Tasmania. I am upset that the government dismisses scientific evidence and choose financial gain over protecting our environment - sustainability would be worth considering!<sup>349</sup>*

Josh Overgaauw stated:

*I am an avid surfer and spend hours in the ocean every week. I have already been effected (sic) by seeing the damage caused by existing fish farms on the way to Roaring Beach at Nubeena, as well as seeing the devastation to the eco system caused in Macquarie Harbour and Franklin areas. I understand that farming salmon is perhaps necessary for jobs and growth etc but not at the expense of our natural resources which is largely our clean green image. I also understand how little the government is charging these farms to operate, which should be a lot more and that money should be used to help the communities around these farms. I also hope that each company has to be more responsible for their waste, as I am sick of seeing it in the surf and on our beaches!<sup>350</sup>*

---

<sup>347</sup> Bruny Sustainable Aquaculture, 2019, *Submission #65*, pp. 3-4.

<sup>348</sup> Bruny Sustainable Aquaculture, 2019, *Submission #65*, p. 5.

<sup>349</sup> Jane Griggs, 2019, *Submission #195*, p. 1.

<sup>350</sup> Josh Overgaauw, 2019, *Submission #201*, p. 1.



A number of submissions expressed concern regarding the impact of the industry on tourism.

Amanda Sully and Geoff Law, tourism business operators on the Tasman Peninsula expressed concerns:

*Stewarts Bay Lodge, as a major tourism business on the Tasman Peninsula employing many locals, depends very much on maintaining and celebrating our pristine environment and our links with the natural environment and notably the Three Capes Walk. This algal bloom ...in Long Bay and attested to by Denis Mermet, is of grave concern to our business investment. In fact, there are numerous local businesses that depend entirely on eco-tourism and the natural wonders of the Peninsula.<sup>351</sup>*

Fiona Housego expressed concern regarding the potential impact on tourism:

*The Tasman Peninsula is home to the World Heritage listed Port Arthur Historical Site, the Tasman National Park, the world class Three Capes Track and the award winning NRMA Port Arthur Caravan and Holiday Park. These significant tourist sites and award winning eco businesses now sit close to the home of 14 finfish pens that were re-established after more than 10 years of being absent in the area.<sup>352</sup>*

Bruce Blackie, in his submission noted the perceived impact of the industry on visitor experience to Port Arthur:

*I purchased my house 13 years ago overlooking Long Bay where the Port Arthur Tassal fish farm has recently been reinstated after closing down a decade earlier. Since reinstatement we have put up with noise, foul smell and visual pollution (day and night) and have noted a precipitous decline in recreational fishing in the area.*

*I do not know enough about other sites but the Tassal nets in Port Arthur are completely inappropriate for a small bay surrounded with high value ecological and visitor accommodation attractions. Visitors known to me from interstate have commented on the noise and the smell spoiling the quality of their visit.<sup>353</sup>*

Lynda House stated:

*While the fish farms are big employers so are the tourism organisations that rely on the purity of this state and it's water, the professional fishers.<sup>354</sup>*

According to the Neighbours of Fish Farms submission:

*It is often claimed that the fin fish industry is a major contributor to Tasmania's employment and finances, but our analysis shows that these contributions are minor*

---

<sup>351</sup> Amanda Sully and Geoff Law, 2019, *Submission #68*, p. 1.

<sup>352</sup> Fiona Housego, 2019, *Submission #61*, p. 1.

<sup>353</sup> Bruce Blackie, 2019, *Submission #137*, p. 1.

<sup>354</sup> Lynda House, 2019, *Submission #24*, p. 2.

*compared to those of the tourism and agricultural sectors, and that the industry is very likely to impede the growth of tourism in the state.*<sup>355</sup>

Adam Mollineaux expressed concern:

*The Long Bay lease is directly in the line of sight of a number of tourist operations. The cages and other infrastructure that comprise the fish farm can only be described as an “eyesore.” They sit only 250 metres directly opposite the award winning Port Arthur Caravan Park at Garden Point. It is in direct line of sight of the Fox and Hounds Hotel and people undertaking the three capes walk. Cruise ships that visit the Port Arthur historic site drop anchor within a kilometre and in direct site of the fish farm. This operation and its infrastructure is viewed by thousands of tourists each year, leaving a contrasting reality to the image that Tasmania attempts to promote itself to the world as – clean, green, natural and wild.*

*The noise emanating from the lease site is noticeable, particularly at night, and is a constant source of irritation. Whereas once residents only heard the natural noises of wildlife such as frogs, nowadays a constant droning hum, various thumps, crashes, bangs and other noises that are clearly not natural are heard coming from the fish farm. I am advised that visitors to the Port Arthur Caravan Park have complained to park management regarding the noise emanating from the fish farm. Soon TASSAL will begin to moor the wellboat Aqua Spa at the site; this vessel is some 84 metres in length and will sit directly in the line of site from practically any position for kilometres. One can only speculate at this stage as to the noise levels this vessel will emit as it conducts its operations.*

*Fin-fish farming infrastructure and an 84 metre long large factory boat moored on the edge of a premier national park, within direct line of sight of visiting cruise ships, and other tourist operations – hardly a pleasant visual or audio experience for the thousands of visitors seeking a natural wilderness escape, not to mention the smell at low tide. One wonders how much longer tourism operators will remain politely silent before the adverse impacts of this inappropriately located fin-fish farming operation becomes too much for them to tolerate.*<sup>356</sup>

Frances Bender, Huon Aquaculture, addressed claims the Industry was damaging the Tasmanian brand:

*Many submissions claim the industry is damaging the Tasmanian brand, and provides no return to the state of Tasmania. The only damage comes from those people who create their own facts. Where is the evidence to support the claim that the industry is damaging the brand? The people we employ are regarded as global leaders of the salmon industry, which is something to celebrate - something for every Tasmanian to celebrate, as we do our excellent produce and experience.*<sup>357</sup>

---

<sup>355</sup> NOFF, 2019, *Submission #41*, p. 4.

<sup>356</sup> Adam Mollineaux, 2019, *Submission # 81*, p. 18.

<sup>357</sup> Frances Bender, *Transcript of Evidence*, 21 February 2020, p. 66.

Brand Tasmania was invited to appear to provide verbal evidence to the Inquiry, initially accepted the invitation however due to COVID the hearing was cancelled. A subsequent invitation to appear was declined.

**Findings:**

181. Concern was expressed that the fin fish farming industry impacts negatively on Tasmania's clean green image, tourism and brand.

**Recommendation 66:**

Conduct a review of the fin fish farming industry impact on and relationship with the Tasmanian tourism industry to inform the revised Salmon Industry Growth Plan (refer to Recommendation 1).

## Research and Development

A commitment in the SIGP is to encourage research and development. According to the DPIPWE submission, DPIPWE and the EPA are supporting several research projects, including:

- *a pilot aquaculture spatial assessment tool, which will inform responsible salmon farming development based on assessment of evidence based scientific and marine values. This work was undertaken in partnership with the Institute for Marine and Antarctic Studies (IMAS), the TSGA, the Tasmanian Association for Recreational Fishing and the Tasmanian Seafood Industry Council.*
- *developing hydrodynamic and biogeochemical modelling as well as monitoring and decision support tool development for the Storm Bay region. This work is being undertaken by CSIRO and IMAS and is funded by the Fisheries Research and Development Corporation (FRDC).*
- *developing offshore solutions that will allow aquaculture to move into more exposed conditions. This work is being undertaken through the Blue Economy CRC. The Tasmanian Government is contributing \$2M during the term of the CRC and DPIPWE staff are actively providing support and advice to the Blue Economy project team. The level of the Australian Government funding commitment (through the Department of Industry, Innovation and Science), makes this CRC one of the largest in the program's history, which, considering the cash and in-kind contributions to be made by the 40 plus partners will see investment of over \$330 million for the CRC's 10-year term. The Blue Economy CRC will provide for innovation and development of offshore engineering and technology that will provide engineering solutions that create healthy growing conditions using the latest technologies for construction, installation, automation, monitoring and maintenance of offshore infrastructure.*
- *aquaculture systems to provide solutions in animal and plant husbandry and feed design.*
- *solutions for modelling and monitoring to understand the environment impacts of new offshore developments.*
- *fit for purpose' policies, regulatory instruments and sustainable business development and commercialisation models.<sup>358</sup>*

The IMAS submission made the following comments in relation to its research capacity:

*Finally, it is worth noting that IMAS, through the Experimental Aquaculture Facility (EAF), has access to state of the art research facilities with the capacity to undertake targeted biosecurity research on a range of fish sizes. In a unique model the EAF is a partnership with two industry partners, Huon Aquaculture and Skretting Australia*

---

<sup>358</sup> DPIPWE, 2019, *Submission #221*, p. 8.

*(aquafeed maker) which ensure rapid industry uptake of research findings. The EAF capability has an established record of successfully growth (sic) large salmon at industry equivalent growth rates and therefore provides Tasmania with some of the best research support in the world, and we would hope to collaborate with government and industry to address some of the key research issues identified in the Sustainable Industry Growth Plan. For example, the potential to increase the use of Tasmanian grown ingredients in salmon aquafeeds can be done at the EAF. With further modification the EAF can be used to further understand climate change impacts on water quality by quantifying the combined influences of sub-optimum elevated temperature and sub-optimum decreased dissolved oxygen. Research on amoebic gill disease can also be done in the EAF and in conjunction with these sub-optimum environmental conditions. IMAS facilities, including the EAF, can be modified to explore the effects of moving salmon farming off-shore by greater focus on swimming, respiration and energy expenditure.<sup>359</sup>*

Professor Catriona MacLeod, Associate Professor IMAS described the sources of funding:

**Prof. MacLEOD** - *It depends on the mechanism by which the research comes to us. On occasions we do consultancies - they are fairly rare, I have to add, in the environmental space because we're quite conscious that we like our information to be generally available in that space. I take on board Ruth's comment earlier on about our research being criticised. We take heart from the fact that we are often criticised by every avenue. It makes us feel that maybe we are a little bit independent if everybody can have a go.*

*Most of our research funding comes from the Sustainable Marine Research Collaboration Agreement - SMRCA - which is internal, but because that is a finite government pool of money, we look to leverage that wherever we can.*

**Mr VALENTINE** - *That's federal money and state, or state?*

**Prof. MacLEOD** - *The leveraging usually comes through federal money. The advantage in doing that is, first, you can get better bang for your buck so we get more money. When it's through external funding, you have more independence, not to say that the SMRCA doesn't do due diligence and internal review, but when we can leverage it through ARC, FRDC or some other external funding agency, there is an explicit requirement for our approaches and the project proposal in the first place to be reviewed and people can comment and criticise that and say -*

**Mr VALENTINE** - *Who reviews that?*

**Prof. MacLEOD** - *Depending on which agency you go to, it is a panel of experts usually who are not us - we have no part in determining who those people are. The FRDC will commission that independently.*

**Mr VALENTINE** - *It's at arm's length?*

---

<sup>359</sup> IMAS, 2019, *Submission #100*, pp. 10.

**Prof. MacLEOD** - Yes. It will then come back to us with an approval or without an approval. We then internally have a regular process by which we seek to report back on our research and we try to report back as much as possible to all the relevant stakeholders on the progress of the research as it goes through. Sometimes that is in a formal reporting format, so through the FRDC there is a requirement for reporting milestones they can use to verify and check on progress and what's happening.<sup>360</sup>

According to the CSIRO submission:

*CSIRO provides research to underpin evidence-based decision making for marine resource management in Australia and internationally. With regard to finfish aquaculture, our research has provided knowledge regarding the mitigation and amelioration of environmental impacts, management of environmental risks, and improved aquaculture production and animal husbandry.*

*In addition to Australian research, in recent years we have provided expertise to salmon aquaculture management and industry in Chile. Chile is one of the largest salmon producers in the world and have now taken a spatially structured approach to their production zones. This spatial management supports aquaculture industries producing finfish, shellfish, and algae.*

*CSIRO has a long history of involvement in Australian finfish aquaculture – in Tasmania this is primarily Atlantic salmon. Our contribution to the evidence-base for finfish aquaculture falls into three main areas, noting that overlaps exist between the research and the scientists undertaking that research:*

***Production science – research to improve the productivity of the finfish industry has supported industry growth and profitability while increasing animal welfare.***

- *CSIRO developed applied breeding techniques in partnership with the salmonid industry to increase performance, ameliorate disease and improve productivity in the face of climate change (<https://www.csiro.au/en/Research/AF/Areas/Aquaculture/Premium-breeds/breeding-salmon>)*
- *Develop disease surveillance techniques and improved treatments for early disease intervention*
- *Sustainable diet development and dietary interventions to improve fish welfare (Wade et al, 2019)*

***Environmental science – research to support sustainable marine farming practices***

---

<sup>360</sup> Professor MacLeod, *Transcript of Evidence*, 11 February 2020, p. 42.

- *CSIRO evaluated broadscale environmental impacts of salmon aquaculture in the Huon Estuary and D'Entrecasteaux Channel with modelling and observations in the Aquaculture CRC (Volkman et al., 2009). This study quantified the nutrient load from fish farms (Wild- Allen et al., 2010) and designed the Broadscale Environmental Monitoring Program (BEMP) (Thompson et al., 2008).*
- *CSIRO has built and deployed desktop decision support tools to investigate connectivity for the evaluation of spatial and temporal environmental 'footprints' of fish farm sites, the potential transfer of disease agents between leases and for the rapid evaluation of water quality following changes to farm site stocking and/or relocation; these tools have been deployed and used in Southeast Tasmania (Condie et al., 2017).*
- *CSIRO has deployed models in Macquarie Harbour to evaluate residual circulation and flushing time, simulate water quality (including dissolved oxygen) in near real time and provide a 3 day forecast. Model results and near real time observations are routinely displayed on a web dashboard that informs industry operations.*
- *Conducting integrated environmental baseline studies and the development and application of risk assessment protocols in support of ecosystem based management.*

***Climate change, extreme events and environmental forecasting - research to support risk management approaches to a changing environment***

- *CSIRO was involved in the first report exploring the implications of climate change for salmon aquaculture (Battaglione et al. 2008). This report explored many of the issues that are now emerging in Tasmania, including the need to manage risk in a changing environment, breed salmon for a warmer environment, and develop disease responses.*
- *CSIRO has investigated historical changes in the marine environment on the east coast of Tasmania, and shown this is a fast warming area relative to the rest of the world (Hobday and Pecl, 2014). We estimate rates of warming, and thus the likely future conditions that marine farming must consider. Our work on marine heatwaves (Hobday et al. 2016) has also shown that extreme events can impact the marine environment and industries (Oliver et al. 2018).*
- *In partnership with the Bureau of Meteorology, we have developed seasonal forecasts for finfish farming regions which are provided to salmonid companies that seek this information (Spillman and Hobday, 2014; Hobday et al. 2017). These forecasts are used by the industry to manage environmental risk associated with, for example, warm or cold conditions that affect salmon growth and survival.*

*CSIRO is also a partner in the CRC for the Blue Economy. The goal of the 10 year CRC program is to develop the infrastructure, energy systems, and production options for offshore aquaculture.* <sup>361</sup>

According to Dr Alistair Hobday, Research Director in Oceans and Atmosphere, CSIRO:

*I emphasise that CSIRO is an independent research organisation. We undertake what we consider to be best practice and world-class research that's independently peer reviewed. We receive funding from government, we receive funding from industry and we also receive funding from philanthropic organisations. Despite the source of the funding, we continue to maintain this independent status.*<sup>362</sup>

Dr Hobday clarified the avenues for funding:

**Dr HOBDAY** - *The CSIRO receives a portion of its funding direct from the federal government; that is not enough -*

**Mr VALENTINE** - *How much of that?*

**Dr HOBDAY** - *Across all of CSIRO or our particular Oceans and Atmosphere group? It is about \$45 million for our Oceans and Atmosphere group; that is not enough to fund the research endeavour for a year, so we seek other partners in order to balance the budget. We would do partnerships with industry, with other government agencies and with philanthropic, and the level of co-investment we make depends on the degree of science to be done in a project. Our preference is generally not to take on what we would call 'cranking the handle' projects which do not have much research capacities through them; they are just delivery. In all the projects we do, we are looking for what the research advance can be made there.*

**Mr VALENTINE** - *You look at it broadly and say, yes, we could add value in this area, this area or this area, rather than just being an organisation that provides targeted research for any one of the areas you get your funding from. Is that what you are saying?*

**Dr HOBDAY** - *That is right and we also have our internal strategic plan so if Karen, for example, said she would like to come and work on fruit bats, we would say, no that is not within our mandate, we are an ocean research group and here is where our priorities are.* <sup>363</sup>

According to the Fisheries Research and Development Corporation (FRDC) submission:

*The Fisheries Research and Development Corporation (FRDC) is a Federal Government Corporation. FRDC's role is to plan and invest in fisheries research, development and extension (RD&E) activities across Australia. This includes, providing leadership and coordination of the monitoring, evaluating and reporting*

---

<sup>361</sup> CSIRO, 2019, *Submission #90*, pp. 4-5.

<sup>362</sup> Dr Alistair Hobday, *Transcript of Evidence*, 1 April 2020, p. 1.

<sup>363</sup> Dr Alistair Hobday, *Transcript of Evidence*, 1 April 2020, p. 5.



*on RD&E activities, facilitating dissemination, extension and commercialisation. The FRDC achieves this through coordinating government and industry investment, to address RD&E priorities of stakeholders. In addition the FRDC monitors and evaluates the adoption of RD&E to inform future decisions.*

*The FRDC has been investing in science to ensure the sustainable development of the salmonid aquaculture industry since its inception in 1991. Over this time the FRDC has invested in some 260 projects with an overall investment in excess of \$60m that have some benefit to Atlantic Salmon in Tasmania. ...topics covered have spanned feed development, animal health aspects, vaccine development, management of key husbandry aspects (management of amoebic gill disease), capacity building and understanding environmental impacts and establishing monitoring programs to name a few.*

*Current investment focuses on:*

- development of vaccines;*
- broadscale understanding of the Storm Bay environment and development of fit-for purpose monitoring program to ensure sustainable development of this area beyond the currently approved biomass; and*
- understanding the oxygen dynamics of Macquarie Harbour to inform future management of this area.*

*... The Fisheries Research and Development Corporation (FRDC) is a statutory corporation within the Australian Government's Agriculture portfolio and is accountable to the Parliament of Australia through the Minister for Agriculture. The portfolio aims to enhance the sustainability, profitability and competitiveness of Australia's agriculture, food, fisheries and forestry industries. Formed on 2 July 1991, the FRDC operates under two key pieces of legislation: (i) Primary Industries Research and Development Act 1989 (PIRD Act), and (ii) Public Governance, Performance and Accountability Act 2013.*

*... The role of the FRDC – a cofounded partnership between the Australian Government and the fishing industry – is to plan and invest in fisheries research, development and extension activities in Australia. Investment into RD&E is undertaken to assist in the management of Australia's fisheries and aquaculture resource for ongoing sustainability, profitability, and productivity. This means that FRDC's funding is directed at research that has a benefit for the three sectors of the fishing industry: commercial (wild catch and aquaculture), recreational and indigenous, while also delivering a public good benefit to the Australian community.*

*364*

According to the FRDC submission, the FRDC receives funding from a variety of sources:

---

<sup>364</sup> FRDC, 2019, *Submission #96*, pp. 3-4.

*This includes the commercial fishing and aquaculture sectors via voluntary contributions (approximately 33%) which paid by the State and Territory Governments which is matched by the Australian Government. In addition, the FRDC receives funding for “public good” investment from the Australian Government. The investment looks to broader issues such as addressing environmental needs, industry development needs, community needs, development of people, and communicating our results to relevant stakeholders, including the community.<sup>365</sup>*

Huon Aquaculture’s submission outlined the company’s investment in research and development:

*Huon is extremely proud of the advances made in the last 30 years of salmonid farming in Tasmania. Research into all aspects of our operations is a cornerstone of our business and it is through ongoing investment that we remain at the forefront of our industry internationally.*

*Huon has invested in the order of \$200m on research and development (R&D) since 2002 alone and collaborated with over 17 external research providers. Our expenditure on research and development is published at <https://dashboard.huonaqua.com.au>.*

*Huon also undertakes a large number of internal R&D projects providing results that underpin scientifically based decision-making which enables Huon to remain at the leading edge of salmonid farming expertise and technology.*

*Huon operates a dedicated thirty-five trial pen unit at its Hideaway Bay lease near Dover (one of a few commercial trial units worldwide) and also operates three dedicated trial units (a total of 51 tanks variously capable of holding 0.2 gram to 15 kg size fish) located at its freshwater hatchery operations.*

*Huon is a one-third partner in the Experimental Aquaculture Facility (EAF), a world class research facility which opened in October 2015. A first of its kind in the Southern Hemisphere, the primary purpose of the EAF is to provide specialist research facilities to support the growth and sustainability of the salmonid industry. Tasmania's salmon farming is by far the largest aquaculture industry in Australia, and accounts for the bulk of seafood production in Tasmania.*

*The EAF is advancing the understanding of Tasmania's aquaculture industry (mainly salmon and oysters) by addressing issues of animal physiology, genetics, health, nutrition, welfare and production, environmental management, food safety and climate change impacts.*

*The EAF is a key component in the industry's strategic future, providing a research capability that underpins growth, sustainability and the ability to adapt to a changing environment of increasing sea water temperatures. For salmon farmers, this facility is already delivering improved environmental benefits through:*

---

<sup>365</sup> FRDC, 2019, *Submission #96*, p. 4.

- *Furthering research into Amoebic Gill Disease management;*
- *Reducing the environmental impact of salmonid farming;*
- *Reducing the fish losses due to high sea water temperatures; and*
- *Maintaining size of fish during extreme high temperatures.*

*Huon has been a strong supporter and funding contributor to the Centre of Excellence for Aquatic Animal Health and Vaccines located in Launceston. This facility is critical in providing research and development of vaccines and diagnostic tests for the salmon industry.<sup>366</sup>*

Tassal's submission outlined the company's commitment to research and development:

*As responsible farmers and neighbours, we know scientific and operational excellence is critical both above and below the water. Reliance on research and scientific evidence establishes credibility, accountability and due diligence in our decision making. Tassal actively collaborates with Australian and international research institutes and independent consultancies to drive a culture of continuous improvement through the entirety of our operations.*

*As outlined, Tassal has contributed millions of dollars towards research and development through levies paid to the Fisheries Research and Development Corporation and is matched by the Commonwealth.*

*This investment has seen significant advancements in how salmon farming is undertaken. For example, over the past 30 years we have developed sophisticated modelling tools to better understand the environmental response from our farming operations; adopted smart farming and data analytics through Internet of Things (IoT); improved water use efficiency (including through the introduction of the Aqua Spa), strengthened biosecurity and advanced salmon breeding programmes to improve survivorship and growth. We are a key industry participant within the Blue Economy Cooperative Research Centre (CRC), supporting our efforts and the broader Tasmanian salmon industry in world-leading research and development as we transition responsibly to offshore farming.<sup>367</sup>*

Petuna Aquaculture's submission noted the company's commitment to innovation, research and development. An example was provided:

*In December 2015, Petuna opened a state-of-the-art recirculation hatchery at Cressy, which involved a \$10 million investment. Today, researchers at the hatchery are applying sophisticated selective breeding techniques to produce fish that are better equipped to deal with rising water temperatures.<sup>368</sup>*

---

<sup>366</sup> Huon Aquaculture, *Submission #87*, pp. 36-7.

<sup>367</sup> Tassal, 2019, *Submission #23*, p. 12-13.

<sup>368</sup> Petuna Aquaculture, 2019, *Submission #88*, p. 4.

The TARFish submission stated:

*The industry to fund independent research that underpins the continued operations of the industry and the potential impacts on the marine environment, endemic species and the ecosystem.*<sup>369</sup>

Christine Coughanowr, independent scientist, highlighted the need for independent review of industry funded research:

*... Finally, an independent science/technical body is needed to routinely audit and review industry sponsored research and development outputs. Most aquaculture-related studies in Tasmania are funded through the industry sponsored Fisheries Research and Development Corporation (FRDC) and are not generally peer reviewed. Furthermore, many of the scientists who are contracted to do this work are dependent on industry and government funding and good will, which can make it difficult to maintain independence or express alternative views. Indeed, to do so in Tasmania is generally considered to be, at best a career-limiting move, and at worst professional suicide. I have a high level of respect for the scientists at IMAS and CSIRO involved in this work, however it is essential that they have greater autonomy and independence.*<sup>370</sup>

Dr Lisa-ann Gershwin raised concern regarding the independence of researchers:

*As awkward is this is to say, CSIRO is not as independent as many people believe. CSIRO requires a minimum of 60 per cent industry co-investment on all new projects, which means that only the data and outcomes that industry is willing to fund actually go on to become active projects. Research on the jellyfish blooms problem was actively minimized by CSIRO management on numerous occasions, on the basis that it was a sensitive subject with industry. Even on two occasions when industry appeared to be pushing for research, CSIRO stalled and ducked, resulting in collapse of the projects. As a result, we are left without the proper data or strategies to fully understand the complexities of this problem in a Tasmanian context, or to deal with it in locally appropriate ways. We have our heads in the sand on this issue, and it will only get worse. Strong leadership is needed on this issue.*<sup>371</sup>

Claire Bookless and Nicole Sommer, EDO provided the following comments around the independence of the science:

**Mr VALENTINE** - *Do you see any conflict there at all because scientists are actually working with industries as opposed to being independent?*

**Ms BOOKLESS** - *I don't see any real way around it. Industry obviously has the infrastructure and they are preparing the proposals, so they have to work with industry in order to establish -*

---

<sup>369</sup> TARFish, 2019, *Submission #63*, p. 2.

<sup>370</sup> Christine Coughanowr, 2019, *Submission #67*, pp. 2-5.

<sup>371</sup> Dr Lisa-ann Gershwin, 2019, *Submission #40*, p. 2.

**Mr VALENTINE** - *There are only so many scientists to go around.*

**Ms BOOKLESS** - *Certainly, I think there is more scope for IMAS to inform the assessment process in a greater capacity.*

**Ms FORREST** - *Do you trust IMAS information and the science that comes out of there?*

**Ms BOOKLESS** - *When you are looking at various research projects, some of those projects are funded by industry. I am not suggesting for one moment that necessarily means they are only going to get a certain answer, but they have asked a certain question so the question that is being asked is -*

**Ms FORREST** - *Someone has to fund the research.*

**Ms BOOKLESS** - *Someone has to fund the research. But they have also asked the questions so that will necessarily mean that there might be other questions that are just as valid that aren't being asked or answered.*

**Ms SOMMER** - *This is the reason we need the EPA or the relevant regulator to identify the criteria in a public and transparent way so we know what questions should be asked. That is one of the reasons we need those sorts of criteria and outcomes.<sup>372</sup>*

Mark Bishop and Rebecca Howarth, TAMP raised some concern regarding the independence of research bodies:

**Ms FORREST** - *Does TAMP have confidence in the research done by IMAS and CSIRO? Some of the research projects are targeted and specific and are only addressing a research question. Broadly, do you believe they are independent research bodies?*

**Mr BISHOP** - *Yes and no.*

**Ms FORREST** - *Do you want to expand on that?*

**Mr BISHOP** - *Yes, IMAS and CSIRO do some fantastic research work, but it is when you get to that point between the research that is being done and the conclusions drawn from it. The research is being done to analyse the industry and what they require and often after the fact, so I imagine there is a lot of debate and discussion about how they are going to present the information to government and the department. To use a terrible term, what spin is going to be put on that research? We can all look at research data and draw different conclusions, and it is that point where the conclusions are drawn that I have my concerns.*

...

---

<sup>372</sup> Nicole Sommer and Claire Bookless, EDO, *Transcript of Evidence*, 11 February 2020, p. 18.

*Ms HOWARTH - On the IMAS point, we have full confidence in the independence of the scientists who work at IMAS and full respect for the work they produce, but in the research for the industry a certain percentage will be funded by the industry as well. Perhaps we could put forward a suggestion for a body that would sit between IMAS and government that could receive the reporting. It could be an independent body - there are some scientists who have proposed this idea to me in conversation - to act as a buffer to ensure there's that transparency and independence of that research as well.* <sup>373</sup>

**Findings:**

182. There is a commitment in the Salmon Industry Growth Plan to encourage research and development in the fin fish farming industry.
183. The fin fish farming industry invests in research, development and innovation, both for improved commercial returns and for improved scientific understanding and environmental outcomes.
184. Concerns were raised regarding the independence of research due to the relationship between industry, funding sources and research bodies.

---

<sup>373</sup> Mark Bishop and Rebecca Howarth, TAMP, *Transcript of Evidence*, 12 February 2020, p. 27-28.

## Antibiotic use

Concerns were raised in a number of submissions in regards to antibiotic use by the Industry.<sup>374</sup>

Susan Wardle expressed concern:

*I have never been able to get a straight answer in direct discussion with the fish farm representatives on the use of antibiotics. My understanding is that antibiotics are used and some are on our last line of defence as far as human health is concerned. In an aquatic situation and in open pens, this is a grave concern. From information on line and from published articles, it is my understanding that these antibiotics are banned from use overseas and this practice is closely monitored. In addition, I fail to see how the aquatic delivery method is accurate, as it should be, for the safety and prevention of antibiotic resistance. One fish may get one, two or any number of doses and another, none. Meanwhile the antibiotics leech (sic) out into the surrounding marine environment. On all counts, this is not good enough.*<sup>375</sup>

The Marine Life Network submission pointed to other jurisdictions and raised concern regarding the potential overuse of antibiotics:

*It is stated that parasites are increasing resistance to chemicals and antibiotics in Europe, with chemical use increasing dramatically in European fish farms. This is potentially adverse to the environment and is not what consumers want from their producer.*<sup>376</sup>

In relation to the disclosure of antibiotic use by industry, Laura Kelly, Environment Tasmania made the following comments:

*There are a couple of areas where we talk about where we think the existing regulations are somewhat lax and we would like them to be tightened. We tabled two papers as supporting evidence for our statement in relation to that. One of them is disclosure of antibiotic use by industry in hatcheries and the marine environment. Huon Aquaculture recently disclosed their hatchery and marine use, but we do not have full disclosure of antibiotic use from either Tassal or Petuna.*

*One of the co-authors of the paper that I gave you is Professor Peter Collignon. He works at Canberra Hospital and the ANU Medical School, and was part of setting up the World Health Organization committee on the use of antibiotics in animal farming. It basically says why there is a public health interest in ensuring that antibiotic use in public areas such as waterways and river systems is important, because even small amounts can create the risk of antibiotic-resistant gene transfer.*<sup>377</sup>

---

<sup>374</sup> For example: *Submission #3, 20, 22, 23, 152, 204.*

<sup>375</sup> Susan Wardle, 2019, *Submission #20*, p. 2.

<sup>376</sup> Marine Life Network, 2019, *Submission #22*, p. 2.

<sup>377</sup> Laura Kelly, *Transcript of Evidence*, 21 February 2020, p. 45.

David Whyte, CEO of feed company Biomar was questioned on the addition of antibiotics to the feed:

**Mr VALENTINE** - *Could you... confirm no antibiotics are added to the meal?*

**Mr WHYTE** - *We have no facilities to add antibiotics to feed in our operation.*

...

**Mr WHYTE** - *It is one of those things. As I say, you probably engage with the farming companies on that. They have a lot of pain to go through with making sure the fish are well and in terms of the efforts they put in every single day, not just when fish are sick. We have specific ranges of products we use to help boost the fish's natural immune system and help it cope with stressful situations but we don't add antibiotics to the feed.<sup>378</sup>*

Haydn Slattery, General Manager Aquafeed, confirmed that feed company Ridley Aquafeed does not add supplemental antibiotics to its feed product.

*To ensure the food safety of raw materials and final products, Ridley Aqua-Feed is certified to HACCP and Feedsafe@ (Stock Feed Manufacturer's Council of Australia) standards. We undertake regular monitoring of raw materials and finished feed for undesirable substances, including antibiotics. Ridley Aqua-Feed does not add supplemental antibiotics feed. Medicated feed is typically manufactured in a dedicated production facility, separate from the main production line and medication is only added on request, accompanied by the required authorisation from a registered veterinarian.<sup>379</sup>*

The Huon Aquaculture submission made the following comments regarding antibiotic use:

*We believe that disease control in salmon requires a holistic approach. Good site management, fish husbandry and rigorous biosecurity measures are central to reducing the risk of disease outbreaks and controlling the spread of infectious diseases. Vaccines are important in preventing disease outbreaks but cannot control all losses. Medication such as antibiotics is used as a last resort to avoid significant animal welfare issues and stock losses.*

*We have the attitude that antibiotics should only be used as a last line of defence. This mindset means that we are continually working to develop proactive diet regimes and vaccines to allow our salmon to combat known illnesses and lead healthy lives. However, if our vet feels there is a need to treat fish with antibiotics it is supervised, reported and strictly regulated by government. The antibiotics are allowed to pass through the fish long before it is harvested in accordance with regulatory requirements. Huon has not used antibiotics at sea since 2016 when a single pen was treated (see Huon's website for publication of antibiotic use*

---

<sup>378</sup> David Whyte, BioMar, *Transcript of Evidence*, 17 February 2020, p. 97.

<sup>379</sup> Question on Notice response to the Inquiry dated 23 September 2020.



including quantities and pens treated) <https://www.huonaqua.com/6657-21> [link is not accessible at the time of preparing this report - alternatively refer to <https://www.huonaqua.com.au/our-approach/our-operations/fish-health-welfare-and-biosecurity/antibiotic-use/>]

*Any antibiotic use is reported to State Government in real time.*<sup>380</sup>

Ruben Alvarez, CEO Petuna Aquaculture made the following comments when asked about his company's use of antibiotics:

**Mr ALVAREZ** - *Yes. We do not have any issue with this. I think the main concern of people is about chemicals or antibiotics, all these types of things. We do not have any problem with that because we do not use any chemical in our fish. We have not used antibiotics since 2014. I think that was the last treatment.*

**Ms FORREST** - *At all, including in food?*

**Mr ALVAREZ** - *The antibiotic you include in the food.*

**Ms FORREST** - *You have not used any antibiotics at all since 2014?*

**Mr ALVAREZ** - *No, 2014 was the last time.*

**Ms FORREST** - *At all?*

**Mr ALVAREZ** - *At all. In fresh water and sea water - both.*<sup>381</sup>

Mr Alvarez subsequently clarified:

**Mr ALVAREZ** - *Just to clarify a couple of things. We are not using antibiotics at the moment. That doesn't mean that we are not going to use them in the future. I don't know. For me, it is an animal welfare thing as well. If your animals are sick, you need to try to give them something in order to recover. You cannot leave them just dying. But then, you need to have a veterinarian prescription. It's a record of the antibiotic you use, the amount of antibiotic, and then after you treat your animals, as every single farm in the world does, you need to check the depletion curve, which is the amount of antibiotic in the flesh of the animal. You can slaughter your animals and sell into the market when the level of antibiotic is zero.*<sup>382</sup>

In a question on notice response from Tassal, dated 25 May 2021, the Inquiry invited Tassal to put information in the public domain in relation to antibiotic use:

*Like any farmer, we need to look after the health and wellbeing of our stock, and that on occasions includes sometimes using antibiotics where absolutely necessary.*

---

<sup>380</sup> Huon Aquaculture, 2019, *Submission #87*, p. 3.

<sup>381</sup> Ruben Alvarez, *Transcript of Evidence*, 24 February 2020, pp. 31-32.

<sup>382</sup> Ruben Alvarez, *Transcript of Evidence*, 24 February 2020, p. 33.

*Across our entire farming operations, less than 1% of our salmon were treated with antibiotics in the past year.*

*Antibiotics are only administered by a qualified veterinary officer via medicated feed. Once a pen has been medicated, a withdrawal period is applied to that pen. Fish are not harvested before the end of the withdrawal period. Withdrawal period refers to the minimum period of time from administering the last dose of medication and the production for food. The withdrawal period is set so that it is long enough antibiotics used are not critical for human health, are authorised antibiotics used in food production systems, withhold periods are used to ensure that product sold meets all residue legislation to ensure that residues are below the limits set in the food standard code.*

**Findings:**

185. Concern was expressed regarding antibiotic use in the fin fish farming industry.
186. Feed companies BioMar and Aquafeed stated antibiotics are not added to the fin fish feed they produce.
187. The three fin fish farming operators stated their use of antibiotics is limited and is regulated by and reported to Government.

## Heavy Metal Pollution

The Derwent Estuary Program submission raised concerns regarding the possible resuspension of toxic metals due to low oxygen levels and its potential impact:

*The estuary has a longstanding history of heavy metal pollution - with some of the highest reported levels of zinc, mercury and lead in the world. In recent years, there has been significant investment to reduce metal inputs by both the zinc smelter and the state government, with considerable success. However, the legacy pollution in the estuary sediments will require careful management for many years to come.*

*More recently, the estuary has shown increasing signs of nutrient stress, including nuisance algal blooms, seagrass loss and persistent low oxygen levels in some areas. Previous research has shown a strong link between nutrient loading, low oxygen and release of heavy metals from sediments. Therefore, a key element of our long-term management strategy for the estuary is to manage and reduce nutrient loads, particularly during summer months, when the risks are highest. The marine waters of Storm Bay and the D'Entrecasteaux Channel drive the overall circulation of the estuary, and set the background nutrient levels for the system as a whole. Therefore, a significant change in nutrient inputs from Storm Bay could have far-reaching impacts on the Derwent estuary.<sup>383</sup>*

*Of particular concern is the potential for increased nutrient levels in bottom water, which drives the overall circulation of the Derwent estuary and subsequent ecological response. This is not fully represented in the model [nutrient dispersion model], nor is the potential for large-scale resuspension following storm events.<sup>384</sup>*

Dr Dain Bolwell and Dr Lisa-ann Gershwin, in their submission, expressed concern regarding heavy metal pollution:

*Many coastal waterways, especially including the Derwent estuary and Storm Bay, have legacy heavy metal contamination. Heavy metals are known to cause severe neurological impairment, many types of cancers and other chronic diseases, and horrific birth defects. In healthy waters, heavy metal molecules bind with sediments and are rendered inert. However, oxygen-depleted conditions, such as those resulting from salmon farming, unbind these metals, resuspend them in the seawater, and make them more likely to be taken into the human food chain (Banks & Ross 2009; DEP 2010, Coughanowr et al. 2015). Thus, waste from the salmon farms is likely to exacerbate the heavy metal toxicity problem that already exists, and may result in raising food for human consumption in waters enriched with heavy metals. We find it alarming that fish farming is already taking place in waters with a heavy metal legacy, without research on safe stocking densities and toxic impacts on other species and without a robust monitoring program in place.<sup>385</sup>*

---

<sup>383</sup> Derwent Estuary Program, 2019, *Submission #74*, p. 1.

<sup>384</sup> Derwent Estuary Program, 2019, *Submission #74*, p. 4.

<sup>385</sup> Dr Bolwell and Dr Gershwin, 2019, *Submission #18*, p. 1.

**Findings:**

188. Concern was expressed regarding the resuspension of heavy metal contamination in the Derwent Estuary as a result of nutrient load generated by the fin fish farming industry.

**Recommendation 67**

Ensure continued research and monitoring is undertaken in the Derwent Estuary with regard to heavy metal resuspension associated with fin fish farming, including the identification of any public health risks relating to heavy metal contamination.

## Fish Escapes

The Huon Aquaculture submission made the following comments in relation to fish escapes:

*Another issue which the community has incorrectly associated with the possible damage to wild species is fish escapes. On rare occasions, fish escapes can occur. This is typically when a fish containment net becomes compromised/torn due to a storm event or infrastructure malfunction.*

*A significant fish escape is defined as "any loss of licenced species to the marine environment in excess of 500 individuals at any one time" - as per Environmental Licence (G3 section 7). The EPA is notified when such an event occurs, as is the DPIPW Marine Farming Branch. 500 individuals can constitute less than 0.4% of a pen population, so when an escape occurs (net/pen is compromised due to Mother Nature), it can on occasion be difficult to identify the exact timing of breach. We can be made aware of this by the immediate seal response (active feeding) in the localised area and as soon as the area of failure is evident it is immediately rectified it we suspect a significant escape event has occurred, we notify the EPA and Marine Farm Branch immediately and then update once we have facts. Other reported information is sourced from our comprehensive stock data base which includes number of fish, average fish size, predicted escape number, lease and pen of possible escape (although disclosure of this information is not required in the EL).*

*We also have the ability to count the number of fish in a pen every time we bathe with very sophisticated counting equipment on our wellboat, however a reliable count can be challenging depending on fish size when trying to detect a < 0.4% loss. To minimise stress, we only handle the fish when it is absolutely necessary e. g. during gill checks or bathing.*

*Huon is very cognisant that fish escape events can have broader consequences for the company, including direct financial at harvest, and indirect (ASX and insurance) as well as community concerns. However, after decades of farming and studying previous fish escapes along with more recent scientific studies it is apparent that there is a very limited impact on local environment of fish escapes in Tasmania.*

*IMAS surveyed more than 120 recreational fishers about the location and catch numbers of the 120,000 salmon escapees (following the May 2018 storm). The report confirmed the salmon dispersal was largely restricted to south-eastern Tasmania, particularly within the general Storm Bay region, including associated bays and tributaries. Importantly, the report showed there was only limited feeding by the escapees on native fauna. We know this is consistent with previous studies (here and overseas) where farmed salmon generally don't appear to feed on native species as they are typically used to feeding on fish pellets. Tasmania has no native salmonids so there is no impact on wild genetic stocks (a problem in some northern hemisphere countries) plus escaped salmon typically don't last long, what the seals don't get, the fisherman quickly do!*

*The May 2018 storm dealt our extended community a once-in-a-Century challenge and while it's always difficult to respond to rare and unpredictable large-scale escape events the facts obtained through the IMAS survey will inform future operations.*

[https://www.imas.utas.edu.au/data/assets/pdf\\_file/0017/1210544/Atlantic-salmon-survey.pdf](https://www.imas.utas.edu.au/data/assets/pdf_file/0017/1210544/Atlantic-salmon-survey.pdf) <sup>386</sup> [link not working at the time of reporting].

Mr Ruben Alvarez, Petuna Aquaculture provided the following evidence to the Inquiry:

**CHAIR** - *In some structured way you share real-time data and relevant operational data in a public domain so people in the community who wish to do so or people who are involved in scientific groups or whatever it might be could access that data readily, say, online?*

**Mr ALVAREZ** - *Yes. We have our webpage. We report everything to the government. If you have an escape of fish, you need to report it and we do that. Petuna always do these types of things.*

*Now on our webpage we are going to include that information. Information is available. Some people do not want to see the information or they do not trust the information available. Most of the information is always there.*<sup>387</sup>

A number of submissions to the Inquiry raised concern regarding mass fish escapes and associated reporting of such events.<sup>388</sup>

Ms Trish Baily, providing verbal evidence to the Inquiry, made the following comments regarding mandatory reporting of fish escape incidents:

*We seek transparency and mandatory immediate reporting of fish escapes, outbreaks of disease and seal death.*<sup>389</sup>

And further:

**Ms BAILY** - *I find, as a community member, when you are looking for the answers, it is very, very difficult to get answers. You feel, as I said in my presentation just now, that you are jumping through the hoops. In one instance I called DPIPW to report there had been a fish escape at Port Arthur, and the fishermen were all catching great big fish, apparently. Someone called me and let me know that. I called DPIPW and they said Tassal had told them that there were fewer than 500 fish. Apparently, you don't have to report a fish escape if it is fewer than 500 fish. They said basically Tassal had indicated there were fewer than 500 fish and asked why was I reporting this. I said, 'Well, why don't you come down to the peninsula and*

---

<sup>386</sup> Huon Aquaculture, 2019, *Submission #87*, pp. 19-20.

<sup>387</sup> Ruben Alvarez, *Transcript of Evidence*, 24 February 2020, p. 31.

<sup>388</sup> *Submission #7*, 12, 23, 87, 105.

<sup>389</sup> Trish Baily, *Transcript of Evidence*, 12 February 2021, p. 3.

have a look? Fishermen are catching massive fish and these are the reports that are coming out.' They said, 'We don't have the time.' They basically dismissed me for creating a drama and making up the report.

They did follow through later by insisting that Tassal had said that when they harvested the pen, they would know how many fish had escaped, which is kind of a strange answer. Tassal had later reported that they had not lost more than 499-and-a-half fish, so it was all within legal bounds.

...

**Ms BAILY** - It was reported back to me; I forget if that was reported back to me by Tassal or by DPIPWE, yes.<sup>390</sup>

Mr Mark Bishop, TAMP provided the following evidence:

**Mr BISHOP** - Yes, I think it is about transparency. In the past, rules have been bent and pushed around, and things have been only exposed later, after the event - you know, fish escapes, which are a great concern to me.

What is the level? In a few years time, when it is difficult to catch flathead because there was a large fish escape in previous years and those fish gobbled up all the baby flathead in the shallows, how are we going to know that there was a cause and effect that may or may not have happened? ... these are our public waterways. I can understand how within the lease area it is the fish farms' area, but the effects of fish farming go far beyond the boundaries of the lease. I think it is our right to know.<sup>391</sup>

Appearing at a subsequent hearing as an individual, Mr Bishop, fisherman, expressed concern regarding the impact of fish escapes on the wild fishery:

**Mr BISHOP** - 'Do exotic salmonids feed on native fauna after escaping from aquaculture cages in Tasmania, Australia?' The study was done in Macquarie Harbour. The last sentence says -

Nevertheless, biochemical analysis indicates that 2.6 per cent of rainbow trout and 15 per cent of Atlantic salmon have survived on a diet based on native fauna for a long period of time as their tissue has already reflected the biochemical composition of their new food sources.

My concern as a fisherman in this area is that if we have a mass fish escape from a pen failure, salmon go towards shallow water. They are one of the few species that go to the shallows to escape predators. They will invade these tidal waterways and bays that fish use to breed.

---

<sup>390</sup> Trish Baily, *Transcript of Evidence*, 12 February 2021, p. 5.

<sup>391</sup> Mark Bishop, TAMP, *Transcript of Evidence*, 12 February 2020, p.24.

*When I go out fishing in the very early hours of the morning, the shallows are alive with small, immature native fish. They do have natural predators already. The natural world works at 100 per cent all of the time with whatever is possible. To go and add 10 000 or 20 000 tonnes of salmon into this area, with its associated pollution, gives me great concern. Most of my concern is the escaped fish could have a huge impact on the juvenile fisheries we have in this area.<sup>392</sup>*

Ms Laura Kelly, Environment Tasmania called for the inclusion of information regarding fish escapes on the data portal:

*If we had the Macquarie Harbour level of data statewide it would answer a lot of transparency issues. There are other things we would like to see included, which we have spoken to in relation to escapes - fish kills and antibiotic use.<sup>393</sup>*

In response to further questions from the Inquiry, Mr Tim Baker, Secretary DPIPWE, provided information regarding the regulatory requirements relating to the escape of farmed fish. The full response can be accessed via the Inquiry webpage as an addendum to the DPIPWE submission.<sup>394</sup>

### ***1.1 What regulatory requirements are in place broadly and what specific licence conditions apply in relation to the escape of farmed fish?***

#### ***Marine Fin Fish Farms***

*All Marine Farm Licences require that Licence holders shall not release into State waters any fish unless authorised in the licence.*

*All Marine Farming Development Plans (MFDP) contain Management Controls relevant to fish escapes as follows:*

#### ***Fish Escapes***

- Lessees must not intentionally release into State waters fish of the species authorised in the relevant marine farming licence unless authorised to do so by that licence.*
- Lessees must report to the Manager, Marine Farming Branch any significant incident of fish escapes within 24 hours of becoming aware of the escape. A significant escape is defined as any loss of licensed species to the marine environment in excess of 500 individuals at any one time.*
- Lessees must recover escaped fish when and in a manner as directed by the Secretary.<sup>395</sup>*

<sup>392</sup> Mark Bishop, *Transcript of Evidence*, 24 February 2020, p. 15.

<sup>393</sup> Laura Kelly, *Transcript of Evidence*, 17 February 2020, p. 52.

<sup>394</sup> DPIPWE, response to Question on Notice, 22 January 2021, available as Addendum to *Submission #221*

<https://www.parliament.tas.gov.au/ctee/Council/Submissions/FIN%20FISH/20210209%20DPIPWE%20Addendum.pdf>

<sup>395</sup> As taken from the D'Entrecasteaux Channel and Huon River MFDP

<https://dPIPWE.tas.gov.au/Document%20s/DEntrecasteaux%20Channel%20and%20Huon%20River%20MFDP.pdf>



*Additionally:*

- *All Environmental Licences require Environmental Licence holders to report to the Director, EPA of any significant incident of fish escapes within 24 hours of becoming aware of the escape. A significant escape is defined as any loss of licenced species to the marine environment in excess of 500 individuals at any one time.*

#### *Inland Fish Farms*

- *Fish farming activities require a fish farm licence under the Inland Fisheries Act 1995.*
- *Conditions of a Fish Farm Licence include the implementation of a fish farm management plan approved by the Director, that addresses fish biosecurity.*
- *The Director Inland Fisheries is responsible for the regulation of fish escapes into the freshwater environment. All holders of an Inland Fisheries Licence must report to the Director, Inland Fisheries, of any loss of licenced species to the freshwater environment.*

#### ***1.2 What biosecurity risks are presented by fish escape incidents? How are these risks assessed?***

*Biosecurity Tasmania is not aware of any specific studies into the biosecurity risks caused by farmed fish escapes in the Tasmanian context. However, routine testing conducted by the Department as part of the Tasmanian Salmon Health Surveillance Program (the Program) provides data about the prevalence and distribution of diseases that affect the industry.*

*In all cases to date, the Program has determined the pathogens appear to have originated from native Tasmanian sources. Examples include POMV and reovirus, both of which have been detected in wild fish in and around salmon cages.*

*In comparison to wild fish populations, the number of individuals in stocked fish cages and their relative proximity to one another creates an increased opportunity for disease risk to amplify. It is therefore considered that, although escapees may present a low risk to wild populations of fish, the greatest risk is that escaped salmon carrying disease could transmit pathogens to other farmed fish should they come in close contact with stocked cages.*

*With regard to the longevity of escaped salmon potentially carrying disease, it is assumed that reduced population densities would limit transmission consistent with the already mentioned amplification risk. In addition, nutritional stress is likely to cause diseased fish to drop out of the marine environment relatively quickly. However, no formal testing of this theory has been undertaken by the Department.*

*Movement of escaped fish between growing regions could also present a biosecurity Risk, but again the risk is considered higher for other farmed salmon than for wild fish populations. Such movements could occur via the natural movement of escaped salmon into another growing region (assuming they disperse far enough from the point of escape), or through mechanical movement whereby recreational fishers catch salmon in one region and later use it as bait in another.*

...

**1.4 In response to fish escape incidents, what measures may be taken either by the company involved or by the EPA or Department to minimise biosecurity risks and environmental harm?**

*Communication between companies about fish escapes allows an informed decision-making process to be implemented regarding planned movements of stocked pens and/or harvesting operations in the area.*

*Targeted messaging from the Department can assist to increase biosecurity awareness among recreational anglers. For example, Biosecurity Tasmania assisted the Marine Farming Branch with Facebook messaging regarding responsible use of salmon as bait in cray fish pots after a recent fish escape event occurred just prior to the opening of the recreational crayfishing season.*

*Under the respective Marine Farming Development Plan(s), there are management control(s) that the Secretary, DPIPW E may utilise to instruct the leaseholder to recover the escaped fish. In practicality, escapee fish are thought to disperse from the lease area relatively quickly. In some cases, leaseholders have engaged contract fishermen to attempt to recapture escapee fish, however this approach isn't always appropriate. More recent escapee events have been publicly disclosed enabling a rapid recreational fishing effort increase.*

*Fish escapes from inland fish farms are reported to the Inland Fisheries Service (IFS). A review of the Fish Farm Management Plan is undertaken by the company in consultation with the IFS to identify improvements that will prevent future escapes.*

**1.5 After specific fish escape incidents, how is the environmental or biosecurity impact of that escape incident measured or assessed?**

*Biosecurity Tasmania is aware that IMAS run an escaped fish survey using recreational angler reports of salmon catches. Biosecurity Tasmania has not been directly involved in this survey.*

*Reported fish kill events provide another means of monitoring the impact of salmon escapes on wild fish populations. However, to date there has been no evidence collected by the Department that suggests a link between salmon escapes and wild fish kills.*

*There is no regulatory requirement within the Marine Farming Licence or MFDP Management Controls that requires the leaseholder, or licence holder to assess the environmental or biosecurity impact of escaped salmonids.*

*The impact of inland fish farm escape incidents is not measured; however the escape is assessed for disease risk.*

Questions were also put to DPIPW E regarding details of fish escape events over the past 5 years. See Appendix G for the response to these questions.

**Findings:**

189. Industry noted that fish escapes do occur, typically when a fish containment net becomes compromised or torn due to a storm event or infrastructure malfunction.
190. Regulations require lessees to report to the Manager, Marine Farming Branch any significant incident of fish escapes (>500 fish) within 24 hours of becoming aware of the escape.
191. Concerns were raised regarding the estimation, timely reporting and disclosure of fish escapes.
192. There was competing evidence regarding the impact of fish escapes on native species.

## Native Fish

In response to concerns raised regarding impact of fin fish farming on native fish, Tim Baker, Secretary DPIPWE, provided a response outlining the regulatory framework relating to native fish death. The full response can be accessed via the Inquiry webpage as an addendum to the DPIPWE submission.<sup>396</sup>

### ***2.1 Is native fish death within salmon pens identified as an issue associated with the fin fish industry?***

*The fate of native fish that are trapped in fish pens during bathing and harvesting was raised during public hearings conducted by the Marine Farming Planning Review Panel relating to the Storm Bay planning processes. The Panel's addressed the issue in its reports, for example, [Marine Farming Planning Review Panel Report 22 August 2018 for draft Amendment No. 5 to the Tasman Peninsula and Norfolk Bay MFD](#) (see 3.1.2.1 p12, 3.1.2.2 p13). The Panel indicates that it received advice that there are incidences of native fish species being trapped in pens. Any request for further information about the advice received by the Panel would need to be directed to the Panel.*

*Native fish species, primarily small schooling pelagic schooling species including both jack and blue mackerel, redbait, Australian sardine and blue sprat, may be found in association with marine farming equipment owing to the habitat (structure, protection, food source etc) this equipment provides and the potential availability of both natural food sources that may also be attracted to the marine farming equipment and/or as a result of the feed provided to the farmed species (salmonids).*

*These native species are common within the marine environment and with the exception of blue sprat, are commercially targeted species within the Commonwealth managed small pelagic fishery and are considered not overfished: [Small Pelagic Fishery I Australian Fisheries Management Authority \(afma.gov.au\)](#).*

*Native fish may move in and out of the confines of marine farming equipment (pens) until such time as their size prevents their movement past the containing net(s).*

*The Department understands that industry practices aim to exclude native fish wherever possible and that live fish are returned to State waters. There are a number of reasons for the industry to do so. Large numbers of any native species found in salmon pens may pose a potential biosecurity risk. Anecdotally, native species of an appropriate size may*

---

<sup>396</sup> DPIPWE, response to Question on Notice, 22 January 2021, available as Addendum to Submission #221  
<https://www.parliament.tas.gov.au/ctee/Council/Submissions/FIN%20FISH/20210209%20DPI%20PWE%20Addendum.pdf>

*feed on salmon pellets. Further, some native species actively predate on smelt and cause injury by fin nipping.*

*Exclusion methods include manual removal and release of native fish by dipnet at appropriate times during farm management, such as during stocking, grading, bathing and harvest operations and management of smelt net deployments to limit opportunity for native fish to enter the net.*

*It would not be expected that the farmed species (salmon) would show any interest (predation) in the native species due to the readily available supply of pellets.*

*The operation most likely to cause mortality of entrapped native fish is bathing in fresh water, which is likely to be fatal for most marine species. Some estuarine species, such as mullet, have a greater tolerance for low salinity and may survive freshwater bathing. Regardless, the Department understands that it is widespread industry practice to remove native fish to the greatest extent practicable prior to bathing.*

*Further, the Department understands that the methods and equipment used for bathing using wellboats, which is now the standard method of bathing in farming areas where routine bathing is required, excludes most native fish prior to bathing (and returns them to the wild).*

*Any request for more detailed operational information relating to management of wild fish should be referred to the industry.*

*Three permits, issued under the Living Marine Resources Management Act 1995 (LMRMA), have been granted to Tassal to allow them to undertake sampling of wild fish to document the species, prevalence, numbers and potential mortality. Reporting to the Department in accordance with these permits, to date, indicates a very low level of interaction.*

*Any resulting mortalities of any native species associated with marine farming operations would be expected to be on very low scale relative to their abundance in the surrounding environment.*

## ***2.2 Are there other identified causes of native fish death associated with the fin fish industry***

*Not in the context of wild finfish, such as those described above. Fish is defined under the Living Marine Resources Management Act 1995 as: any aquatic organism of any species, whether dead or alive, which, in the normal course of events, spends part or all of its life in the aquatic environment.*

*As this definition is very broad and includes microbes, a more strictly correct response would be that native 'fish' may be 'killed' at all stages of marine farming operations.*

**2.3 What regulatory requirements are in place broadly and what specific licence conditions apply in relation to native fish death related to fish farming operations?**

All Marine Farming Development Plans (MFDP) contain management controls. Some of these controls may be relevant to native fish. Examples may include controls on monitoring, waste and disease:

*3.4.2 Lessees must keep the following records for each lease area held by the lessee and retain these records for a period of 5 years;*

*3.4.2.3 The names and quantities and date of use, of all chemicals which have been used on the lease area. This must include, but is not confined to, therapeutants, anaesthetics, antibiotics, hormones, pigments, antifoulants, disinfectants and cleansers.*

*3.7.2 All mortalities arising in connection with marine farming operations must be disposed of at a site that has the necessary approvals to receive this material.*

*3.8.1 Lessees must notify an inspector of any suspicion of a notifiable disease in accordance with the Animal Health Act 1995.*

*3.8.2 Lessees must remove dead fish from cages and report mortalities in accordance with any direction from the Secretary or Director, EPA.*

*3.8.3 Lessees must participate in any fish health management plan or fish biosecurity program as directed in writing by the Chief Veterinary Officer or Secretary.\**

*\*As taken from the D'Entrecasteaux Channel and Huon River MFDP <https://dpiwwe.tas.gov.au/Documents/DEntrecasteaux%20Channel%20and%20Huon%20River%20MFDP.pdf>*

*More specifically, a marine farming licence authorises the holder of the licence to carry out marine farming in accordance with the licence. The licences specify salmonids as the species that may be farmed under the licence. Native fish are not authorised to be farmed. Marine farming includes the farming, culturing, enhancement, or breeding of fish for trade, business, or research. So, a salmonid farmer has no authority to commercially benefit from native species that may be incidentally caught. Pursuant to management controls (e.g. 3.7.2 above), the dead fish must be disposed of. With no capacity to benefit from entrapment of native fish and for fish health, biosecurity and economic reasons, there is a strong incentive for industry to minimise interactions with native fish.*

**2.4 Is the incidence of native fish death related to fish farming operations (e.g. native fish death within salmon pens) quantified and reported on to regulators?**

*There are no direct reporting requirements for native fish that die in the course of salmonid farming operations, except in an unusual situation, for example, if a notifiable disease is suspected.*

*Three permits, issued under the Living Marine Resources Management Act 1995 (LMRMA), have been granted to Tassal to allow them to undertake sampling of wild fish to document the species, prevalence, numbers and disease sampling.*

*Such permits include requirement to provide a report relating to activities under the permit.*

***2.5 If companies are required to report, please provide a breakdown of the reported data for the previous 5 years by company, including number of native fish deaths and location/lease.***

*No native fish deaths have been reported to ... the Department by salmon farmers.*

***2.6 In what way is the broad impact of native fish death associated with the fin fish industry measured or assessed?***

*There are no specific reporting or assessment requirements. If research recommends an alternative or new management approach in relation to the management of effects of marine farming on wild fish, existing management controls would be suitable to initiate a management change. Additionally, powers under the Environmental Management and Pollution Control Act 1994 or other relevant legislation may be exercised by the appropriate authority.*

*Catch and effort data collected for Tasmanian commercial fish and shellfish fisheries is reported annually by IMAS, to provide information about the status of fish stocks and trends. Reporting includes scalefish (e.g. Tiger Flathead and School Whiting), rock lobster and abalone. When trends in commercial fisheries stocks become evident, appropriate management responses are be investigated. To date, such responses have not included specific requirements relating to finfish farms.<sup>397</sup>*

---

<sup>397</sup> Reference Cited: Lyle, J.M. 2019. *Fishing for Atlantic salmon following a major escape event: inferences about dispersal, survival and ecological impact*, Institute for Marine and Antarctic Studies, University of Tasmania.

## Birds

A number of submissions raised concern regarding the impact of the Industry on birds.<sup>398</sup>

The Marine Life Network submission raised concern over bird and mammal entanglements and disruptions:

*Sea cages can attract a variety of wild predators which can sometimes become entangled in associated netting, leading to injury or death. Previously, salmon-farming sea cages have entangled white-bellied sea eagles. These incidents should be reported and disclosed.*

*More important is to conduct research into the long-term effects of fish farms on animals like seals and sea eagles. Very old studies show that they disrupted sea eagle hunting behaviour. There is no real incentive for industry to study something if the answer might be adverse, so this work would have to be directed by the State.<sup>399</sup>*

Craig Garland, fisherman, expressed concern regarding impacts on the birdlife that rely on baitfish:

*I am here today because of my ongoing concerns with the state of salmon/finfish aquaculture in this state, stemming from the relocation of seals, which occurred for 27 years up to the point where I heard on the evening news they were expanding into the north-west. I have just spent the last eight years collecting samples for scientists of the fish that breed in that area, which is one of the most crucial fish-breeding and propagation nursery areas we have in this state, not only for finfish but also for sharks, skates and rays. The birdlife that relies on baitfish in that area is quite significant - you are talking millions of birds.<sup>400</sup>*

At the request of the Inquiry, Mr Tim Baker DPIPW provided a response outlining the regulatory framework relating to bird interactions and deaths associated with the Industry. The full response can be accessed via the Inquiry webpage as an addendum to the DPIPW submission.<sup>401</sup>

### ***3.1 What are identified as the main causes of bird interactions and deaths associated with the fin fish industry?***

*The main causes of bird interactions and deaths associated with the marine fin fish farming industry are entanglement in netting on fish pens (including aerial bird exclusion nets), and drowning (sometimes in association with entanglement). Birds are attracted to pens due to the presence of fish food pellets (e.g. gulls) or to the farmed smolt/mature fish themselves (e.g.*

---

<sup>398</sup> For example: *Submission #9, 20, 22, 68, 116.*

<sup>399</sup> Marine Life Network, 2019, *Submission #22*, p. 8.

<sup>400</sup> Craig Garland, *Transcript of Evidence*, 24 February 2020, p. 1.

<sup>401</sup> DPIPW, response to Question on Notice, 22 January 2021, available as Addendum to Submission #221

<https://www.parliament.tas.gov.au/ctee/Council/Submissions/FIN%20FISH/20210209%20DPIPWE%20Addendum.pdf>



cormorants, raptors, petrels, terns, penguins). Farm infrastructure also presents roosting (perching for rest) opportunities for birds.

### **3.2 What regulatory requirements are in place broadly and what specific licence conditions apply in relation to bird interactions and deaths related to fish farming operations?**

Most native birds involved in interactions with marine fin fish farming operations are listed as Specially Protected, Protected or Partly Protected under the Wildlife (General) Regulations 2010 of the Tasmanian Nature Conservation Act 2002. Some species are also listed as threatened under the Tasmanian Threatened Species Protection Act 1995. Both sets of legislation provide broad protections to listed species.

*The Minimum Requirements 2018A for the Mitigation of Seal Interactions with Aquaculture Staff and Infrastructure in Tasmania (the "Minimum Requirements 2018A", supplementary to the Seal Management Framework 2018) is the industry-agreed policy document used to manage interactions between marine fin fish farming operations and protected wildlife in Tasmania. However, the requirements of the Seal Management Framework apply only to infrastructure and operations on a marine farming lease if a marine farming company seeks to use approved seal deterrent devices and management options on that lease.*

*When relevant, Section 1 (MRWEM) of the Minimum Requirements 2018A stipulates the regulatory requirements for industry regarding mitigation and response to bird interactions and deaths. These include specific infrastructure (wildlife exclusion netting) requirements (throughout the section), as well as handling and reporting requirements when entanglements do occur...*

#### **1.12 Requirements in relation to approved Wildlife Exclusion Measures**

*1.12.1 Specially Protected, Protected or Partly Protected Wildlife, as defined and listed in the Wildlife (General) Regulations 2010, that become entrapped and/or entangled in any marine farming netting, infrastructure or equipment must be reported to DPIPWE according to the following procedure:*

- i) If the wildlife is entangled and alive, immediate attempts to release the entangled wildlife must be made (except marine mammals - the Marine Conservation Program must be contacted (0427942537) immediately for instruction regarding appropriate and safe response to live entangled seals, whales and dolphins);*
- ii) If the immediate attempts to release entangled wildlife are unsuccessful then, the entanglement must, within one hour of the commencement of the attempt, be reported to a DPIPWE Contact Officer;*
- iii) If the entangled wildlife is injured, a DPIPWE Contact Officer must be contacted before a decision can be made to release;*
- iv) If the entangled wildlife is deceased then the carcass is to be immediately recovered and held. A DPIPWE Contact Officer*

- must be contacted for advice regarding carcass disposal within four hours after carcass recovery; and*
- v) *A monthly report (Wildlife Incident Record sheet) for each marine farming lease held by a marine farming lease holder must be submitted to DPIPWE detailing numbers of all wildlife mortalities, injuries, entanglements and entrapments detected in wildlife exclusion netting or marine farming infrastructure. A report must be submitted for each marine farming lease even if there has been no wildlife incidents at a lease.*

*In addition, clauses in some Marine Farm Development Plans (MFDPs) specify the following:*

*3.13.9 Lessees must not undertake or cause or permit another person to deliberately interact with wildlife except in accordance with the Nature Conservation Act 2002.*

*3.13.10 Lessees must comply with any operational requirements notified by the Secretary in relation to managing, mitigating or avoiding interactions with wildlife as defined by the Nature Conservation Act 2002. (NOTE - it is understood that the intention is to update all MFDPs to include these prescriptions).*

### ***3.3 Is the incidence of bird interactions and deaths related to fish farming operations quantified and reported on to regulators?***

*The incidence of bird entanglements and deaths related to fish farming operations is quantified and reported to DPIPWE, through the reporting mechanisms outlined in Section 1.12 of the Minimum Requirements 2018A. In addition, some marine fin fish farming companies self-report this information on their own publicly available 'Sustainability Dashboard' websites (previous 12 months only).*

### ***3.4 If companies are required to report, please provide a breakdown of the reported data for the previous 5 years by company, including the number of bird interactions and deaths and location/lease.***

*Companies that access and use seal deterrent devices on marine farming leases are required to report all bird entanglements, injuries and deaths in a "Wildlife Incident Record", submitted monthly to DPIPWE. The format for these returns has changed several times in the last 5 years, including the number and types of reporting fields. On occasion, reports have been provided in the form of email text only.*

*Reports, including over the five years from 2016 to 2020 are stored and filed as individual reports, mostly electronically, but including a proportion of reports in hard copy. It has not been aggregated into a central record keeping sheet or tally. Hence, providing a breakdown of report data is currently not straightforward. However, steps are being taken to overhaul and refine DPIPWE record keeping of this data.<sup>402</sup>*

---

<sup>402</sup> DPIPWE, response to Question on Notice, 22 January 2021, available as Addendum to *Submission #221*

## Jellyfish Blooms

Christine Coughanowr's submission stated:

*In addition to diseases, biosecurity planning should include other likely causes of salmon mortality, including toxic algal blooms (e.g. NOCtaluca), jellyfish, and warming ocean temperatures/ocean heat waves that reduce salmon resistance to disease.<sup>403</sup>*

Dr Lisa-ann Gershwin, in her submission, expressed concern that fin fish farming is exacerbating jellyfish blooms, which is a worsening ecological problem influencing the long-term viability of the industry.

In her submission, Dr Gershwin detailed issues relating to the following:

Medusa threats;

*The more accepted mechanism of fish kills happens with a combination of mucus and nematocysts (microscopic stinging cells). When jellyfish are stressed, such as when they are caught up in a net or a cageful of frantic fish, they exude copious amounts of mucus, which contains countless nematocysts. Stings to the gills panic the salmon, so they breathe faster, inhaling more mucus. The mucus coats the surface of the gills, preventing oxygen uptake. Simply, the salmon suffocate. A typical fish kill event is over and done with in a half hour or so, leaving hundreds of thousands of fish dead.<sup>404</sup>*

Polyp threats;

*At least two introduced species of hydroids are now known in southern Tasmania, both of which could pose a threat to salmon and other species. Both are thoroughly unresearched; however, it seems likely from what we know about jellyfish natural history that salmon farms may be acting as incubators for these and other pest species. Robust biosecurity and sustainability plans will include jellyfish and hydroids in their monitoring and management goals.<sup>405</sup>*

*Hydroid seeding downstream beyond the farms is a serious biosecurity issue and environmental hazard for other industries and natural habitats, with knock-on effects back to the farms in terms of increased bloom impacts; the biosecurity plan must consider this.<sup>406</sup>*

Impacts on native species;

---

<https://www.parliament.tas.gov.au/ctee/Council/Submissions/FIN%20FISH/20210209%20DPI%20PWE%20Addendum.pdf>

<sup>403</sup> Christine Coughanowr, 2019, *Submission #67*, p.4.

<sup>404</sup> Dr Lisa-ann Gershwin, 2019, *Submission #40*, pp. 1-5.

<sup>405</sup> Dr Lisa-ann Gershwin, 2019, *Submission #40*, pp. 1-5.

<sup>406</sup> Dr Lisa-ann Gershwin, 2019, *Submission #40*, pp. 1-5.

*There is no question that salmon farming is affecting native species; the unresearched questions are how badly and how permanently. The Act should mandate independently-conducted research and monitoring on these questions. The environmental impact and assessment processes in the existing legislation are too short-term in their scope to capture long-term environmental changes from fish farming.*

*...Fish farms attract and incubate opportunistic pests because of their artificial nature; this presents a chronic biosecurity risk to the fish. Likewise, from the point of view of native species, salmon farming presents a biosecurity risk, because farms breed pathogens and degrade water quality. Tasmania's new Biosecurity Act 2019 should be implemented to ensure that biosecurity plans and regulations extend beyond protection of the salmon from invading pathogens, to include the role of farms in threatening the health and habitats of native species.<sup>407</sup>*

Nutrients making it worse;

*Jellyfish blooms are an integral part of a positive feedback loop, together with nutrients and algae, that causes legacy damage to the environment. Jellyfish and algae blooms are normal, but not in the frequency, densities, and duration created by current fish farming practices. This is unsustainable to both the long-term viability of this industry and to the environment in the broader sense.<sup>408</sup>*

Dr Gershwin made recommendations regarding threat characterisation, bloom monitoring, net cleaning, best practice guidelines and native species impacts.<sup>409</sup>

Frances Bender, CEO Huon Aquaculture responded to the submission of Dr Gershwin:

*Dr Lisa-ann Gershwin claims salmon farming is exacerbating jellyfish blooms, which are in turn impacting ecosystem stability and industry viability. There is no evidence for these claims and Dr Gershwin fails to provide any information in support of her claims. In fact, the available evidence suggests that the claims are baseless. We know this because Huon collaborates closely with several internationally recognised jellyfish experts from Australian universities and overseas.<sup>410</sup>*

**Finding:**

193. There are competing claims regarding the relationship between fin fish farming and jellyfish blooms, in particular the impact on ecosystem stability and industry viability.

<sup>407</sup> Dr Lisa-ann Gershwin, 2019, *Submission #40*, pp. 1-5.

<sup>408</sup> Dr Lisa-ann Gershwin, 2019, *Submission #40*, pp. 1-5.

<sup>409</sup> Dr Lisa-ann Gershwin, 2019, *Submission #40*, pp. 1-5.

<sup>410</sup> Frances Bender, *Transcript of Evidence*, 21 February 2020, p. 71.

**Recommendation 68**

Ensure biosecurity planning for the fin fish farming industry includes consideration of jellyfish blooms as a potential risk.

## Abalone Industry

The Tasmanian Abalone Council (TAC) submission expressed concern regarding the impact of salmon farming on the abalone industry:

*The burgeoning Tasmanian salmon aquaculture industry has long been identified by the Tasmanian abalone industry as posing a potential risk to the health of delicate inshore reef systems.*

...

*It is a widely acknowledged fact that salmon aquaculture has a detrimental effect on water quality and substrate characteristics in close proximity to farming operations - events in Macquarie Harbour in 2016/2017 have confirmed this statement beyond any doubt. The degree to which these impacts occur depends on the intensity of the farming (i.e. stocking density and fish feed inputs) and the capacity of the receiving marine environment to buffer or assimilate these impacts.*

*An understanding of the environmental sensitivities of abalone during its life cycle and the complex interactions within reef ecosystems are required for assessing the potential impacts of pollutants from anthropogenic activities such as open-cage salmon farming.*

*Salmon farm inputs potentially detrimental to abalone habitat include the principal inputs of artificial fish feed and fish excreta plus incidental inputs such as bio-fouling from net cleaning practises, anti-foulants, heavy metals (principally copper and zinc), fuel & oil spills, rotting and/or dead fish, fish escapees, recoverable and non-recoverable farm debris and cleaning chemicals. Other detrimental impacts may occur as a result of the restriction of wave action and water flow around and through cage systems to neighbouring marine habitats. This list is by no means exhaustive.*

*In summary however, there are two key environmental inputs from open-cage salmon farming systems that may have a detrimental impact on wild abalone populations. These are:*

- *Sustained nutrient loads; and*
- *Sustained sediment loads.*

*The primary risk for wild abalone reef habitat adjacent to salmon farming operations is the broader-scale medium to long-term environmental degradation caused in part or wholly by sustained nutrient and sediment inputs from open-cage farming systems.*

*Excess nutrient and sediment load may detrimentally affect abalone larval growth, larval settlement and the early grow-out stages of the lifecycle. In addition, sustained nutrient and sediment loads may also change the balance of micro and macro algal species within delicate reef ecosystems – creating less than optimal*

*environmental conditions and availability of preferred food for abalone during some or all lifecycle stages.*

*Tasmanian inshore reef ecosystems are complex interactive systems within which it is hard to define or predict the potential impacts from changes in environmental or anthropogenic inputs, since there are many oceanic and reef scale feedback mechanisms that may compensate for one change or multiply/amplify another. As there is currently a lack of specific scientific research dealing with the impact of salmon farm derived pollutants on wild abalone reef systems it makes absolute sense to be cautious when siting salmon cage systems in close proximity to productive abalone reef habitat.<sup>411</sup>*

...

*The TACL has expressed these concerns to the Tasmanian Government regarding the expansion of the salmonid industry since 2014. There is a substantial "body of work" relating to the salmonid sector which has been publicly available on the TACL website <https://www.tasabalone.com.au/news/> since 2014.<sup>412</sup>*

**Finding:**

194. The Tasmanian abalone industry believes that fin fish farms located near abalone reef habitats are a threat to its viability in those locations, and further research and regulation is required.

---

<sup>411</sup> Tasmanian Abalone Council Inc., 2019, *Submission #57*, pp. 2-3.

<sup>412</sup> Tasmanian Abalone Council Inc., 2019, *Submission #57*, pp. 2-3.

# **APPENDIX A: Submissions Received**



<b>Sub No.</b>	<b>Name</b>	<b>Written Submission</b>	<b>Verbal Evidence</b>
1	Brian Hinson	✓	x
2	Dr Bob Brown	✓	x
3	Richard Davoren	✓	x
4	BioMar PtyLtd	✓	✓
5	John Redgrove	✓	x
6	Chris Wells	✓	✓
7	Marjorie (Trish) Baily	✓	x
8	Wilderness Society	✓	x
9	Denis Mermet	✓	x
10	Keep King Island Fish Farm Free	✓	x
11	Alison Stubbs	✓	x
12	Environment Tasmania	✓	✓
13	Bob Brown Foundation Inc	✓	✓
14	Susan Westcott	✓	x
15	Dr Brendan & Marlene Schmidt	✓	x
16	Jeff Self	✓	x
17	Simon Gould	✓	x
18	Dr Dain Bolwell & Dr Lisa-ann Gershwin	✓	x
19	Andrew Boon	✓	x
20	Susan Wardle	✓	x
21	Glenn Martin	✓	x
22	Marine Life Network	✓	x
23	Anne Duffield	✓	x
24	Lynda House	✓	x
25	Tony Mahood	✓	x
26	Gilian Pixley	✓	x
27	Kevin Cotter	✓	x
28	Petuna Aquaculture	✓	✓
29	Mark Duncan	✓	x
30	Dr Gianluca Amoroso	✓	x
31	Sheenagh Neill	✓	✓ TAMP
32	Michelle Pears	✓	x

33	Colette Harmsen	✓	x
34	Frits Harmsen	✓	x
35	Tinderbox West Coastcare Group	✓	x
36	Johnny de Deuge	✓	x
37	Ian Locke	✓	x
38	Neil Edwards	✓	x
39	Shooters, Fishers & Farmers Party TAS	✓	x
40	Dr Lisa-ann Gershwin	✓	✓
41	Neighbours of Fish Farming	✓	✓
42	Tasmanian Alliance for Marine Protection	✓	✓
43	Simon Allston & Dr Janeil Hall	✓	x
44	Dr Shea Cameron	✓	✓
45	Mick Chalmers	✓	x
46	Geoffrey Swan	✓	✓
47	Glenn Arnol	✓	x
48	Cheryl Cushion	✓	x
49	Tasmanian Salmonoid Growers Association	✓	✓
50	Margaret Taylor	✓	x
51	Barbara Nowak & Louise Cherrie	✓	✓
52	Gerard Castles	✓	x
52	Gerard Castles - Attachment A	✓	x
53	Paul Thomas	✓	x
54	Private	✓	x
55	Louise Cherrie	✓	x
56	Stefan Froelich	✓	x
57	Tasmanian Abalone Council	✓	x
58	South East Marine Protection	✓	x
59	Jenni Stokes	✓	x
60	Skretting Australia	✓	x
61	Fiona Housego	✓	x
62	Christo Lees	✓	x
63	TARFish	✓	x
64	Josephine Murray	✓	x
65	Bruny Sustainable Aquaculture	✓	✓

66	Colleen Osborne	✓	x
67	Christine Coughanowr	✓	✓
68	Amanda Sully & Geoff Law	✓	x
69	The Australia Institute	✓	✓
70	Marion Erbs & Monica Henry	✓	x
71	Derwent Estuary	✓	x
72	Karmen Pemberton	✓	x
73	Dr Sharon Moore	✓	x
74	Hrisanthi Dokos	✓	x
75	Fran Murray	✓	x
76	Spring Clay Target Club Inc	✓	x
77	Craig Garland	✓	✓
78	Huon Valley Council	withdrawn	x
79	All Suburbs Cleaning Services	✓	x
80	Senator Peter Whish-Wilson	✓	✓
81	Adam Mollineaux	✓	x
82	Mark Bishop	✓	✓
83	Tassal Group	✓	x
84	Rebecca Howarth	✓	x
85	Aquenal Pty Ltd	✓	x
86	Mabs Mollineaux	✓	x
87	Huon Aquaculture Company Pty Ltd	✓	✓
88	Robert Wyvill	✓	x
89	Tasman Peninsula Marine Protection	✓	✓
90	CSIRO	✓	✓
91	Anglers Alliance	✓	x
92	Dr Robert Watson	✓	x
93	Tasmanian Seafood Industry Council	✓	x
94	WWF Australia	✓	✓
95	Eric Bain	✓	x
96	Fisheries Research Development Corp	✓	x
97	Jane Unwin	✓	x
98	Private	✓	x
99	Marine Solutions Tas Pty Ltd	✓	x

100	IMAS	✓	✓
101	Tasmanian Greens	✓	✓
102	Helen Hussey	✓	x
103	Felicity Holmes	✓	x
104	Jennifer Hadaway	✓	x
105	Robyn Weeding	✓	x
106	Boris Charles	✓	x
107	Private	✓	x
108	Simon Lewis	✓	x
109	Michaela Storer	✓	x
110	Cara Clark	✓	x
111	Jenny Archer	✓	x
112	Sally Curry	✓	x
113	Julie Frances	✓	x
114	Harriet Adams	✓	x
115	Ingerlise Armand	✓	x
116	Kerry Johnstone	✓	x
117	Adam Lincoln	✓	x
118	David Hildred	✓	x
119	Michael Brennan	✓	x
120	Tim Sidebottom	✓	x
121	Deidree McMaster	✓	x
122	Fiona Beer	✓	x
123	Jordan Oudejans	✓	x
124	Richard Knox	✓	x
125	Vincent Job	✓	x
126	Tomas Najman	✓	x
127	Mark Sconlan	✓	x
128	Oliver Taylor	✓	x
129	Ruth Malcolm	✓	x
130	Simone Lieschke	✓	x
131	Eleanor Laud	✓	x
132	Paul Gibson	✓	x
133	Helen Stone	✓	x

134	Peter Jackson	✓	x
135	Helen Hussey	✓	x
136	Michael Roberts	✓	x
137	Bruce Blackie	✓	x
138	Henry Sheerwater	✓	x
139	Alison Stubbs	✓	x
140	Catherine Nicholson	✓	x
141	Robin John Riley	✓	x
142	Raymond Jones	✓	x
143	Louise Rigozzi	✓	x
144	Felicity Hargraves	✓	x
145	Alanna Beck Godfrey	✓	x
146	Gavin Evans	✓	x
147	Michelle Gearman	✓	x
148	Kate Skitt	✓	x
149	Sandra Kellett	✓	x
150	Kelly Sims	✓	x
151	Matthew Mackay	✓	x
152	Russell Langfield	✓	x
153	Elodie Gaillard	✓	x
154	Alex White	✓	x
155	River Mason	✓	x
156	Karen Weldrick	✓	x
157	Benjamin Dean	✓	x
158	John Kelsall	✓	x
159	Terence Brumby	✓	✓ TPMP
160	Amanda Davies	✓	x
161	Graham Reeve	✓	x
162	Celeste Saunders	✓	x
163	Jenna Tomlin	✓	x
164	Georgia Hofto	✓	x
165	Felicity Holmes	✓	x
166	Frits Harmsen	✓	x

167	Ophelia Hopkins	✓	x
168	Patsy Harmsen	✓	x
169	Colette Harmsen	✓	x
170	Ally King	✓	x
171	Rod Hartvigen	✓	x
172	Bee Higgins	✓	x
173	Rohan Pace	✓	x
174	Martin Paradisis	✓	x
175	Tom Sparks	✓	x
176	Amanda Riley	✓	x
177	Sarah Glover	✓	x
178	Andrew Menzies	✓	x
179	Oliver Cunningham	✓	x
180	Jeremy Willson	✓	x
181	Hamish Renwick	✓	x
182	Kathryn Moolenschot	✓	x
183	Brenda Kenyon	✓	x
184	Adam Gibson	✓	x
185	Jaymie Howard	✓	x
186	Hugh Woodward	✓	x
187	Brad Jackson	✓	x
188	Matt Breen	✓	x
189	Mikhala Howard	✓	x
190	Layla Kain	✓	x
191	David Edmondson	✓	x
192	Ysabel Tueno	✓	x
193	Dylan Cooper	✓	x
194	John Morgan	✓	x
195	Jane Griggs	✓	x
196	Benjamin Carosi	✓	x
197	Wendy Armstrong	✓	x
198	Stephen Watson	✓	x
199	Ian Verdouw	✓	x
200	Brett Lawrance	✓	x

201	Josh Overgaauw	✓	×
202	Jonathan Griffiths	✓	×
203	Howard Groves	✓	×
204	Dave Nelson	✓	×
205	Jack Redpath	✓	×
206	Fionn Sinclair	✓	×
207	Dan Herron	✓	×
208	Kim Murray	✓	×
209	Matthew Morgan	✓	✓
210	Melinda Huck	✓	×
211	Kim Cartwright	✓	×
212	Carmel French	✓	×
213	Daniel Owen	✓	×
214	Paul Vaughan	✓	×
215	Tammy Squires	✓	×
216	Chloe Squires	✓	×
217	Anita Long	✓	×
218	James Lockkey	✓	×
219	Tasmanian Conservation Trust Inc.	✓	✓
220	Environmental Defenders Office	✓	✓
221	DPIPWE	✓	✓
222	Huon Resource Development Group Inc	✓	×
223	Austra Maddox	✓	×
224	Circular Economy Huon	✓	×
225	Seafood and Maritime Training	×	✓
226	Environment Protection Authority	×	✓
227	Miranda Howie	✓	×

**APPENDIX B: Analysis of industry  
websites provided by Neighbours of Fish  
Farming (NOFF)**



## Websites

Key to transparency is maintaining websites which are easy to use and consistent with other industry and government websites, and which provide not just information, but quantitative data to back up well-intentioned and reassuring words. They should also provide specific contact information, especially for issues and events needing timely responses. In this electronic age, websites have adapted to social media's domination of news and events, by becoming sources of more enduring, authoritative information and data.

This has been recognised by industry leaders. Tassal states:

*Transparent reporting is key to driving accountability and continuing improvement. Our intent is to provide timely, accurate and material information for our stakeholders. We are committed to tackling sustainability issues with integrity, transparency and purpose . . . The dashboard seeks to inform you with accurate, up to date information on material aspects of our operations.<sup>5</sup>*

However, a recent study by NOFF<sup>6</sup> has shown that, while some industry websites appear on first examination to be quite good examples of modern website design (eg [Tassal](#), [Huon Aquaculture](#), [EPA](#)), each of them separately has flaws in structure, content and indexing. Others (eg [DPIPWE](#), [Petuna](#)) are more seriously lacking. Taken together, there are inconsistencies in content, indexing and terminology which make it impossible to access data on specific aspects of the industry on a state or regional basis, or across time.

Overall, while the majority of individual websites are superficially reassuring, on more detailed examination, the industry-wide picture is certainly not one of transparency. The *NOFF Websites* study details many major and minor issues, but we wish to draw attention to five of them.

### 1) Inconsistent terminology, scope and definitions

The most glaring example of this is the region names used.<sup>7</sup> It is difficult, if not impossible, to reconcile the regional names (and hence the data) used by the salmon farmers, with the names of the Marine Farming Development Plans used by DPIPWE. Even the two government organisations, DPIPWE and EPA, use different terms. Macquarie Harbour is used by four sites, but Tassal uses Western. Is this exactly the same? What overlap is there between: Southern (Tassal), Huon River (Huon Aquaculture), Lower D'Entrecasteaux Channel (Huon Aquaculture), Huon River and Port Esperance (DPIPWE), and D'Entrecasteaux Channel, Huon and Port Esperance (EPA)?

Another example is Dissolved Oxygen, where Tassal uses parts per million, Huon Aquaculture uses percent saturation, and Petuna, DPIPWE and EPA provide no obvious information at all.<sup>8</sup> For antibiotic use, Tassal uses the proportion of all fish treated, whereas Huon Aquaculture specifies kilograms used, number of pens treated, and grams per tonne of total biomass.<sup>9</sup>

Tassal, DPIPWE and EPA refer to *Benthic* compliance or monitoring, which is definitely not Plain English, whereas Huon Aquaculture uses the far more user-friendly term *Seabed Health*.<sup>10</sup>

<sup>5</sup> Tassal Website [Sustainability page](#) viewed 18 Nov 2019

<sup>6</sup> NOFF. [Salmon farming website usability and content reporting comparisons](#), Cygnet, November 2019. This report is structured as a spreadsheet with numbered rows – we shall refer throughout this submission to specific rows, eg *NOFF Websites* row 23.

<sup>7</sup> *NOFF Websites* row 4

<sup>8</sup> *NOFF Websites* row 18

<sup>9</sup> *NOFF Websites* row 5

<sup>10</sup> *NOFF Websites* row 7

## 2) Not up to date

There is evidence that some of the websites are not up to date:

- The entire Petuna site uses the increasingly obsolete HTTP protocol, not the much more secure HTTPS protocol. While this does not affect usability, content or interface design, it does not engender trust when your browser loudly proclaims a site to be *Not secure*. The Tassal home page does use HTTPS, but their [Sustainability Dashboard](#) still uses HTTP.<sup>11</sup> To increase Internet security, the software industry world-wide has been actively promoting the change to HTTPS for at least the last five years, as a matter of urgency.<sup>12</sup>
- The Huon Aquaculture site has an orphan page with information about [Our Hatcheries](#), hierarchically below its home page. However, the home page contains no menus or links to the hatcheries page, you can only find it by searching. While this may simply be an oversight, it may also be that the hatcheries information is obsolete, and the page should be removed from the active site. At the very least this indicates a lack of quality assurance on either content or structure.<sup>13</sup>
- The Petuna site displays images of four compliance certificates from external certification agencies. Three of the four certificates have expired.<sup>14</sup>

## 3) Poor access to quantitative, longitudinal and baseline data

Across all the sites there is very little longitudinal data, so it is frequently not possible to analyse changes across multiple years.

- Half or more of the data for antibiotic use, cleanups, bird and seal mortalities, dissolved oxygen, and temperature is for the current year only,<sup>15</sup> and inconsistencies in content impede analysis across sites.
- There is no information or data on pen stocking density, noise, or floating marine debris, and very little on land-based operations.<sup>16</sup>
- All three companies have documents which can be downloaded.<sup>17</sup> Some of these appear extensive: the Tassal sustainability reports for 2012-2017, for example, range from 62 to 112 pages each. However, for all three companies, detailed examination of these downloads shows that they contain little quantitative data which is not already available on their websites.
- The DPIPWE site is particularly lacking. Too often, it just shows 'Yes/No' to compliance reporting.<sup>18</sup> We see little purpose, for example, in knowing that one company reported an escape or significant mortality event, if there is no information on the number of fish involved, or any subsequent actions by the company or regulator.
- There are significant quantitative data and downloadable reports on the EPA website, including compliance breaches, but this is flawed by patchy consistency.<sup>19</sup> Data and documents appear to have been assembled because they are byproducts of other processes, rather than the outputs of a systemic plan designed to make information available to the community.

<sup>11</sup> NOFF Websites row 2

<sup>12</sup> Wired [Half the Web Is Now Encrypted. That Makes Everyone Safer](#) 17 January 2017

<sup>13</sup> NOFF Websites row 3

<sup>14</sup> NOFF Websites row 6

<sup>15</sup> NOFF Websites rows 5, 11, 15, 18, 37, 44

<sup>16</sup> NOFF Websites rows 3, 25, 33, 35

<sup>17</sup> NOFF Websites row 3

<sup>18</sup> NOFF Websites row 22, 27, 31, 37, 42

<sup>19</sup> NOFF Websites row 3

- Where quantitative data is available on the Tassal and Huon Aquaculture Dashboards, the actual numbers can only be seen by hovering the mouse cursor over a data point on a graph.<sup>20</sup> There are no accessible data tables (from which the graphs are undoubtedly generated), so copying quantifiable data numbers is extremely tedious and error-prone.
- A serious issue is the lack of baseline (before and after) data, which handicaps any longitudinal analysis, and limits community trust in video or other evidence. The most obvious example is in Benthic Compliance,<sup>21</sup> where Tassal (King Island only) and Huon Aquaculture (four of ten listed sites) have video clips for 2018 only, but none showing the ocean floor *before* pens were installed. The EPA site has 2016 videos for four Macquarie Harbour sites within the World Heritage Area, and one baseline video from 2012. A few of the downloadable reports on the EPA site have baseline data.<sup>22</sup>

#### 4) Inadequate linking and indexing

Key to the usability of any website is linking and indexing, by standardized menu structures and wording, and by hyperlinks within the site and to related websites.<sup>23</sup>

- There are problems with all sites, with broken links indicating a lack of quality control, or related sites poorly linked (eg to generic home pages not specific pages) or not linked at all.
- All three companies link to external certification agencies, but these are of little use as the external sites contain very little or no accessible information.
- There is little consistency in wording: [Huon Aquaculture](#) starts with *Our approach – Sustainability Dashboard – Sustainability Dashboard* and you then have to browse between *Our Fish* and *Environment*. [Tassal](#) starts with *Sustainability – Sustainability Dashboard* and from there, most but not all items of interest are under *Our Planet*.
- DPIPWE is a notably poor example, not aided by an overall site design that is particularly dated. The [Salmon Farming Data Portal](#) refers in the introductory text, and in the text for each Plan, to several related organisations and to the three companies, but these are not linked. A sidebar provides links to other government and scientific organisations, but only to their top pages, and there are no links to the salmon companies. The [Marine Farming – Aquaculture – Reports and Publications](#) page does provide more specific links to the IMAS reports page, and the EPA regulation page.
- In particular, there is much supporting information and quantitative data on the EPA site, but this is not linked to or from to each Plan on the DPIPWE site.

#### 5) No single point of contact for fish farming issues

Community trust is seriously compromised by lack of a single website page with information about consistent, simple ways for members of the public to request information or report issues such as noise, or marine debris, and to receive feedback. There is certainly no one-stop shop to cater for situations which may require urgent action, and the overall picture is very confusing:

- DPIPWE, on the [Marine Farming – Aquaculture – Reporting Marine Farming Debris](#) page, shows contact details including their marine debris hotline. The hotline number is also on the parent page, but not on the Salmon Farming Data Portal page, nor is it on the list of 13 specific hotline numbers on their [Contact Us](#) page. They also provide details of the Debris Tracker smartphone app, and state that anything reported through the app, or

<sup>20</sup> *NOFF Websites* row 2

<sup>21</sup> *NOFF Websites* row 7

<sup>22</sup> *NOFF Websites* row 3

<sup>23</sup> *NOFF Websites* rows 3, 6

via the hotline, is sent to the Marine Farming Branch (DPIPWE), MAST, and the salmon company closest to the debris for removal. There is no information about possible feedback. The page also has links to MAST, and to DPIPWE's Whale hotline, which it states covers whales, dolphins and seals, although the Contact Us page hotlines list refers only to whales and dolphins, but not seals.

- The EPA website has a [Report Pollution](#) page with contact details for generic incidents. A sidebar has a specific link leading to a [Noise Complaints](#) page where there is an entry for fish farms with the same details. Confusingly, their [Noise Complaints Contacts](#) page links back to the Noise Complaints page, but also provides different contact details for the department's Noise Specialist, with no indication of which to use.
- The [MAST video clip on marine farming](#) (7 mins) says towards the end to contact industry companies first (which appears to contradict the instructions on the DPIPWE site), or failing that, MAST, about any marine debris, but does not specify any contact details or the EPA hotline. The [MAST website](#) has no highlighted contact point for reporting any incidents or issues (not just marine debris), and no details about out of hours emergency contacts.
- [Tassal](#), [Huon Aquaculture](#) and [Petuna](#) have no specific contact details for emergency reports or problems, just generic contacts such as those for consumer feedback, customer service, retail and wholesale business, and general office contacts.

This lack of a single, easily accessible contact point for reporting issues and incidents, has two serious outcomes:

- Members of the public are frustrated, and in some cases even suspicious of deliberate obfuscation.
- There is apparently no centralized data being collected which would enable Government objectives and industry performance to be better managed, and priorities directed to correct emerging issues.<sup>24</sup>

## Conclusion

In looking at these five websites involved in salmon farming in Tasmania, we have considered only the lowest of the four commonly accepted levels of community engagement: the provision of information. This has been defined as providing the community with *balanced and objective information to help them understand a problem, alternatives, opportunities or solutions*.<sup>25</sup>

Our analysis in this section of our submission shows that each site fails to meet this minimal standard in many ways, and taken together, the five sites present an inconsistent, non-standardised, confusing mish-mash of information, with little accessible or usable quantitative data. This cannot and does not foster community trust. Considerable work is needed before these sites can support the higher level of involvement set out in the *Marine Farming Planning Act*,<sup>26</sup> or develop the public trust and pride, and the transparency, set out in the *Sustainable Industry Growth Plan for the Salmon Industry*.<sup>27</sup>

**To address these issues, we recommend establishing a single, coordinating authority, with enforceable power over all relevant industry and government websites, to:**

1. Establish mandatory standards for website terminology, units of measurement, hyperlinks, the consistent recording and presentation of data including mandatory baselines, and ongoing access to all historical quantitative data.

<sup>24</sup> *NOFF Websites* rows 26, 33

<sup>25</sup> Blacktown City Council. *Community engagement strategy* 2010 p 6-7. The other levels, in increasing order of engagement, are consultation, involvement, and collaboration.

<sup>26</sup> *Tasmania. Marine Farming Planning Act 1995* schedule 1, s3(1) objectives c and e.


<sup>27</sup> DPIPWE *Sustainable Industry Growth Plan for the Salmon Industry*, p.5.

2. Require public access to all quantitative data in support of or used in the presentation of visual or graphical information.
3. Require alignment of all reports, data and terminology with the geographic boundaries set out in DPIPWE's Marine Farming Development Plans.
4. Require the use of Plain English principles in the presentation of all information.
5. Establish and maintain a single point of contact for the public to report issues and incidents involving the salmon farming industry, receive feedback, and request information, on a website or by phone or email.

**APPENDIX C: Dispute between the  
Marine Farming and Planning Review  
Panel and Professor Nowak and Ms  
Cherrie**

**Item 1: Submission #51 Professor Barbara Nowak  
and Ms Louise Cherrie**

29 November 2019

Barbara Nowak  
Louise Cherrie  


Mr Stuart Wright

Inquiry Secretary  
Parliament House, Hobart 7000

Phone (03) 6212 2250

Email: finfish@parliament.tas.gov.au

We would like to make a submission to the Inquiry into the Fin Fish Farming in Tasmania.

We were the two members of the Marine Farming Review Panel who resigned in August 2018. We would like to comment on the planning and regulation of finfish farming in Tasmania, in particular application of Marine Farming Act 1995.

We are both supportive of a sustainable salmon industry in Tasmania. However, we have concerns about the current planning and regulation of salmon industry, which is at significant risk unless changes are made to the legislation and operation of the Marine Farming Review Panel. In particular we would like to note:

Legislative restrictions and flaws do not allow timely response to changes in the marine environment. For example, sections that provide sole power to the Minister to approve or reject marine farming development plans and (Section 16) and amendments to such (Section 42), and to approve and revoke Emergency Plans (Section 46).

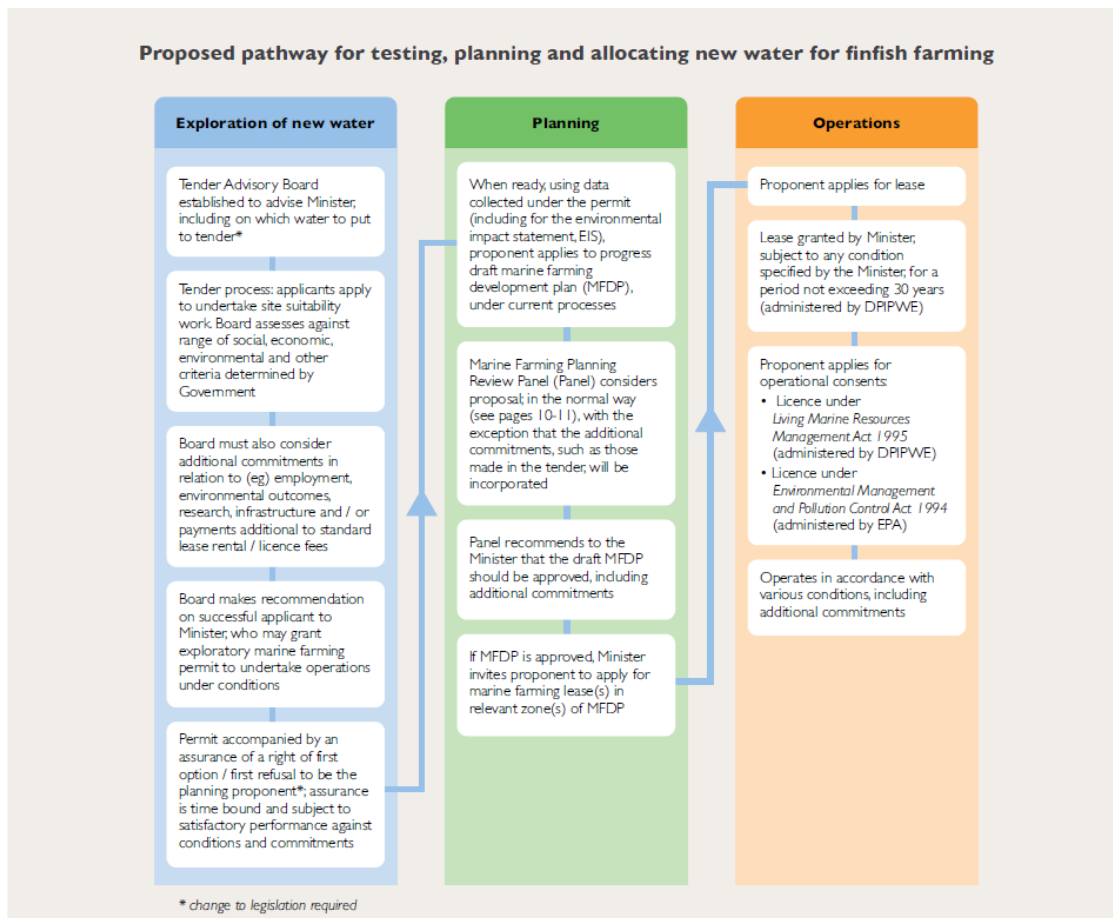
Indeed, once the Minister approves a draft plan for an exhibition, the plan may be varied but will eventually be approved for that location regardless of the appropriateness or any changes in the conditions. This is reflected by the Marine Farming Act 1995:

**“30. Modification of draft plan**

- (1) If the Panel rejects a draft plan, the planning authority, within any period the Panel allows, must submit to the Panel a modification to the draft plan.”



This is also shown on page 17 of Sustainable Industry Growth Plan for Salmon Industry (DPIPWE 2017), where in the Planning section “Panel recommends to the Minister that the draft MFDP should be approved” with no other option available (please see below).



The flaws in the legislation have directly resulted in environmental harm in Macquarie Harbour, which is unlikely to fully recover.

Poor functioning of the Marine Farming Planning Review Panel includes the inability to apply sound science, an unwillingness to discuss and learn from changes (e.g. Macquarie Harbour, emergence of POMV), and the propensity to only provide advice operationally convenient to salmon industry. Indeed, the salmon industry had ready access to the Panel to advise on the operational impact of potential management conditions and were consulted on frequent basis and at a minute notice to the Panel.

We were not allowed to consider the previous salmon industry issues in Macquarie Harbour as they were considered irrelevant by other members of the Panel. While Macquarie Harbour is a very different system to Storm Bay (hydrodynamically and biogeochemically), the factors that are the same are: same operators, same operation, same regulation, and based on flawed or inadequate science. We were not allowed to apply biosecurity recommendations from Global Salmon Conference 2017 (Carter et al. 2019) to assess MFDP. This inability to take into account the latest information and policy recommendations jeopardises the sustainability of Tasmanian salmon industry.

We would be happy to provide further information. We would be prepared to make a private presentation.

Sincerely,

Handwritten signature of Barbara Nowak in cursive script.

Barbara Nowak

Handwritten signature of Louise Cherrie in cursive script.

Louise Cherrie



**Item 2: Submission #55 Ms Louise Cherrie**

29 November 2019

Louise Cherrie

(Former member of the Marine Farming Planning Review Panel, appointed as the person with an expertise in environmental management)

Mr Stuart Wright

Inquiry Secretary  
Parliament House, Hobart 7000

Phone (03) 6212 2250

Email: [finfish@parliament.tas.gov.au](mailto:finfish@parliament.tas.gov.au)

Dear Mr Wright

I would like to make a submission to the Inquiry into the Fin Fish Farming in Tasmania in reference to term 2(c). I have also made a joint submission with Professor Barbara Nowak, but this additional submission relates specifically to the aspect of 'adaptive management' that I feel strongly about. Adaptive management has failed in Macquarie Harbour and is an inadequate management strategy that is out of step with contemporary industrial operational practices.

As noted in the other submission, Barbara and I were former members of the Marine Farming Planning Review Panel but resigned in August 2018 after our significant efforts to achieve better outcomes for both industry and the Tasmanian community failed.

Adaptive management means taking operational actions in response to unforeseen changes. All developments, whether land or marine based, are subject to some uncertainties based on the dynamic nature of environmental systems and there is a place for adaptive management. However, it cannot be the whole strategy and does not replace sound science and planning for foreseeable events. Adaptive management relies on:

- reasonable understanding of the receiving environment at the outset (e.g. collection of baseline data, applicable reference sites, biogeochemical modelling)
- understanding of what standards or natural values are to be protected
- monitoring on a frequency and scale necessary to detect deviations
- timely reporting and analysis of data so that management decisions can be made
- appropriate and timely operational response
- monitoring of recovery prior to any further site use; and
- acceptance (or at least tolerance) of issues when they do arise.

Adaptive management can be used to allow flexibility of resource management where it is beneficial to proceed with an activity but not all information is known about the receiving environment or impacts. However, it has been used inappropriately to progress developments for which key aspects have not been resolved. In the case of massive expansion in Storm Bay, these developments have proceeded without: completed biogeochemical modelling; no biosecurity plan; no Regulatory standard to which operations will be held to; and no mapping of natural values to provide clarity on what needs to be protected.

Whilst operators identify and respond to issues throughout the life of their activities, adaptive management should only be necessary where adequate science cannot be completed and to address

changes that were not reasonably foreseeable. In the case of Storm Bay, developers have advised that these proposals were many years in the making. The State has also issued the Salmon Growth Plan with clear objectives to expand. There was adequate time to address data gaps and develop plans to prevent or recover from plausible event scenarios (e.g. change in dissolved oxygen levels, major fish kills, jellyfish bloom, eutrophication). This has not happened. Despite clear and known scenarios for environmental harm and fish kills the operational plans have been non-existent or grossly inadequate. No plans were submitted that were of an adequate level of detail and, in the case of biosecurity and waste management, no plans existed at all. Regardless the developments have been approved. The question is why adaptive management is relied upon so much?

I am a person who gets directly involved in issues that interest or concern me to rather than agitating from afar. I am also a pragmatist and believe we can balance environmental and economic goals. I joined the Marine Farming Planning Review Panel to ensure due diligence in advice and decision-making. I personally verified information and data provided and delved into Regulatory history to ensure advice to determine whether operators had earned the right to grow. This assurance process led me to identify extremely concerning information and the only reasonable view I could form was that Storm Bay developments should not proceed as proposed. Regardless I was unable to influence some other Panel Members who advised it was "too late to raise issues". Professor Barbara Nowak and I were disappointed that we were not able to affect the changes necessary to ensure sustainable growth in the salmon industry. Panel members were either openly dismissive of our concerns or silent. There was no interest in learning from past lived experience in Macquarie Harbour and moving the industry closer to best practice.

In summary:

- Adaptive management relies on close monitoring of key parameters and appropriate trigger points for action and swift operational response. This is proven to have failed and Macquarie Harbour. From receipt of a sample of concern to an operational action took anywhere up to 8 months. This is grossly inadequate.
- Adaptive management relies on planning for plausible event scenarios and having adequate monitoring, response and recovery plans. This has not been satisfied in proposals, yet they have been approved regardless.
- Adaptive management relies on strong and clear Regulation and community tolerance. No Regulatory standard exists for the salmon industry, and there is no current social license for Storm Bay expansion.
- If we continue on this path the industry will crash and the impacts will be borne by the broader Tasmanian community, not just operators.
- Sound science and planning for known and plausible scenarios should be a mandatory requirement for development applications rather than the standard default to adaptive management as the strategy.

I would be happy to provide further information as required.

Yours Sincerely



Louise Cherrie

[louise@cherrieconsulting.com.au](mailto:louise@cherrieconsulting.com.au)

**Item 3: Authorised *In Camera* Transcript of  
Evidence 21 February 2020 (Professor Nowak and  
Ms Cherrie)**

IN CAMERA

THE LEGISLATIVE COUNCIL SESSIONAL COMMITTEE GOVERNMENT ADMINISTRATION A MET IN COMMITTEE ROOM 2, PARLIAMENT HOUSE, HOBART ON FRIDAY 21 FEBRUARY 2020.

---

FINFISH FARMING IN TASMANIA

Professor BARBARA NOWAK AND Ms LOUISE CHERRIE WERE CALLED, MADE THE STATUTORY DECLARATION AND WERE EXAMINED.

CHAIR (Ms Webb) - [REDACTED]

[REDACTED]

[REDACTED]

**Professor NOWAK** - I want to start by introducing us. I am Barbara Nowak and this is Louise Cherrie. We joined the Marine Farming Planning Review Panel at the same time. We didn't know each other when we joined it. I joined it as an expert in aquatic animal health and marine biosecurity, and Louise joined it as an expert in environmental management. Louise has expertise in environmental consulting and she has been working with lots of different industries, including primary industry and aquaculture, but not primarily aquaculture. She works more with mining, forestry and other industries.

[REDACTED]

CHAIR - [REDACTED]

**Professor NOWAK** - [REDACTED]

[REDACTED]

[REDACTED]

We both really support sustainable aquaculture and we thought that by joining the panel we could improve the aquaculture management, advise the minister on aquaculture and the sustainability of aquaculture long term in Tasmania.

Unfortunately, that wasn't possible. We were very frustrated with the marine farming approval process. We were not able to provide advice. The panel had very limited ability

[REDACTED]

## IN CAMERA

We felt we were unable to respond to new knowledge and situations to suggest any changes. We were just supposed to propose approval of a draft plan. [REDACTED]

[REDACTED] We could recommend rejection of a draft amendment, but for the draft plan the only option for us was to recommend approval. So we found ourselves in a very difficult position and we tried first to go through the department, the minister, the department secretary. We talked to many people and were given sometimes misleading information.

**Ms FORREST** - [REDACTED]

**Ms CHERRIE** - [REDACTED]

**Professor NOWAK** - [REDACTED]

**Ms CHERRIE** - The fact that you can only recommend approval, in practice and under the legislation, is absolutely correct. What you can do is bounce it back and bounce it back, but it will eventually come back to you and you eventually have to approve it. There's no way out. When these Storm Bay ones were proposed, applications were made, and then the world changed because we had Macquarie Harbour, this lived history of harm, and we had a virus crop up, but because they had made application, they will get approved. The panel was unwilling to address the changes, so we go back - 'You will approve'. We can't recommend approval. The world changed and there was no appetite and no legislative backing for that change for us to learn and do better.

**Professor NOWAK** - The only thing we were allowed to do was introduce management controls and the chair advised us the management controls will be irrelevant in a few years anyway, and another member of the panel said industry can't be controlled so the management controls are all useless. Other members of the panel were of the view that we should leave the management controls to the department and minister [REDACTED]

In the end we felt very, very frustrated and decided the only way to go would be to resign, despite really wanting to support the industry contributing to the state's sustainable growth. What we were hoping to achieve in the end - we would really like to change aquaculture industry planning and that would obviously require changes to the legislation because the panel is embedded in the legislation, and increase transparency and accountability in the planning process. Currently because the panel is presented as an independent panel - but it's not - the public has a lot of suspicion that it's not working the way it should work and they are not really aware how it should work from the point of view of the department and minister. I think there is a lot of confusion about what the panel is doing. It's not independent at all.

**Ms FORREST** - There is confusion about whether the panel is independent or not. If the panel is operating according to the legislation which says you can only approve the plan, they are acting according to the legislation.



IN CAMERA

Professor NOWAK - [REDACTED]

CHAIR - [REDACTED]

Professor NOWAK - [REDACTED]

Ms CHERRIE - [REDACTED]

Mr FINCH - [REDACTED]

Ms CHERRIE - [REDACTED]

Mr FINCH - [REDACTED]

Ms CHERRIE - [REDACTED]

Mr VALENTINE - [REDACTED]

Ms CHERRIE - Yes, it wasn't objective, it wasn't science-based, it wasn't based on engineering principles. It wasn't based on evidence, it was based on opinions. My opinion of the salmon industry is that I hope it has a really long and massively prosperous future. I think if it can make a lot of money, it absolutely should, but just not to the detriment of other users of that resource and other people who want to enjoy that amenity. They are compatible goals. You can have greater economic performance and greater environmental performance.

CHAIR - Can you talk us through how the panel goes about weighing and considering those different interests and outcomes?

Ms FORREST - And what you can consider.

CHAIR - Exactly, that's what I want to hear about. What tangibly happens within the panel to weigh those things against each other?

Ms CHERRIE - [REDACTED]

IN CAMERA

CHAIR - [REDACTED]

Ms CHERRIE - Yes, that was one of the problems. Because they haven't actually identified the natural values or really mapped the use of Storm Bay to the level where you can say these are people with an interest in this body of water, these are the people we need to consult with - that's not done.

If I think about what we would do sensibly, there's no evidence for everything. Sometimes you just go, what would be sensible here? What would be in keeping with the public interest and industry interest? Really for me it comes back to understanding a bit of the science and what the system can handle. If the system can handle it - you know what? - let them go a bit, let them have it. But the science wasn't there to say what the system could handle it, therefore we were just letting them run away with it without having the foundations strong.

You weigh it up based on professional inference and available information. Those public hearings were important. Having said that, I've done a lot of community consultation on big, dirty, meaty mining issues, and they are very emotional. Emotion is sometimes not helpful, but sometimes it's telling of how big an issue is. [REDACTED]

Professor NOWAK - [REDACTED]

Mr VALENTINE - There were no principles you had to measure things against?

Ms CHERRIE - There was never a statement of expectation or intent. I used to sit on the EPA board where the minister would write to you and say 'This is what I expect you to do and how I expect you to discharge yourself, and as a board we would write back and go 'Yes, we can do that and this is the way we will do it.'. There is none of that for the panel. Coming back to your point:

## IN CAMERA

if we were deliberating a particular aspect and not enough information was being submitted by the developers or provided by the EPA or the marine branch, we would seek more information.

**Ms FORREST** - On that point, in the submission you said -

We were not allowed to consider the previous salmon industry issues in Macquarie Harbour as they were considered irrelevant by other members of the Panel.

Can you talk me through that? Why were you not allowed to consider that?

**Ms CHERRIE** - We were told repeatedly 'They are different systems and we have moved on from then and things have changed', but in reality, you earn your right to grow. Any industry earns its right to grow. You earn it by your history and your reputation and what you deliver. They had not earned their right to grow through Macquarie improved. I did my own due diligence on this exact issue of Macquarie Harbour outside of meetings. Nobody wanted to talk about it in meetings - 'We don't talk about Macquarie Harbour' - it was the elephant in the room.

All right, but I needed to know they had earned their right to grow, so I spent time with the EPA director and said, 'Show me how they went, show me the sampling under and around cages, show me what they did when a sample was poorer or indicated environmental harm. How did they respond to that? How did they work with you? Were they respectful?'

**Ms FORREST** - Did you look at all three companies?

**Ms CHERRIE** - Yes, and you will notice in none of what we have written and today I am not talking about any companies; [REDACTED]

**Mr VALENTINE** - It is the process.

**Ms CHERRIE** - It is the process. I went and looked and saw a particularly bad sample. What happened then is it showed me letters written back; eight months later we are destocking that cage. The problem with that is we have thrown all our eggs into the adaptive management basket, which is 'Let's throw cages in and see how it goes.'. That is lazy management and lazy science. No land-based development in Tasmania is approved on an adaptive management as their strategy.

As with putting a mine in, you are not going to start discharging tailings and see how the river responds to it. You plan it, engineer it, put filtration and treatment in and understand what you are going to monitor and what your trigger levels are before you are approved. With marine farming, we stick cages in and we suck it and see. It is inappropriate. From an environmental management perspective, we are saying come on; the plausible scenarios are clear, the global experience on what goes wrong, so let's get plans for every one of those plausible scenarios because that is reasonable. Let's get sampling programs and the right analysis and the right response, so we can see things happening and can respond.

**Ms FORREST** - When you did your own due diligence with what happened in Macquarie Harbour, what then did you try to take back to the panel in terms of assessing the proposal before you?

IN CAMERA

Ms CHERRIE - [REDACTED]

Ms FORREST - [REDACTED]

Mr VALENTINE - [REDACTED]

Ms CHERRIE - [REDACTED]

Ms FORREST - [REDACTED]

Ms CHERRIE - [REDACTED]

CHAIR - [REDACTED]

Ms CHERRIE - [REDACTED]

Professor NOWAK - [REDACTED]

Ms CHERRIE - [REDACTED]

IN CAMERA

Professor NOWAK - [REDACTED]

CHAIR - [REDACTED]

Professor NOWAK - [REDACTED]

Ms FORREST - [REDACTED]

Ms FORREST - [REDACTED]

Professor NOWAK - [REDACTED]

Ms CHERRIE - [REDACTED]

Professor NOWAK - [REDACTED]

[REDACTED]

Ms CHERRIE - [REDACTED]

[REDACTED]

Mr VALENTINE - [REDACTED]

Ms CHERRIE - [REDACTED]

Professor NOWAK - [REDACTED]

Ms FORREST - [REDACTED]

[REDACTED]

Ms CHERRIE - [REDACTED]

[REDACTED]

Professor NOWAK - [REDACTED]

[REDACTED]

Ms CHERRIE - [REDACTED]

Professor NOWAK - [REDACTED]

Ms CHERRIE - [REDACTED]

[REDACTED]

Ms FORREST - [REDACTED]

Ms CHERRIE - [REDACTED]

CHAIR - [REDACTED]

Ms CHERRIE - [REDACTED]

Mr FINCH - [REDACTED]

[REDACTED]

Professor NOWAK - [REDACTED]

[REDACTED]

Ms CHERRIE - [REDACTED]

Professor NOWAK - [REDACTED]

CHAIR - [REDACTED]

Professor NOWAK - [REDACTED]

CHAIR - [REDACTED]

Ms CHERRIE - [REDACTED]

CHAIR [REDACTED]

Mr VALENTINE - [REDACTED]

Ms CHERRIE - [REDACTED]

CHAIR [REDACTED]

Professor NOWAK - [REDACTED]

[REDACTED]

[REDACTED]

Ms CHERRIE - [REDACTED]

[REDACTED]

Professor NOWAK - [REDACTED]

[REDACTED]

Ms FORREST - [REDACTED]

[REDACTED]

Professor NOWAK - [REDACTED]

[REDACTED]

Ms CHERRIE - [REDACTED]

[REDACTED]

Professor NOWAK - [REDACTED]

[REDACTED]

Ms CHERRIE - [REDACTED]

[REDACTED]

Mr VALENTINE - [REDACTED]

[REDACTED]

Ms FORREST - [REDACTED]

[REDACTED]

Ms CHERRIE - [REDACTED]

[REDACTED]

Professor NOWAK - [REDACTED]

[REDACTED]

Ms CHERRIE - [REDACTED]

[REDACTED]

Professor NOWAK - [REDACTED]

[REDACTED]



[REDACTED]

[REDACTED]

Ms CHERRIE - [REDACTED]

Mr VALENTINE - [REDACTED]

Ms CHERRIE - [REDACTED].

Professor NOWAK - [REDACTED]

Ms CHERRIE - [REDACTED]

[REDACTED]

Ms FORREST - [REDACTED]

Professor NOWAK - [REDACTED].

Mr VALENTINE - [REDACTED]

Ms FORREST - [REDACTED]

Professor NOWAK - [REDACTED]

Ms FORREST - [REDACTED]

Ms CHERRIE - [REDACTED]

**Professor NOWAK** [REDACTED]

**CHAIR** - Can I put it to you that when we spoke with the department the other day they characterised your disagreements with the other panel members as just differences in scientific opinion, and that can happen, and then you stepped away because you were disgruntled with the process?

**Professor NOWAK** - For us it was the process but not because of differences in scientific opinion. There was no other expert on the panel who spoke about aquatic animal health or biosecurity. The industry talked about it sometimes, based on their experience apparently and also what they wanted to achieve. [REDACTED]

**CHAIR** - You'd gather this mass of information which, by the look of it, involves a mass of information and all these submissions from external parties, and then consideration of all that can go in different ways. What happened in your situation was that you both had a view and everybody else had a different view?

**Ms CHERRIE** - No, not really. It was simply the fact that we weren't allowed to consider the glaringly obvious. As a scientist, I would go, 'Here are all the things we know and that are unrefutable - the experience in Macquarie Harbour, POMV's existence - we need to respond to those.'. It was us trying to respond to the changes that was refuted. There were many occasions where I learned a lot from other panel members in areas outside my expertise and I enjoy learning. I don't mind being wrong. Present me with information and that is fine, but my whole business is an assurance business. This whole thing fell apart when I started to say 'Okay, that's great so show me how practically that will work.'.

**Mr VALENTINE** - [REDACTED]

**Ms CHERRIE** - [REDACTED]

**Professor NOWAK** - I also think the main problem is the fact that the panel is very ineffective. It doesn't really have any role, to be honest. It doesn't really do quality control. Most members are aware of it and they mostly say just don't do anything because we have to approve it anyway. It is a waste of taxpayers' money, in my view. Having an independent panel where the public believes they are independent people when they are not, I think is just lack of transparency and it shouldn't be happening like this.

**IN CAMERA**

**CHAIR** - Do you have a suggestion as to what could be modified or changed about that mechanism of the panel that would have it fulfil a worthwhile function in an accountable way?

**Professor NOWAK** - If you have a panel that is advisory and has representatives from other stakeholders, not just someone who represents aquaculture - because if you look at membership of the panel, there are different skills, but then there is someone who knows things about aquaculture who represents aquaculture. Why not have other stakeholders who have interests and use the marine environment? Or we don't have a panel at all because all the roles we were doing could be done by the department - and it would be done obviously - it's not independent, which it's not.

**Ms FORREST** - Is it a role that could be done by the EPA or is that separate again?

**Professor NOWAK** - Yes, that's what I am saying.

**Ms CHERRIE** - That's exactly the same way as land-based developments happen under the Environmental Management and Pollution Control Act - EMPCA. Somebody puts in a proposal and they prepare all their plans. The department considers it. They get together with all the scientists in the relevant areas and they thrash it out, sometimes over two or three years. They work up a development that is worthy, all the bugs have been ironed out, of coming to the EPA board and you only send it when it is worthwhile.

What we looked at, from the environmental management perspective, was an eight-page environmental management plan for the state's largest industrial development ever. That is not appropriate. I cannot form a view on an eight-page environmental management plan. Tell me where your sampling is going to be. Tell me how you are going to manage mortalities. Tell me how you are going to wash your fish, tell me, tell me. But if you do not think those things through when they are normal operational things, it was a waste of time. Certainly, for me, my whole business is assurance, helping people deal with really big, meaty polluting public issues.

**Ms FORREST** - Is it appropriate then for the EPA to assess a marine farming plan and/or amendment, as well as apply the standards related to the environmental assessments?

**Ms CHERRIE** - They are separate groups within the EPA. There is an assessment branch that does developments and looks at applications, and a regulation branch that, okay, you have approved it, we will regulate it to that standard.

**Ms FORREST** - You believe that could work?

**Ms CHERRIE** - Yes, absolutely.

**Professor NOWAK** - [REDACTED]

**Mr FINCH** - [REDACTED]

**Ms CHERRIE** - [REDACTED]

**Mr FINCH** - [REDACTED]

IN CAMERA

Ms CHERRIE - [REDACTED]

Professor NOWAK - [REDACTED]

Mr FINCH - [REDACTED]

Professor NOWAK - [REDACTED].

Mr FINCH - [REDACTED]  
[REDACTED]

Professor NOWAK - [REDACTED].

Mr FINCH - [REDACTED]

Professor NOWAK - [REDACTED]  
[REDACTED]

Mr VALENTINE - [REDACTED]

Professor NOWAK - [REDACTED]  
[REDACTED]

Mr FINCH - [REDACTED]  
[REDACTED]

Ms CHERRIE - [REDACTED]

Mr FINCH - [REDACTED]

Professor NOWAK - [REDACTED]

Ms CHERRIE - [REDACTED]

Professor NOWAK - [REDACTED]

CHAIR - [REDACTED]  
[REDACTED]

Ms CHERRIE - [REDACTED]

CHAIR - [REDACTED]

IN CAMERA

Professor NOWAK - [REDACTED]

Ms CHERRIE - [REDACTED]

Mr FINCH - [REDACTED]

Professor NOWAK - [REDACTED]

Mr FINCH - [REDACTED]

Ms CHERRIE - [REDACTED]

Professor NOWAK - [REDACTED]

Mr FINCH - [REDACTED]

CHAIR - [REDACTED]

Ms FORREST - [REDACTED]

CHAIR - [REDACTED]

Mr FINCH - [REDACTED]

CHAIR - [REDACTED]

Professor NOWAK - [REDACTED]

IN CAMERA

CHAIR - [REDACTED]

Professor NOWAK - [REDACTED]

CHAIR - [REDACTED]

THE WITNESSES WITHDREW.

IN CAMERA

**Item 4: Transcript of Evidence 8 September 2020  
(Marine Farming Planning Review Panel  
represented by Mr Andrew Paul, Professor Colin  
Buxton, Mr Pheroze Jungalwalla and Mr Jock  
Campbell)**

## PUBLIC

**Mr ANDREW PAUL**, CHAIR, **Professor COLIN BUXTON**, **Mr PHEROZE JUNGALWALLA** AND **Mr JOCK CAMPBELL**, MARINE FARMING PLANNING REVIEW PANEL, WERE CALLED, MADE THE STATUTORY DECLARATION AND WERE EXAMINED.

**CHAIR** - Thank you very much for coming. This committee hearing is protected by parliamentary privilege. I will remind you that comments you might make outside the hearing may not be afforded that same privilege. You have a copy of the information for witnesses available to you. If you don't have that and you would like it, we can provide it to you. The evidence you are presenting is being recorded; the *Hansard* version will be published on the committee website when it becomes available and we are also broadcasting the hearing today.

Would you like to begin, Andrew, by making an opening statement?

**Mr PAUL** - I thank the committee for the opportunity to appear before it. As you know my name is Andrew Paul, I am a former longstanding general manager of Clarence City Council. I have qualifications in environmental health and management, and am a fellow of the Australian Institute of Company Directors. In addition to other board roles, I am the current chair of the Marine Farming Planning Review Panel. I was appointed to this role in November 2019, only some months ago. As a relatively new member of the panel I thank the committee for allowing me to be accompanied today by longstanding panel members who I would like to introduce if I may.

To my left is Emeritus Professor Colin Buxton. Colin has extensive experience in fisheries, aquaculture, marine science and marine resource management. He currently serves on several state and national boards, including the Tasmanian EPA; the Fisheries Research and Development Corporation, where he is deputy chair; he is chair of Southern Rocklobster Limited - SRL; the National Fishing Advisory Council, where he is also chair. He was the inaugural director and professor of the Tasmanian Aquaculture and Fisheries Institute - TAFI - the University of Tasmania; and the director and professor of the Fisheries, Aquaculture and Coasts Centre when TAFI became the Institute of Marine and Antarctic Studies - IMAS.

Mr Pheroze Jungalwalla started working in the aquaculture industry after graduating in 1976, initially with trout, then with oysters and mussels and later with salmon. Since that time, he has served with various companies in senior operations and research manager roles. Pheroze has extensive knowledge of marine farming, having been a pioneer of the salmon industry in Tasmania. Pheroze is now retired from full-time employment but remains the owner and operator of the aquaculture consultancy business, Access Aquaculture. In this capacity he has served on several state and national boards relating to aquaculture, aquatic animal health and welfare and biosecurity.

To my far left is Mr Jock Campbell, a former longstanding councillor and mayor of Clarence City Council. Jock was the managing director and owner of Plastic Fabrications Pty Ltd and designed, manufactured and supplied finfish pens and aquaculture infrastructure throughout Australia and internationally.

I would like to make a brief opening statement.

The Marine Farming Planning Review Panel is a statutory body established under the Marine Farming Planning Act 1995. The functions and powers of the panel are set out in



## PUBLIC

section 9 of the act and the members of the panel are appointed by the Governor. The current membership of the panel is as follows. Do I need to read out the membership of the panel?

**Mr VALENTINE** - What I would like to know, if I can, is which person is appointed according to the list in the act?

**Mr PAUL** - I was appointed as chairperson. Mr Mitchell Clark, who is not here today, is a person with ability and experience in planning issues who was nominated by the chair of the Resource Planning Development Corporation - it's called something else now; Joanne Fearman, as a person other than the director of the EPA with ability and experience in environmental management; Dr Rod Andrewartha, as a person other than the director of the EPA with ability and expertise in fish health and biosecurity; Professor Colin Buxton, who I've outlined as a person with ability in marine resource management; Mr Terry Long, as a person with ability to assess boating, recreational and navigational issues; Mr Pheroze Jungalwalla, as a person with experience in marine farming; Mr Neil (Jock) Campbell, as a person with expertise in local government issues; and Heather Chong, as a person nominated by the minister.

Can I say at the outset that the panel did not make a submission to this inquiry or when submissions were called. As a statutory body, it was the view of the panel members that the panel's role was to work within the legislative provisions as enacted by the parliament from time to time. I also understand - and I stand corrected on this - that no specific request was made to the panel to make a submission at the initial calls for submissions in October 2019. The panel, however, welcomes the opportunity to appear today.

In appearing before the committee today we are aware that numerous submissions made by interested parties to the inquiry have referenced or commented on a number of matters that have been considered by and been the subject of panel consideration - specifically, what we would call the Storm Bay proposals.

In relation to these submissions we are concerned that some submissions appear to have incorrectly represented the actions and determinations of the panel. I would ask that Professor Buxton and Mr Jungalwalla be permitted to respond to those matters. The submission from Professor Buxton and Mr Jungalwalla is eight pages in length and can be presented in full detail or in summary key point form. We would seek guidance of the Chair regarding this. Either way, we wish to table a full copy of the written submission to the committee, if that's acceptable?

Additionally, prior to concluding our evidence to the committee, Professor Buxton and Mr Jungalwalla would, with the agreement of the committee, seek to give further evidence in camera in relation to matters previously given in evidence by other parties to the committee.

Finally, for the information of the committee I would like to table, if I may, the panel reports for each of the three Storm Bay proposals. We are happy to take questions in relation to any other matters as the committee wishes.

Thank you.

**CHAIR** - Thank you very much. You're welcome to table those three reports and you're also welcome to table the longer version of the statement that Professor Buxton would like to

## PUBLIC

make. We would like to hear the summarised version of that so that we could interact with you about it while we're here.

**Ms FORREST** - Mr Jungalwalla as well.

**CHAIR** - Yes, both. A summarised version of the lengthy statement. We will consider the matters in camera at a later stage of the hearing that you feel is appropriate for us to consider that. Thank you.

**Prof. BUXTON** - Thank you very much. The key points we would like to make in relation to the assessment of Storm Bay are first, that the panel is an advisory body to the minister. Its powers under the Marine Farm Planning Act 1995 include an ability to reject a draft amendment - that's section 33(4)(b) and to reject a draft plan, which is section 29(2)(b).

The second point is that in our assessments all members of the panel are given the opportunity to contribute to panel reports.

The third point is that issues raised by the subject experts during the deliberations of the panel are thoroughly discussed and edits, once agreed by the panel, are incorporated into our reports.

The fourth point is that the previous statement was definitely the case in the evaluation of the Storm Bay proposals. The work of the panel resulted in very significant changes to the draft amendments and to the plan.

The fifth point is that much has been made of the resignation of two panel members during the process of evaluating the expansion of salmon farming into Storm Bay. We believe their comments and the reasons for their resignation reflect poorly on the workings of the panel. They question the integrity of other panel members and have contributed significantly to an erosion of public confidence in the panel. As such, they merit a response.

Both Professor Nowak and Ms Cherrie were party to the finalisation of two of the reports - they being the draft amendment No. 5 to the Tasman Peninsula and Norfolk Bay Marine Farm Development Plan, and draft amendment No. 3 to the Storm Bay North, Trumpeter Bay, North Bruny Marine Farm Development Plan, and they were party to the finalisation prior to their resignation.

The seventh point is that the above two reports and the recommendations therein were unanimously approved by the panel. No dissenting views were recorded.

Professor Novak and Ms Cherrie resigned from the panel towards the end of the assessment of the third report, which is the draft Storm Bay North Marine Farm Development Plan; however, they were both very involved in the assessment of that plan by way of edits up until the time of their resignation.

Lastly, following their resignation, the panel determined there was adequate expertise remaining on the panel to complete the assessment, particularly in the light of the fact that most of the drafting of the report and contributions by members of the panel were complete.

## PUBLIC

I will take your guidance now as to how much more detail you would like, as I can address those points in summary form, and certainly we would like to submit the full document to you.

**CHAIR** - You are welcome to table the full document; we will certainly accept that. WE may ask questions to elicit further detail, unless members would like to hear more detail now on elements of those points.

**Mr VALENTINE** - It would be good to complete it, I think.

**CHAIR** - Okay. If you would like to go into a little more detail, that's fine.

**Prof. BUXTON** - In relation to statements we hear from time to time that the panel has no teeth, in one of the submissions to the inquiry from the Tasmanian Conservation Trust, they state that -

The Marine Farm Planning Review Panel has very important responsibilities to decide on the areas that are made available for finfish farming.

That statement is incorrect. The panel does not determine the areas to be made available for finfish farming; however, as an advisory body to the minister we do have power both to reject the draft amendment and to reject a draft plan. They occur at a particular point in the statutory outline of the act.

In relation to the Storm Bay proposals, the panel began the process of assessing these proposals in June 2016. Very early in the piece we wrote to the minister, noting the complexity of the process, given that there were three separate proposals, two amendments, two existing plans and a new plan area for Storm Bay and all of them obviously related to the same water body, and the panel noted to the minister that the proposals should be considered as a package.

Part way through this process there was a change in panel membership, notably with the addition and strengthening of expertise on the panel, and that included Barbara Novak and Louise Cherrie.

**Mr VALENTINE** - What date was that?

**Prof. BUXTON** - It was towards the end of 2017 that they came onto the panel.

**Ms FORREST** - Was that because of the perceived complexity of the three assessments being undertaken at once, or was there some other reason?

**Prof. BUXTON** - No, I think at the time there was a belief that the panel in conducting its business could be enhanced by including the specific expertise these two people brought. I believe it was publicly advertised and they were selected based on merit.

**Ms FORREST** - So not a perceived gap in the skill set, then?

**Prof. BUXTON** - I don't think so, just an additional complementary skill set.

**Mr VALENTINE** - Was that by expression of interest?

## PUBLIC

**Prof. BUXTON** - I am subject to correction on this matter, because I wasn't involved in the selection of these panel members, but I believe the way this is done, other than the direct appointment from the Governor, is through an expression of interest.

**CHAIR** - Can I clarify in terms of the timing of adding those two members that it was after the process had commenced in terms of the applications for Storm Bay?

**Prof. BUXTON** - That is correct, and that's a very important question because the panel had already passed the stage at which we would have been in a position to reject an amendment or reject a plan.

**CHAIR** - Particularly, what stage is that? Just to be very clear so that we know when you talk about that opportunity to reject, where does that lie in the actual process?

**Prof. BUXTON** - This is like being in an exam.

**CHAIR** - I have a lovely diagram.

**Prof. BUXTON** - I think it's in section 3 of the act; it's early in the piece. If I can explain in general terms, the minister will receive, either from a proponent or the Government, a proposal to establish a plan. The minister, through his officers and presumably consultation with government, makes a determination as to whether that plan should proceed. The minister obviously has an opportunity to refer that matter to the panel and it's at that stage that a plan could be refused. We've passed that stage.

In relation to draft amendments, the panel will receive a draft amendment and under section 33 of the act has the right to reject an amendment. Further on in the process, once the approval has been provided by the minister to proceed with a plan, the panel then goes through the evaluation of that plan and once again the panel has the ability to reject a plan, at which point the plan would go back to the planning authority for amendment, which would then come back to the panel, and that could on a technicality become an endless loop if the panel were not satisfied with what was in front of them. The panel has power to reject and to make significant changes to plans and amendments.

**CHAIR** - Can I just pick up on that a little further? You are saying that you were already past the stage of the potential to reject the plan when the two new members were added?

**Prof. BUXTON** - That's right.

**CHAIR** - So you'd already conducted hearings and engaged in that process?

**Prof. BUXTON** - No, we hadn't conducted hearings. What would have happened is that we would first of all receive information that these proposals were on the table. We as a panel would have a contribution to make to the guidelines for the drafting of an environmental impact statement. The proponent would then, in collaboration with the planning authority, go out and draft that environmental impact statement. Once the panel was satisfied that the impact statement was fit for public exhibition, it would go out for public exhibition. The panel also has an opportunity to make a determination as to whether they want to hold a hearing or a public inquiry, and then that process proceeds; we hold a hearing, we take that information together with the planning authority's section 40 report, which details the objections and the

## PUBLIC

responses and mitigations to objections, and all of that is put together towards the end of the process in a report written by the panel that then is submitted to the minister with a recommendation.

**Mr JUNGALWALLA** - Can I add something at this point? As to your earlier question about at what point did it happen, I don't have the details in front of me, but I recall we were provided with a flowchart of exactly the process you're talking about.

**Prof. BUXTON** - Yes.

**CHAIR** - I have a flowchart here and it looks to me as though the point at which you're able to reject a plan is after everything has been considered, after hearings have been held, and that's where that is in the process. So that we have a context in which to understand information we've received from different sources, I'm just trying to clarify something about the two new members who joined after that time. After you've made a recommendation - either a rejection or an approval or perhaps a modification - then there is no further role for the panel, so why would the new members have been involved in the process?

**Prof. BUXTON** - No, that's not entirely correct. The point at which those two members joined the panel would have been prior to us making a determination either to reject the draft amendments or to reject the plan.

Again, subject to correction here, I believe they were serving members of the panel when we chose to reject the plan.

**Ms FORREST** - Can I clarify? There are two points. One when you first get the draft amendment, or the draft plan. That is earlier in the piece under sections 15 and 16 of the Act, which is Part 3, Marine Farming Development Plans.

Later on, after you have accepted the amendment or the draft plan to assess it, then, from section 41 on, is where you have done the work; you have had the public hearings if you are having them, and all that process.

Then you make a report to the minister where you may recommend that they don't proceed, or that they do.

**CHAIR** - It is the minister's decision about whether to grant the application or refuse the application for a plan.

**Mr PAUL** - To clarify, the latter point you are referring to - and correct me if I get this wrong, Colin - the panel doesn't have the capacity to reject it out of hand. They have the capacity to reject it in the current form, and request further modification, which is the continuous loop, as Colin termed it.

**Prof. BUXTON** - It's different for a plan and for an amendment, obviously, but the panel does have an ability to reject a draft amendment. That part of the process had been passed when Louise Cherrie and Barbara Nowak joined the committee.

## PUBLIC

**Ms FORREST** - Reject the consideration of it. You'd passed the point where you could reject the consideration of it. So when they joined, they joined at a point where you were about to consider the plans.

**Prof. BUXTON** - That's correct. A very substantial amount of work needed to be done, including the hearings associated with that process.

**CHAIR** - I think there's confusion here. I recognise that this is very complex. But the panel doesn't have the authority to reject the consideration of a plan. The minister has the authority to do that, at that earlier time.

**Prof. BUXTON** - That's correct for a plan.

**Mr VALENTINE** - For a plan or an amendment?

**Prof. BUXTON** - The panel has the ability to reject a draft amendment, under section 33 of the act.

The panel doesn't have the ability to reject a draft plan. It has the ability to send a draft plan back to the planning authority for amendment, until it is satisfied that the draft plan is fit for purpose.

**Ms FORREST** - In a never-ending loop.

**Prof. BUXTON** - It could be in a never-ending loop. That is the technicality I thought merited some mention.

**CHAIR** - To clarify in relation to Storm Bay, which is where we began this part of the discussion, the things being considered there, are you saying they were amendments or they were new?

**Prof. BUXTON** - There were two amendments. One was an amendment to the operations of Huon Aquaculture. One was an amendment to the operations of Tassal. One was an entirely new plan, which was to accommodate the operations of Petuna.

**CHAIR** - The two reports that those two new members were involved in writing were related to the two amendments?

**Prof. BUXTON** - That's right.

**CHAIR** - And the one at which they resigned, prior to completion, was the new plan?

**Prof. BUXTON** - That's right.

**CHAIR** - And you are saying that they had joined the panel at a stage in relation to those two amendments where a rejection option no longer existed?

**Prof. BUXTON** - We'd passed the point at which the panel had the power to reject a draft amendment.

## PUBLIC

**Mr PAUL** - If that is rejected out of hand, they still have the capacity to recommend to the minister that the amendment doesn't proceed. That is a very clear point that needs to be made.

**CHAIR** - Those members weren't there for that. They were there for the latter part of those two amendment locations.

**Mr PAUL** - The panel at that point could have recommended to the minister that those amendments not proceed.

**CHAIR** - They were there for the entire process in relation to the new plan that was being sought for Petuna?

**Prof. BUXTON** - Correct.

**Ms FORREST** - If I might, Chair. With the amendment that the two members were there for - past the point of rejection out of hand, saying we are not going to look at that. Were they involved in the process of assessment and preparing a report? They were there right to the end of that preparation of report and there were no dissenting comments in the report regarding the amendments?

**Prof. BUXTON** - That is correct; they were there through that entire process. That gets to a formal point whereby the panel has to make a resolution to approve or to make a recommendation to the minister to approve an amendment. They were party to that recommendation and there was no dissension.

**Mr PAUL** - That recommendation was unanimous from the panel.

**Prof. BUXTON** - That is correct.

**CHAIR** - Do you want to pick up on where you were up to?

**Prof. BUXTON** - I think we are covering some of the points I wanted to make. I will pick up in saying, again, that the deliberations of the panel led to significant changes being made to all three of our reports and to the proposals on the table.

However, Barbara Nowak and Louise Cherrie in their submission to this inquiry stated that -

Poor functioning of the Marine Farm Planning Review Panel includes the inability to apply sound science, an unwillingness to discuss and learn from changes (e.g. Macquarie Harbour, emergence of POMV [the pilchard orthomyxovirus]), and the propensity to not only provide advice operationally and the propensity to only provide advice operationally convenient to the salmon industry.

As I have said these resignations were seized upon by the press and by others and have been reported in several other submissions to this inquiry, notably from Environment Tasmania, the Tasmanian Conservation Trust, the Greens and the Environmental Defenders Office, as evidence of the poor functioning of the panel.

## PUBLIC

The reasons for their resignation, however, were only provided in a letter to Mr Barnett some three months after they had resigned and they were leaked to the press from sources unknown. I suppose it was the contents of that leaked document that we believe reflected very poorly on the workings of the panel, that certainly questioned the integrity of other panel members and we believe have contributed significantly to an erosion of public confidence in the workings of the panel.

Their concerns over the wording of the act, which in their view at the time limited the powers of the panel, to my mind reflected a poor understanding of the act itself and the point of the process at which they joined the panel. They should have come into the process with some knowledge of the act. They should have properly understood where it was in the process that they were making a contribution. We were certainly past the point, as we have already mentioned today, at which the panel had the power to reject either those amendments out of hand prior to evaluation or to reject the plan.

**Ms FORREST** - To clarify: didn't you just say you can't reject the plan?

**Prof. BUXTON** - We can't reject a plan, correct; that is a power the panel does not have. The panel could make a recommendation to it.

**Ms FORREST** - After the assessment, but you can't reject an assessment of a plan.

**Prof. BUXTON** - Yes, that is correct. The second point that they make - the absence of base information on which they could provide evidence - was very well understood and appreciated by the rest of the panel. However, in our deliberations, the panel came to the view that this could be accommodated and we noted several things. We noted that Huon Aquaculture was already operating in Storm Bay and that Tassal was also operating effectively by way of contributing nutrients to Storm Bay in its current operations.

There was considerable amount of information on Storm Bay in the work done by IMAS and CSIRO that describes the underlying conditions - that there were commitments from all three companies to establish a robust research program that would further provide information on this farming activity; that the historical development of salmon farming; and other aquaculture ventures in Tasmania and Australia in general had proceeded without perfect knowledge and had been regulated under an adaptive management framework that, might I say, is considered to be internationally best practice. The regulator had clearly articulated a slow ramping up of activity while this significant research program was underway, so the argument that there was insufficient base information on which to proceed was by way of our discussion as a full panel rejected, and we proceeded. Their third point - that the panel showed an undue propensity to support what is operationally convenient for the aquaculture industry - is a highly subjective statement. No evidence was led to support the statement and we don't think it merits a response.

They elaborate in their letter to the minister on the reasons for their resignation, and I have responded to that in this document. Do you want me to elaborate on those reasons?

**Ms FORREST** - I think so, a little.

**Prof. BUXTON** - Okay. The first point is that they claimed there was a lack of a biogeochemical model upon which to determine the carrying capacity and nutrient transfer



## PUBLIC

within the lower Derwent Estuary, and that was a fundamental shortcoming which prevented us from proceeding any further.

Again, this was very well understood and thoroughly considered by the panel. The panel noted the existing farm inputs via Huon Aquaculture and Tassal, which I mentioned earlier, were existing inputs through current operations. Huon Aquaculture, for example, wasn't asking only to expand its production in Storm Bay - they were already there; they were operating, their pens were in place and they were making a contribution to the area.

The panel's job at that time, in the case of Huon Aquaculture, was primarily to look at concerns levelled around biosecurity issues and how we managed the onset of POMV, which was becoming an increasing problem within that farming industry. The lack of a biogeochemical model, in the opinion of the panel, was insufficient for us to say, 'Stop - no further. We have to do an enormous amount of research work to get perfect knowledge and then only proceed with farming'. That is not how adaptive management works; in fact, that is not even how the precautionary principle should be applied in an agricultural context.

**Mr VALENTINE** - I was going to ask that question. Is there a difference between adaptive management and precautionary principle management of -

**Prof. BUXTON** - Certainly there is a difference.

**Mr VALENTINE** - No, but is it that the people who resigned had the precautionary principle as their main thesis while the panel was operating under an adaptive management approach?

**Prof. BUXTON** - Neither of them specifically stated they had problems with the application of the precautionary principle in the context of Storm Bay, but Louise Cherrie was certainly concerned that the adaptive management framework under which salmon farming is conducted in Tasmania was insufficient, not fit for purpose; I will deal with that later on.

At this point, I should state that the industry aspirations for Storm Bay, when initially stated, were to produce 80 000 tonnes of fish. The applications we were reviewing in total were addressing an increase or a production limit of 40 000 tonnes.

The EPA took it upon itself, prior to going any further, to limit that further to 30 000 tonnes, and that included the existing production of Huon Aquaculture. If the panel were looking at this from the perspective of a precautionary increase in farming in Storm Bay, we already had about 8000 tonnes of production from Huon Aquaculture contributing to that 30 000 tonnes. We were clearly of the opinion as a panel that if they were approved to go ahead, Tassal would take time before they could actually occupy that space, and Petuna was much further behind in that race to occupy the space.

In terms of the state of knowledge we have in Storm Bay and whether it was sufficient to proceed in a careful way, our view as a panel was that we had plenty of time to do research to understand issues like nutrient inputs that you get out of biogeochemical modelling.

**Mr JUNGALWALLA** - My memory is that the 30 000 tonnes was a staged increase to that point; it wasn't straightaway. Is that a correct, Colin?

## PUBLIC

**Prof. BUXTON** - Absolutely.

**CHAIR** - We have to be mindful of our time. We have a lot of questions and we're not necessarily again prosecuting the decisions made there; we're interested in the process certainly and it's where I think our questions will be directed, most likely. By all means, keep going but be mindful that we will get to a point where we can -

**Prof. BUXTON** - So keep going but speed up. Okay. They make five points as reasons for their rejection. I am not going to go through all of those because they're outlined in this thing. They were concerned about a biosecurity plan. Again, the panel considered that thoroughly. They claimed there were no regulatory guidelines around which to define standards to which we should be holding the operators. We reject that on the grounds that the management controls stipulate those standards.

As I said earlier, Louise Cherrie in particular was concerned about the adaptive management strategy not being fit for purpose, and I deal with that in some detail.

Last, they claim that there were no natural values for Storm Bay and that these were not considered and mapped. Again, that's incorrect because there's been considerable mapping of the natural values of Storm Bay, and they are described in some detail in the Integrated Marine and Coastal Regionalisation of Australia, version 4.

In terms of their functioning on the panel, I think we have said enough about our view that both of these panel members consulted extensively on matters of concern in the drafting of our reports. By way of example I'd like to table an appendix that outlines in some detail those contributions. Because it was a complex evaluation and all of us were struggling to keep abreast of everything that was going on, we were evaluating three things concurrently. The planning authority did an excellent job of keeping us on the straight and narrow by documenting every time Pheroze Jungalwalla, for example, came along with a list of edits and how they were dealt with. By way of an example, this is just for the Trumpeter Bay assessment, and you can see pages and pages of editorial, which is a clear demonstration that they made significant contributions -

**Ms FORREST** - Which guided the writing of your report at the end of the day.

**Prof. BUXTON** - This is the writing of the reports and our consideration of all the individual issues contained within the environmental impact statements which leads to the substance behind our recommendation to the minister.

**Mr VALENTINE** - This is a document to pull all that together, not something produced earlier?

**Prof. BUXTON** - No, this is just a document for me to demonstrate to you that -

**CHAIR** - The sequence of events when you were writing your report.

**Prof. BUXTON** - Yes. The editorial and other changes the panel made were derived through discussions. This assessment involved seven meetings of the panel, four of which were full-day workshops, extensive email exchanges between panel members - we use that as a methodology of discussing things - and 15 separate expert briefings from the likes of the IMAS,

## PUBLIC

the Chief Veterinary Officer, the EPA, DPIPWE, industry proponents, and Professor Larry Hamel, an international expert on biosecurity. All that is pulled together, summarised in this document and is the substance of our report.

As we have stated before, these reports and recommendations, at least for the two amendments, were finalised and unanimously approved. I have given you an example of an email exchange that I'd really like you to look at. Not only is it a respectful and detailed analysis of a particular issue, it concludes with a statement from Barbara Nowak that says 'Great minds think alike'. Hardly the sort of thing that you would expect from somebody who is thoroughly disaffected by the process.

**CHAIR** - You're tabling those two documents with us? Thank you.

**Prof. BUXTON** - Yes, they are a part of my submission. These probably have scribbles on them; Andrew, can you -

**Mr PAUL** - I have full sets of that to hand up.

**Prof. BUXTON** - It is disingenuous and plainly wrong for these panel members, Barbara Nowak and Louise Cherrie, to state that they were not allowed to do or say anything during our deliberations. Through discovery, it is very clear that is an incorrect statement.

As I said before, in any event they could have recorded their opposition or abstention from any individual resolution taken by the panel. It never occurred.

**Ms FORREST** - On that point, you would have copies of minutes of each meeting where decisions were made?

**Prof. BUXTON** - We do, yes.

**Ms FORREST** - Maybe for completeness, you could send us a copy of the minutes.

**Prof. BUXTON** - Of the entire set? We can do that.

**Ms FORREST** - How many meetings are we talking about?

**Prof. BUXTON** - I think we're talking in excess of 26 meetings. I think they are probably on the departmental website. Can we take that on notice?

**Mr PAUL** - They are kept by the Marine Farming Branch. We will inquire and ask them to forward them.

**Ms FORREST** - Thank you.

**Prof. BUXTON** - With specific reference to pilchard orthomyxovirus - POMV - and the global salmon conference you have probably heard about - this relates to biosecurity concerns we all had about three companies farming in Storm Bay - the panel considered these issues very carefully.

## PUBLIC

We took advice and we took the edits of Barbara Nowak in particular on numerous occasions. All of these things were carefully considered and were signed off by the entire panel through resolution. Again, I will keep repeating: we had no dissenting views in the lead up to the acceptance of our reports.

It is fair to say that world's best practice in the salmon industry suggests that as far as possible you should have a single operator in a single water body. There are practical impediments to doing that. There are particularly practical impediments to doing that in a case like Tasmania, which has very limited spaces to go farming. However, that is not the only consideration that relates to virus security concerns. This is where we used the expertise of Larry Hammell quite explicitly. There is a very long list of things that companies should do in order to minimise or mitigate the risks associated with disease transfer in a single water body.

**Mr VALENTINE** - Could you remind us who Larry Hammell is?

**Prof. BUXTON** - Larry Hammell is an international expert on biosecurity risks in salmon farming. He is from the -

**Mr JUNGALWALLA** - Prince Edward Island. He consults internationally. He was brought out to give us some advice.

**Prof. BUXTON** - The panel looked at all the issues associated with biosecurity management. I won't list all of them, but it is things like all fish in, all fish out, adequate following -

**Ms FORREST** - Little fish in one spot, big fish in another.

In terms of having one operator in one water body, would you say that having more than one in one water body, Macquarie Harbour, was part of the problem there?

**Prof. BUXTON** - Certainly, it was perceived to be a risk, and it will still be a risk. There are lots of things we believe can be done to minimise that risk and they are all contained in the management controls recommended by the panel.

**Mr JUNGALWALLA** - Can I add something at this point in terms of biosecurity specifically? The panel was presented with a modelling of circulation of Storm Bay, seasonal variation and inter-annual variation by Rod Andrewartha, and it showed, to put it bluntly, there is no area in Storm Bay which could not experience some fish pathogens being there. As Colin has said, biosecurity is not just one item. If you can't keep pathogen hosts apart, there are other things you can. On that basis there is nowhere in Tasmania really where you can say, 'Oh, we only have one operator' as opposed to other countries.

**Prof. BUXTON** - You cannot eliminate the risk, you can manage it.

**Mr JUNGALWALLA** - There is no such thing as zero risk.

**Ms FORREST** - I am not suggesting that, but I am saying that more than one operator in Macquarie Harbour contributed to the damage done there. It was trashed, we know that.

## PUBLIC

**Mr JUNGALWALLA** - I guess it would have been easier had there not been three operators, but one operator operating individually could also have caused a problem. It is a risk assessment.

**CHAIR** - In clarifying that, I hear what you are saying - that it is not just a matter of a number of operators in an area or potentially the proximity of the operators in the area but there are other factors that come into play to either minimise or exacerbate the risk. In terms of Storm Bay, the decision to have three operators as opposed to two - is that what you were referring to when you said there are particular circumstances in Tasmania that have to be considered? As in, you can't leave one operator out?

**Prof. BUXTON** - No, what I meant was that if you had the luxury of, in a simplistic way, farming salmon in a fjord and you had three companies and three fjords separated geographically, the smart move would be to put one company in each of the three fjords. That is what goes on in other parts of the world. We know that the proximity of companies in South America led to significant disease problems and the industry there coming to the verge of collapse. It has taken a long time to recover.

Notwithstanding all that, if you are forced to accommodate three operators in a single waterbody, quite a large waterbody I might say, there is a whole list of things other than physical separation that very strongly mitigate the risk of disease.

**CHAIR** - I have heard you say that. What I am interested in though is this concept that we are forced to accommodate three in a single body. What is the imperative that forces us to accommodate three in a single body? We could, I am assuming, contemplate two or one, any of the options. If science indicated two were safer and more appropriate than three -

**Prof. BUXTON** - I think that is a valid point, but it is certainly not the panel's job to try to drive that.

**CHAIR** - Was the panel then instructed to accommodate three in Storm Bay and have that as an underlying assumption to decision-making or advice provided?

**Prof. BUXTON** - The panel was not asked to make the determination that three companies would exist in Storm Bay.

**CHAIR** - That is not what I asked you. I understand that was not your decision, but were your instructions as fundamental as three companies would be accommodated in Storm Bay and the panel had to provide advice and make its analysis and assessment on the basis that three would be there?

**Prof. BUXTON** - Yes, that is a fact.

**Mr PAUL** - I think we are misinterpreting the question. I do not think the panel was instructed to provide; I was not part of it but having read the history of it.

**Mr JUNGALWALLA** - If I may, the Government declared a no-grow zone and a grow zone as part of the plan. A large area in Storm Bay was excluded and a large area was included. My understanding is that three companies put in proposals. I know for a fact that where the companies chose to go was subject to a lot of discussion between the companies and the Marine

## PUBLIC

Farming Branch, and they had to move and accommodate because many things were taken into consideration.

There were shipping channels, recreational fishing considerations, rock lobster reefs et cetera. Where they ended up was subject to quite a lot of negotiation and juggling. We were not party to that. So there was no instruction from anybody to say, 'You will have three people there.'. We were presented with this as what had to be assessed. That would be my summary of where it came from.

**CHAIR** - My question really related to the fact that international understanding of best practice would be separate areas for separate companies, but that is not always necessary or possible. Given that there were two companies already there and you were asked to assess a third, is it your understanding that the expectation was a third would be accommodated regardless of what may be best indicated around biosecurity and those other factors that they would be accommodated into that area?

**Prof. BUXTON** - The panel did not make the determination that there would be three companies operating in Storm Bay. The panel received an instruction from the minister to evaluate both the two amendments and the plan. In that sense, the panel was requested, instructed and clearly understood that there were three items for consideration on the table. We could have made a recommendation to reject any of those things at an appropriate point in the process. First of all, we were not asked that question in terms of the plan, which related to Petuna's presence in Storm Bay.

**CHAIR** - You weren't asked what question?

**Prof. BUXTON** - We weren't asked to comment on the approval of the plan. We were asked to evaluate the plan.

**Mr PAUL** - To be clear, I don't think the panel was ever instructed, as part of that request from the minister, to consider it a third company per se. It was put forward as three proposals. The operator is, by and large, irrelevant. There were three proposals that the panel was instructed to evaluate.

**CHAIR** - My understanding would be, though, that as part of your assessment of risk around biosecurity, the fact that there was more than one company is a very pertinent factor to be considered.

**Mr PAUL** - You're absolutely right. I'm just trying to differentiate that the panel wasn't instructed to allow three operators. They were considering three proposals and inherent in those, the panel's consideration was that it was three different operators. They weren't instructed to provide for three different operators.

**Mr VALENTINE** - So you were asked to assess the three proposals individually, as opposed to collectively?

**Prof. BUXTON** - We were asked to assess them individually. We wrote to the minister requesting to assess them as a package, and particularly with respect to the hearings, we asked that we could hold the hearings concurrently so that members of the public could get their heads around things as well.

## PUBLIC

**Ms FORREST** - Did you also want to assess the combined impact?

**Prof. BUXTON** - Absolutely. The combined impact was critical to all of our evaluations.

**Mr VALENTINE** - So that's not outside your brief? You can look at the combined impact of those three, even though you're looking at each one as a separate plan.

**Prof. BUXTON** - I think the way the act is written we are expected to evaluate each proposal on its merits independently. The fact that these proposals came in pretty much at around the same time and were pertinent to the same waterbody prompted the panel to request that we do much of the evaluation concurrently. When you are talking about farming in the same waterbody, what applies to one applies to the other. If you scrutinise the management controls, for example, they are very generic in terms of what we wanted all three of these proponents to do by way of operating in Storm Bay.

I mentioned earlier that I had a bit to say about adaptive management. Several of the submissions to this inquiry address concerns around adaptive management and a lot of them make particular reference to failures in Macquarie Harbour. For example the Tasmanian Alliance for Marine Protection, the World Wildlife Fund and the EDO as well as the submission from Louise Cherrie contend that adaptive management has failed in Macquarie Harbour and as an inadequate management strategy, that is out of step with contemporary industrial operational practices - these are Louise Cherrie's words.

Louise claims to be an expert on the subject and asserts that she formed the view that Storm Bay developments should not proceed but that she was unable to influence the panel. We categorically reject that statement. Louise was very involved in the two assessments and made significant contributions to the report we wrote on the plan, and was able to influence us where it had merit in terms of what we did.

**Ms FORREST** - The minutes will reflect these decisions, clearly?

**Prof. BUXTON** - Absolutely. As you will see, they were unanimous and there were no dissensions.

In the interests of time I won't go through what I've written here, I'll leave that to you. Louise summarises what she sees as good adaptive management in her submission. I've provided a statement against each of those three comments which I believe arrive at a different conclusion. We believe as a panel that there is a clear regulatory framework for the salmon industry in Tasmania through the Marine Farm Planning Act and the Environmental Management and Pollution Control Act, and in this context it can be argued that the adaptive management regime proposed for Storm Bay meets the above objectives, particularly in the context of the precautionary ramping up of production in the presence of sound monitoring and research.

The application of the precautionary principle must be accompanied by some sort of scientific evaluation of risk. A mere fantasy isn't sufficient for the application of the precautionary principle. The application of good and sound adaptive management is again something you do in the context of an activity. You can't begin to apply adaptive management and derive an outcome if there isn't an activity, so it's almost nonsensical to suggest that

## PUBLIC

adaptive management was insufficient, particularly with reference to Macquarie Harbour. I don't believe the panel made any mistakes at all in its recommendations to go ahead with the development in Macquarie Harbour. What is clear with 20/20 hindsight is that we didn't have a proper understanding of some of the environmental conditions in that waterbody and they have led to significant environmental damage, but I stress -

**Mr VALENTINE** - Doesn't that point up that the precautionary principle might have been best applied there rather than the adaptive management process?

**Prof. BUXTON** - Not necessarily, because the precautionary principle suggests that you need some scientific evaluation based on data of a threat of irreversible harm. That did not exist when we went into that expansion in Macquarie Harbour. It exists now and we would very definitely operate differently to what we did in Macquarie Harbour, but all the way through this we need to bear in mind that what has happened in Macquarie Harbour is not irreversible harm. We've gone in; we've done something; we've learnt our lesson, and we're applying a different management regime and a different stocking density and it will recover. It might take time, but it will recover. Irreversible harm is what we are trying to avoid. Macquarie Harbour is a very different waterbody to Storm Bay. There's no comparison between the two.

**CHAIR** - I don't think anyone's making a comparison. I'm just going to pick you up on a couple of things there to go into a little bit more detail.

Irreversible harm is an extreme, and you stated just then that we didn't have irreversible harm in Macquarie Harbour, but we had a hell of a lot of harm. I think most people's reasonable objective would be to reduce harm as much as possible rather than just avoid irreversible harm. To come back to that, the thing that is similar potentially between Macquarie Harbour and Storm Bay is that you have stated there wasn't potentially sufficient scientific understanding of the environment before the activity was put into that environment and then had adaptive management applied to it.

I think the argument we are being presented with by some people in submissions and hearings is that the same set of circumstances, from their observation, has applied in Storm Bay - that there hasn't been sufficient baseline data and scientific understanding of that environment before the activity was put into it or significantly expanded in it. While adaptive management of course applies once an activity has taken place, there is a precursor to effective adaptive management, and that is a sufficient and robust understanding and baseline data. That is the argument being made to us, I believe - and correct me if I am wrong - by various people.

Can you respond to the lack or insufficiency of the data and the scientific understanding? Why aren't we just mirroring in process the same thing that happened in Macquarie Harbour, even though it's a different environment, but the process being understanding activity then?

**Prof. BUXTON** - We proceeded in Macquarie Harbour based on a model that had been constructed by industry which we now know with hindsight had some fundamental flaws in it. Models are garbage in, garbage out; they're not a perfect understanding of any system. By necessity, they have to be a simplification of a system.

The experiences, both locally and internationally, suggested to us that we could go in based on that model and begin to ramp up production. We could not have anticipated the



## PUBLIC

number of things that led to the dramas we had in Macquarie Harbour. We could have had a better model perhaps, but we need to understand that the federal government placed a significantly lower limit on the expansion of Macquarie Harbour than was being proposed by either the industry or this Government, and with that highly precautionary -

**Ms FORREST** - Which would have had a better outcome had they stuck with that.

**Prof. BUXTON** - Well, not necessarily. It's very easy to sit here now and suggest that it is bleedingly obvious that we did the wrong things in Macquarie Harbour, but I'm not sure that is a fair assessment.

**CHAIR** - We are looking at how we have learned from that and therefore how an argument could be made, potentially, or defended, that the process for Storm Bay, the starting point, was a sufficient understanding, a sufficient amount of data and sufficiently accurate appropriate modelling. Rather than reflecting back on Macquarie Harbour, which I am not asking you to re-prosecute, I am asking you to reflect on how that is taken forward.

**Prof. BUXTON** - Okay. In a very general sense, Storm Bay is a very different waterbody to Macquarie Harbour. If we were going to learn lessons about farming in the open ocean or the marine realm, we wouldn't be looking at Macquarie Harbour as being an example of how we should be proceeding.

**CHAIR** - I am asking you to reflect on lessons learned about process, not scientific lessons learned about similar environments.

**Prof. BUXTON** - Okay. Sorry, I didn't mean to misunderstand your question. I don't think the panel can be accused in any way, shape or form of an inadequate process in the assessment of either Macquarie Harbour or Storm Bay. We followed a very clear path and took all the information at our disposal. I was involved in that assessment. It was a very careful and very thorough assessment and we believed it could progress under the adaptive management framework that existed in Tasmania.

**CHAIR** - You had enough information available, there was enough modelling, enough data -

**Prof. BUXTON** - We had enough information, but the panel at the time highlighted deficiencies in our knowledge and, once again, we went out and insisted that the approval of expansion in Macquarie Harbour was accompanied by a robust research program which we now have at our disposal that makes it much easier for us to say we could have done it differently.

**Mr JUNGALWALLA** - Briefly, to try to answer your question - and please correct me - my understanding would be that the development proposed in Storm Bay is based on much more information about the system in Storm Bay than it was in Macquarie Harbour and the steps of gradual expansion are much more modest in Storm Bay than Macquarie Harbour. Does that answer your question?

**CHAIR** - That is useful information in response to my question.

**Mr JUNGALWALLA** - Is that correct, Colin?

## PUBLIC

**Prof. BUXTON** - We certainly know quite a bit about the basic models around Storm Bay. There has been some baseline information; there is an existing farm in Storm Bay which is being monitored regularly. There is quite a lot of science around the impacts of Huon Aquaculture's activity in Storm Bay. The fact that it is open ocean and a highly dynamic environment suggests that the risks are much lower. The particular issues we were confronted with in Macquarie Harbour simply do not exist in Storm Bay; they are not low DO levels and all of that sort of stuff.

**Ms FORREST** - The difference here is we are not trying to compare the two. As the Chair said, we are trying to learn lessons about the assessment process. To drill down to a couple of points there, from what you have said, it seems there was inadequate data on Macquarie Harbour to fully understand the impact and the nature of the waterbody. There has been more work done since which gives you more information. What is an adequate level of baseline data that you require before being able to fully assess and either recommend or recommend rejection of an amendment or a plan?

**Prof. BUXTON** - As is outlined in the environmental impact statements, there is a number of criteria the proponent needs to address in terms of our basic understanding of the environment, things like whether there has been a survey of the benthic environment over which this farming is going to take place.

**Ms FORREST** - Within what period of time would that be needed? This is the sort of information we need. What is adequate baseline data?

**Prof. BUXTON** - That sort of information needs to be done prior to our evaluation. We need to have some basic understanding of the environment and the likelihood of impact on critical habitat like reefs or important fishing areas. That stuff has to be done beforehand.

**Ms FORREST** - And if it's not?

**Prof. BUXTON** - We would just reject it.

**Ms FORREST** - Even though it is a plan? You can't reject a plan. How can you reject it?

**Prof. BUXTON** - We would send it back to the planning authority.

**Mr PAUL** - That is the loop; you can't reject it out of hand. You keep sending it back requesting further information.

**Ms FORREST** - I get that. I go back to the question: what is the adequate baseline data that you need to enable you to undertake the assessment and prepare a report?

**Prof. BUXTON** - Off the top of my head I can't answer that question other than to point to the numerous things that we assess in an individual environmental impact statement.

**Ms FORREST** - Is there something you could put together for the committee that outlines what would be considered to be adequate baseline data in terms of what you need in terms of the environment? For example, in the north-west there are no farms at this stage, so

## PUBLIC

what do you need before you can assess a plan that is put on your table at some stage in the future by Petuna to say, 'We want to put a farm here'?

**Prof. BUXTON** - The planning authority will give a proponent a guideline on which the proponent will have to write an environmental impact statement. It will include a number of specifics that need to be ticked in order for the -

**Ms FORREST** - No, I want to know what the panel believes is adequate information regarding the baseline data that would enable you to do your job without having to keep going back to this loop of frustration.

**Mr PAUL** - I can answer that in a slightly different sense. Is it appropriate to provide for the committee the initial response - and I am sure it is available somewhere - from the panel back to the planning authority in terms of their initial request of the company in relation to what data needed to be provided as part of the EIS?

**Ms FORREST** - That might be helpful.

**Mr PAUL** - I am sure an original draft EIS was prepared and the panel would have commented on that as part of the Storm Bay process.

**Ms FORREST** - What we hear repeatedly, within the hundreds of pages of submissions we have, is that there is inadequate baseline data.

**Prof. BUXTON** - I think that baseline refers to our understanding of the benthos. It is suggested there was inadequate baseline data. That is a survey of the area which is usually done by IMAS and would include everything from the depth profile, the sediment profile, the flora and fauna profile and the proximity to critical habitat. All those are what we would call a baseline knowledge set against which you could say, 'This is a good place to go farming'.

**Mr VALENTINE** - Is that called a biogeochemical model?

**Prof. BUXTON** - No.

**Mr VALENTINE** - It's not the same?

**Prof. BUXTON** - No, a biogeochemical model is something completely different. It's a model that actually predicts what would happen in this environment if you were to add significantly more nutrients predominantly.

**Ms FORREST** - Let's go back to the baseline data. I just want to keep going on this until we get to an end.

**Prof. BUXTON** - The baseline data, for example, for Okehampton Bay was a survey conducted by IMAS that produced a report which stipulated the characteristics of the area - that the baseline data, it stipulates -

**Ms FORREST** - Do you need to have that? This would include currents; it would include temperature, it would include all those other measures.

## PUBLIC

**Prof. BUXTON** - That's right.

**Ms FORREST** - Over a period of time, is there a requirement you have two years of data or -

**Prof. BUXTON** - No, it's a requirement to have a sufficient understanding of the environment within which we work. I don't think it's two years of data, but we would expect there to be some seasonal data relating to current and temperature so when we look at these things we have a report and it's part of the environmental impact statement that actually shows us what is the current regime. It shows us what's the likely diffusion that was done through the simplistic column model. It shows us the depth profile; it shows us the proximity of important reef habitat life; it shows us where other operators -

**Ms FORREST** - So you need at least 12 months if you're going to get seasonal data?

**Prof. BUXTON** - You'd need 12 months if you want it to be seasonal.

**Mr JUNGALWALLA** - I think we're going around and around this discussion. You're looking for a numeral answer of how long do you need and what data do you need. With the utmost respect, I don't think anybody can actually provide a definitive answer to that because what it amounts to is looking at an appetite for risk. What appetite for risk does the state, the country, the industry -

**Ms FORREST** - Who sets the appetite for risk?

**Mr JUNGALWALLA** - The Government has to set it.

**Ms FORREST** - Right.

**Mr JUNGALWALLA** - What I am saying is that I don't think anybody can produce a numerical value of how long or exactly what data is required, because you can always ask for more or you can always seek more. At some point you've got to say, 'We've looked left, we've looked right, we're going to cross the road or not cross the road'.

**Mr PAUL** - For the guidance of your committee, the initial panel's comments to the draft EIS request that would have gone to the proponent would be helpful.

**CHAIR** - To pick up on that, are you then, as a panel, provided with an indication of appetite for risk such that then you can decide, 'Have we enough information to be able to make an assessment according to that risk appetite or not?'

For example, you mentioned earlier, Colin, that the lack of a biogeochemical model in relation to Storm Bay was decided by the panel to be okay because you felt you had enough other information available to you.

**Prof. BUXTON** - The lack of a full biogeochemical model was not perceived to be a requirement. We had a preliminary model which modelled diffusion within Storm Bay and gave us a good sense of just how connected these farms might be. It gave us an understanding of what the fate of nutrients might be, where would they go. We had that kind of baseline

## PUBLIC

understanding but we demanded that the Government needed a far more thorough understanding if it was going to regulate this activity in its entirety.

**CHAIR** - But that would be developed over time while the activity was expanding and being undertaken.

**Prof. BUXTON** - Yes, that's right.

**CHAIR** - To come back to that in terms of setting the appetite for risk, how are you instructed, informed, provided with an indication of that to take into account?

**Prof. BUXTON** - It's not the panel's responsibility to assess -

**Mr JUNGALWALLA** - To answer that question, we are not provided with the appetite for risk. My view - and perhaps view of other panel members - certainly is that we give advice based on what we are looking at here - do we think it's a reasonable proposal to recommend to the minister? The minister decides yes or no. So the appetite for risk in itself is not our concern. What I can say is that the panel resolved in all these cases to say, 'On balance, we think this.'. That applies to environmental management as well as biosecurity.

**Prof. BUXTON** - And everything else. It applies to social and economic criteria as well. We as a panel evaluate whether these proposals are going to have any impact on other marine activities.

If they are going to have an impact on sailing, we spend a lot of time working out what we can do to mitigate those concerns. It is not just an environmental issue.

**Mr PAUL** - There is no line drawn in the sand; this is where our risk appetite sits. The panel makes its own collective judgment as to whether the level of risk is acceptable or practical.

**CHAIR** - I am mindful of time. We have 10 minutes left. Did you want to request to go in camera for part of this briefing, or would you like to cover more material in the open hearing.

**Mr JUNGALWALLA** - I'd appreciate it if we could have at least five or 10 minutes.

**Prof. BUXTON** - One of the representations you received from Rebecca Howarth criticised the behaviour of the panel in a hearing. We would like to submit a recording of those hearings which you can listen to. As a panel, we reject any assertion that the hearings were conducted in a disrespectful manner.

**CHAIR** - Thank you. You have tabled that there. We will collect that.

**Mr PAUL** - The three reports - it is noted there separately the relevant section in relation to it.

**Ms FORREST** - If you want to go into camera. You can send an answer to this to the committee.

## PUBLIC

We have the eternal loop of frustration. I am wondering if, you as a panel believe there needs to be any amendment to the current act to make the role of the Marine Farming Review Panel more effective, more efficient and more able to achieve the outcomes? Including even pie in the sky expectation that you can actually reject a plan later on once you have done all the work, rather than have to recommend to the minister, for example, that it shouldn't proceed, you can reject it.

I want you to think about that and provide that information to the committee later.

**CHAIR** - That could be a long conversation.

**Ms FORREST** - Which we don't have time for now.

**Mr PAUL** - What extra consideration would -

**CHAIR** - We'll send that to you in writing, to respond to.

**Mr PAUL** - That would be good, just to make sure we are answering the right question.

**CHAIR** - I take it you would like to make a request to be heard in camera?

**Ms FORREST** - You need to explain why. What is the need for it to be in confidence, and we can deliberate.

**Mr JUNGALWALLA** - It's to do with what we perceive as inappropriate behaviour, unprofessional behaviour, by the two people who made representations.

**Mr PAUL** - In particular in relation to a perceived conflict of interest that was not declared.

**CHAIR** - We're going to ask you to leave the room for a moment while we deliberate on that request.

We are going to turn the broadcast off, thank you.

---

[IN CAMERA EVIDENCE GIVEN FROM 11.09 a.m. TO 11.17 a.m.]

---

**CHAIR** - We are out of camera and will get Rob's question on the record.

**Mr VALENTINE** - Can you just describe how you deal with conflicts of interest whenever you are dealing with a matter? If I can set some context, obviously you each have different interests in terms of your roles in other places. I think you mentioned lobsters and a few other things, but I wasn't quite sure exactly how many there are. Can you describe how you deal with that?

**Mr PAUL** - I'm going to ask my colleague because whilst I've been the chair for a short time, I have only chaired one meeting to date. That's all that's occurred. I will add something in a minute.

## PUBLIC

**Prof. BUXTON** - The panel has a conflicts of interests register that is regularly updated, and at the start of any meeting the chair asks whether there are any declared interests associated with the business of the meeting and if there are, they would be handled in an appropriate way.

**Mr VALENTINE** - What would the appropriate way be?

**Prof. BUXTON** - The person who had declared the interest would be asked to leave the room and the panel would then discuss whether that was a perceived or material conflict of interest and make a determination as to whether that person should be present during that discussion and particularly the decision-making of the panel. I think that is a fairly standard way of handling conflicts of interest, but I might also add that the panel has been given the opportunity to do a course in handling conflicts of interest.

**Ms FORREST** - Special development.

**Prof. BUXTON** - That's what I was looking for, thank you.

**Mr PAUL** - Can I also add that in my capacity as chair, going forward my expectation is the old maxim, 'If there is any doubt, get out' in terms of participating in a particular matter, and that is a -

**Mr VALENTINE** - So does declaring an interest and staying in the room depend on what level of interest it is?

**Mr PAUL** - Correct, but if there is any question in my mind, my expectation is that the panel member would exclude themselves from that.

**Mr VALENTINE** - Would it be up to the panel member or you as chair?

**Mr PAUL** - I suspect my firm advice would be if in doubt, get out, if I can paraphrase it that way.

**Mr CAMPBELL** - The other point is that the agenda always lists quite clearly interests, so that it is not -

**Ms FORREST** - 'Declarations of interest' appears on your agenda.

**Mr PAUL** - It is on the agenda itself, always has been.

**Mr JUNGALWALLA** - At the time of appointment to the panel there is also a request to declare anything of interest. For instance, my wife and I had shares in Huon Aquaculture, \$6000-worth. I was required to sell them, and that was fine, not a problem. Anybody on the panel is supposed to declare any pecuniary interests and we are told that.

**Mr PAUL** - That is a preliminary matter to being appointed to the panel.

**Mr VALENTINE** - Is it only pecuniary interests that you do conflicts of interest on or is it other things as well?

## PUBLIC

**Prof. BUXTON** - I think it's all related interests.

**Mr VALENTINE** - Thanks for answering that.

**CHAIR** - One quick question, and you may need to provide this to us later in writing if we don't have time for a full answer, but I am interested in the independence of the panel. There are stakeholders involved that you have direct interaction with and you would be interacting directly with the marine branch and the department. You have processes where submissions are made and hearings held where members of the public and other groups interact with you. What does it look like, in terms of interaction with industry, with the companies? Are there particular defined and accountable points of interaction and contact between the panel and companies or industry, or is there an open interaction there?

**Prof. BUXTON** - I would characterise it as being formal, so the panel will make a request of industry to appear before the panel in a preliminary sense - for example, to outline a particular amendment or plan. They will come in at a specified time on the agenda, make a presentation, be given an opportunity to answer questions from the panel and then get out. If we come across a technical matter, we have the ability to call on anybody to appear before the panel, and that happens on a fairly regular basis, but it is certainly not restricted to industry. We pull experts in on a regular basis to help us.

**CHAIR** - In terms of communication between the panel members and industry, would that always be on a formal basis? Would we always be able to see in an accountable way those points of contact, either in formal correspondence or formal agenda items and interactions in meetings, so there wouldn't be regular or informal interactions or communication about the business of the panel with industry separate to those formal channels?

**Prof. BUXTON** - No, I think it is all formal.

**CHAIR** - Thank you. I think we've gone a bit over time but thank you for your time today; we appreciate you coming here and having the discussion with us. I know we have asked to follow up with you about couple of matters. We will put that in writing and send it through so it is clear what we were asking for in terms of further details.

**Mr PAUL** - I think I have captured those but if they could be put in writing, that would be good.

**CHAIR** - Andrew, is there anything you would like to say in closing before we finish?

**Mr PAUL** - No, I think we have covered every matter, other than these matters which I will hand up, copies of the reports. I will get you the requested information as soon as practicable. Thank you for the opportunity to be here today.

**CHAIR** - Thank you, gentlemen.

**THE WITNESSES WITHDREW.**



**Item 5: Document prepared by Ms Cherrie and Professor Nowak in response to inquiry hearing attended by MFPRP members, dated 1 October 2020**

## Response to Salmon Inquiry hearing with MFPR Panel members

1 October 2020

**From: Professor Barbara Nowak and Ms. Louise Cherrie**

In light of the incorrect assertions publicly made during the Salmon Inquiry hearing session 8 September 2020 it is appropriate that we offer a response.

Responses are offered on the following areas of concern (in no particular order):

1. That we misunderstood the Act and our role
2. That the absence of a biogeochemical model was not material to expansion
3. That there was no dissent among the Panel
4. That 'adaptive management' was misunderstood and that Tasmanian adaptive management is global best practice
5. That Macquarie Harbour issues were due to a lack of knowledge and that the Panel made the right decision to recommend expansion at that time
6. That we were treated fairly

We note In Camera Evidence was given regarding perceived conflict of interest that was not declared. Whilst we are not aware of what was raised, we provide documents and references clarifying that we have declared our conflicts of interest (Appendix 1). We would be happy to respond to any claims that have been made with regard to perceived conflict of interest and we are confident we can allay any concerns.

### **1. *That we misunderstood the Act and our roles***

This is incorrect.

Key points:

- In addition to our underpinning knowledge of the *Marine Farming Planning Act 1995* we undertook an induction by the Marine Branch, and were provided with the Act and supporting documentation. We were clear from the first meeting that our role was to provide advice to the Minister and that we were past the point of rejection for amendments. We were also clear that we could reject the Storm Bay North plan and send it back to the Planning Authority (noting the 'endless loop' that has been discussed).
- All Panel members, including ourselves, were unclear on options for refusal. Advice was sought by the Chair from the Solicitor General on behalf of the Panel. We were not alone in requiring this clarification. The Solicitor General's advice cannot be provided due to Legal Professional Privilege.
- As an advisory panel our role was to provide evidence based best practice advice to the Minister. The Minister can choose to accept that advice or not at their discretion. Whilst we understood we couldn't reject outright, we could advise the Minister that *they* should because of the magnitude of the missing foundations for massive expansion (no biogeochemical model, no biosecurity plan, no regulatory standard for salmon). Providing best practice advice was at odds with other Panel members who took the defeatist attitude of "the Minister will approve it anyway" (this was stated a number of times), which resulted in us questioning the role of the Panel during our meetings. We did not adopt 'rejection' of Amendment 3 and 5 as our default position because it would have been preferable to

resolve outstanding issues to support the Minister, however due to the dysfunction of the Panel this was not possible (refer points raised under 6).

- Storm Bay North plan was never going to be appropriate because there were clear biosecurity drivers for rejection. Prof Nowak provided significant and compelling evidence and published references to support this. It was agreed to reject this Plan and refer it back to the Planning Authority (refer 1.1). We resigned soon after and at that point felt relieved that at least one source of risk to Storm Bay and the industry would be removed. The Plan was then modified by the Planning Authority and subsequently approved in November 2018 (refer 1.2). The [MFPRP final report Nov 2018](#) (page 30) notes that:

“Minimum separation distance between companies

The Panel raised a number of related concerns that hindered its support of the initial Draft Plan:

- The finalisation and implementation of an approved Biosecurity Plan, particularly as it relates to minimum separation distance between companies;
- A more complete understanding of circulation patterns in Storm Bay which will result from the FRDC Project 2017-215 which is developing a full biogeochemical model for Storm Bay; and
- The results from the FRDC Project (2017-182) on POMV.”

These items remain outstanding still today and it is therefore illogical to see how the Panel could approve it. We requested our names be removed from that report (refer 1.2). In hindsight we should have done the same for Amendment 5 (west of Wedge Island) where our dissenting views were not reflected in the report (refer 3 for discussion).

We would like to further note that our views are that the Act is flawed in giving sole power to a Minister rather than an independent Board as with the EPA. The Act was changed in 2011 after the Panel rejected the Soldiers Point development. This change has contributed to an erosion of trust in the transparency and independence of the process.

<b><i>Evidence for 1</i></b>	
1.1	Minutes of the MFRP Meeting 16 August 2018 showing rejection of the Storm Bay North draft Plan, refer Item 6.1.
1.2	<a href="#">MFPRP final report Nov 2018</a>

## **2. The importance of the biogeochemical model as a basis for expansion**

The biogeochemical model is an important foundation for development because it informs where nutrients will be transported and deposited therefore allowing for assessment of impacts and the assimilative capacity of Storm Bay. This in turn provides a basis for determining the carrying capacity (i.e. how many fish is too many?). Whilst some existing information does exist it is not a complete picture hence the FRDC funding of \$M1.650 for a project entitled "Storm Bay Biogeochemical Modelling & Information System: Supporting sustainable aquaculture expansion in Tasmania". We disagreed with the perception of the Panel that this work was not required (refer page 36 of Hansard).

Key points:

- The importance of this work is clearly stated in FRDC project 2017- outline (refer 2.1). Excerpt for your ease of reference:

### **Need**

For the Tasmanian Salmon Industry to expand into new coastal and offshore areas it needs to demonstrate responsible stewardship and sustainable use of natural resources to maintain the support of Government agencies and the Tasmanian community. For Government agencies to assess the environmental implications of the Salmon Industry they need to understand the environmental footprint of the industry, the capacity of the environment to assimilate waste loads, vulnerable locations where impacts might be foreseen, suitable locations and times to monitor change, possible future environmental trajectories under various management scenarios, and appropriate impact mitigation strategies. With this information the State Government and Industry can demonstrate best practice in the strategic and sustainable expansion of farm sites, minimise environmental impacts and keep the Tasmanian community well informed. An information system is required that can report and compare current water quality conditions from models and observations, provide short-term forecasts, analysis of scenario projections of plausible future conditions for planning purposes and link to decision support tools to optimise management response and monitoring programs. The modelling and information system needs to have the capability for future deployment in multiple sub-regions of interest around Tasmania. This requires a downscaling approach where high-resolution local models can be rapidly deployed within a larger scale regional model encompassing the whole of Southeast Australia. One region with an urgent need for such a modelling and information system is Storm Bay where knowledge gaps in hydrodynamic circulation, nutrient sources and transformations, the assimilative capacity of the environment and the footprint of proposed farms, currently limit responsible industry expansion and governance.

Prof Buxton is the Deputy Chair and a Director of the FRDC Board and is therefore taken as being fully aware of the importance of this work but continues to downplay it and provide questionable advice to Panel members looking to him as the "expert".

- Regardless of the known gap the MFRP approved the request for amendment before our appointment to the Panel (refer 2.2). Request for Amendment is the one time the MFRP has the Regulatory power to reject under Section 33 of the *Marine Farming Planning Act 1995*. Once the application for amendment is made it is only the Minister who can reject the amended plan. In this respect, as new members, we were set up to fail.
- There is a very real risk of re-suspension of heavy metals in sediments in the lower Derwent Estuary due to high nutrient loads, as outlined in the DEP submission (refer 2.3). Of most concern would be the methylation of mercury into a bioavailable form that can impact human health if consumed from Derwent seafood. This was dismissed. Ms. Cherrie, having had a long history with the DEP, was keen to ensure this issue was adequately attended to. She did not receive support. Prof Buxton scoffed "How does that even happen!". Ms. Cherrie

initially thought that was a joke, but then responded by explaining basic sediment chemistry. The DEP submission remains largely ignored and did not result in any modification of the draft amendments.

- We consistently advocated waiting until the model was completed before expanding further (approx. 18 months). This would also have allowed for completion not only of the modelling, but also the salmon regulatory standard and the biosecurity plan, two other significant gaps. So as not to be a total barrier to development Ms. Cherrie proposed actions that could be taken in the interim so industry were ready (e.g. an operator who had previously not farmed in a high energy site could deploy empty cages to test design and additional stakeholder consultation). To do otherwise would be to 'rubber stamp' the expansions (refer emails under evidence 3.4).

The FRDC project is still not complete and therefore it is reasonable to conclude that the ability to expand *responsibly* is hindered by a lack of knowledge as to the assimilative properties of Storm Bay. How many fish are too many? We simply don't know.

<b>Evidence for 2</b>	
2.1	Storm Bay Biogeochemical Modelling & Information System: Supporting sustainable aquaculture expansion in Tasmania (refer <a href="https://www.frdc.com.au/project/2017-215">https://www.frdc.com.au/project/2017-215</a> )
2.2	<p>Email <i>inter alia</i> outlining concerns about the approving the request for amendment and our role in providing best practice advice</p> <p>Louise &lt;louise@cherrieconsulting.com.au&gt; Tue, Jul 31, 2018, 9:11 AM to David, Craig, Colin, Pheroze, me, Heather, Jock_campbell@bigpond.com, Pamela, John, Gabrielle Hi</p> <p>Minor correction at 7.1 'zero tolerance' not 'zero approach'.</p> <p>6.2 Agree with Barbara that the minutes reflect a softening of Best Practice for operational considerations.</p> <p>Whilst we must be pragmatic (hence the adaptive management approach) this does not mean that our advice to the Minister should reflect a lower standard. In the absence of a bio security plan, biogeochemical model to inform the carrying capacity, and the environmental standard the applications don't seem logical in the first place. Did the Panel challenge them at that stage? Given that they were endorsed to proceed the process is driving compromises. Obviously the Minister has told them they can expand and we have little say over that, and the intensified focus on bio security has changed things since the applications for amendment. However, we can only control what we advise. If we don't advise best practice then why are we here?</p> <p>This speaks heavily to the difficulty I have in coming into a process late and having to determine a reasonable path without readily available information in my areas of concern and with this niggling issue with why three operators have been permitted to spend money on EIS's etc when the critical base elements for growth are missing.</p> <p>Regards Louise</p>
2.3	Derwent Estuary Program submission (refer Marine Branch).

### ***3. That there was no dissention on the Panel and decisions were unanimous***

This is grossly inaccurate and on this point we consider the statements made to be perjurious.

Key points:

- We raised our concerns in many meetings and outlined them in emails (refer 3.1 and 3.2). It is critical at this point that the Inquiry read the details of our email correspondence provided in evidence.
- Regardless our concerns were not adequately attended to and our dissention remained largely due to the functioning of the Panel and unfair treatment (as detailed in 6). Our positions became untenable because the Panel were simply unwilling or unable to respond to our concerns or adapt to the changed world created by POMV and lived history of harm in Macquarie Harbour.
- In a meeting at 8am on 19 July 2018 we were advised by the Chair that we could not formally dissent unless we write our own report. He advised that the Panel PA would not be available to assist with this and that we would need to complete a dissenting report within a week. We did not consider this a reasonable option and we resigned.
- Minutes consistently did not reflect discussions and we raised some concerns in the meetings and our emails (refer 3.3). In light of the assertion that there was no dissention we regret not more consistently requesting amendments to the minutes.
- Our comments on the draft Panel report were frequently over-ridden. This is completely acceptable where evidence or discussion persuades or informs, however in most circumstances it was simply the will of the dominant Panel members. Comments to be incorporated into the Panel report were emailed (generally to the Panel PA) and some were provided in tabulated form at meetings. On many occasions, agreement seemed to have been reached in meetings only to be changed out of session. The continual over-riding or dismissal of our comments was frustrating and, as with the minutes, constant changing of information became untenable.
- We were set up to fail. The reality is that the request to apply for amendments the plan in Storm Bay should have been rejected at that stage because of the known gaps. Because the Panel approved the request to apply it has essentially set us up to fail as new Panel members. Their decision was wrong and made worse by the emergence of POMV and the lived history of harm Macquarie Harbour (refer 2.2). Regardless they expected us to rubber stamp the expansion and, as previously mentioned, our dissentions were not adequately reflected. We raised 'rubber stamping' a number of times in meetings and emails (refer 3.4).

**Evidence for 3**

**3. Emails from Ms. Cherrie confirming dissenting views and concerns about lack of  
**1 request information and dysfunction in meetings****

**From:** Louise <louise@cherrieconsulting.com.au>  
**Date:** 8 August 2018 at 8:13:56 pm AEST  
**To:** bfnowak@gmail.com  
**Subject:** My thoughts

Hi

I'm very concerned about the next two proposals, and not just because I can't participate fully in the discussions due to my availability.

I was ok with HAC because it's a small increase in comparison to the total proposed expansion and is unlikely to breach any projected carrying capacity for the system. Plus it does allow them to resolve some bio security issues. However, one proposal is not three! The facts remain that there is no biogeochemical model, no agreed and Government endorsed biosecurity plan, and the information we are provided seems to change quite frequently (e.g. harvesting from Norfolk Bay). In my area I am obviously most concerned about the lack of a model as this informs the carrying capacity of Storm Bay. There is insufficient information to understand the impact on Storm Bay and its connection with the lower Derwent Estuary, particularly with respect to nutrient exchange. It's reasonable to expect the HAC expansion will be able to be attenuated by the system but the full expansion is simply stupid without the basic building blocks.

So, my views:

- 1) Reject Petuna outright because, as proposed (and we can really only go on the application that was made public) it does not adhere to reasonable bio security practices.
- 2) Refer Tassal back to the Planning Authority because of the deficiencies outlined above (we simply don't know the carrying capacity) plus I am not satisfied that the consultation was adequate at all. The PA to suggest Tassal to apply for a permit to test infrastructure under the Living Marine Resources Act. This would allow them to undertake additional planning and consultation, and provide time for the FRDC modelling project and bio security plan to be developed. The time might be right in 18 months but it's certainly not the right time now!!!

Obviously this will be at total odds with the rest of the Panel (although I'm unclear what all their views really are). So I consider my options to be either (1) abstain from these decisions, or (2) resign. Abstaining seems a little gutless though because I really believe we can only reject Petuna and refer Tassal back.

I'm very heartened that we are of the same view. This would be even more stressful if I didn't have you to talk to!!! Look forward to a knockoff drink.

Cheers!  
Louise

**From:** Louise [mailto:[louise@cherrieconsulting.com.au](mailto:louise@cherrieconsulting.com.au)]  
**Sent:** Thursday, 9 August 2018 7:37 PM  
**To:** Yates, Gabrielle (DPIPWE)  
**Cc:** Pheroze Jungalwalla; Craig Midgley; Colin Buxton; Barbara Nowak; Heather Chong; [Jock\\_campbell@bigpond.com](mailto:Jock_campbell@bigpond.com); Scott, Pamela (DoJ); Jarvis, David (DPIPWE)  
**Subject:** Re: Panel reports SBTB, TasPen, SBN

Hi

After receiving the agenda last night and only reading after finishing work today I am concerned about a final draft on documents I haven't had full input into. Whilst I have accepted the basic monitoring program is more rigorous to allow better adaptive management, I have concerns about the lack of information on the carrying capacity of the system. Being generally ok with one proposal should not be taken as a green light from me on either of the other two. I am struggling with feeling that I have not been allowed adequate space to air my concerns under the guise of "it is too late to raise issues" and yet seeing industry being given the opportunity to present new information on a continual basis. The focus has been squarely in HAC. That took a long time to get to. Now we have two meetings that I have not been able to attend and get final drafts? I will need to discuss my options with Craig.

Cheers!  
Louise

**From:** louise cherrie <[louise@cherrieconsulting.com.au](mailto:louise@cherrieconsulting.com.au)>  
**Subject:** Re: Panel reports SBTB, TasPen, SBN  
**Date:** 10 August 2018 12:01:14 PM AEST  
**To:** Craig Midgley <[ncmidg@bigpond.net.au](mailto:ncmidg@bigpond.net.au)>

Thank you for your response. I am certainly aware of the statutory timeframe, however, when I do raise issues the discussions are shutdown and I have not been able to explore the aspects I remain concerned about. Meetings have, from my perspective, been dysfunctional. I don't make statements that I can't verify and yet I have been challenged and indeed dismissed on nearly every point. For example, I even raised a minor issue around the intensification of activities in the D'Entrecasteaux to be told that I was not correct. Thankfully this was confirmed by Graeme Woods as being correct. It is frustrating for me to have to fight so hard for a hearing. I was not provided with the information I needed on environmental monitoring until 20 July, but this was never my only concern. I have said time and time again that we need the biogeochemical model. Barbara and I met with you to try to get support for raising our concerns however things have not improved. Anyway, I hope you can understand my frustration at coming into a process that is seemingly too far gone to make any change to, and not being provided readily with the information I need or the space to discuss my concerns.

So, with regards to the current reports, my issues with both proposals are:

- the unknown carrying capacity of the system given the absence of the biogeochemical model...one expansion is vastly different than three given the absence of the biogeochemical model. The absence of this has been a long standing issue and it seems illogical to me that the panel raised the issues and Minister has responded with a "yes it's coming". Problem is obviously that the industry has been told they can. Leaves us in a difficult position of having to provide advice without the Panels concerns being actually addressed (the model doesn't exist so the concerns raised remain valid).
- I feel that representations have not adequately been attended to and, whilst this may be outside our remit somewhat, we held hearings that feel somewhat pointless. I would challenge the effectiveness of consultation undertaken by Tassal and Petuna. With HAC I could at least see a long trail of communications directly to residents stating their intentions. I tried to raise this and again it dismissed out of hand.
- the constant changing of information we are receiving from the company. It seems that the propensity has been to alter views and advice based on what is operationally beneficial. While I am supporting of a strong salmon industry I feel that we do not service the industry or the



Minister well by providing anything other than objective and scientifically verifiable advice.  
Industry do not bear the risk of collapse due to bio-security issues alone.

Anyway, there is no need for any more time extensions so don't be concerned about that. I will however be dissenting in a number of areas. All I can do is provide those comments for the report. As for my role on the panel and whether I contribute as I had hoped, I will give that more thought. Happy to chat anytime.

Cheers!

**Louise Cherrie**  
Principal

3. **Emails from Prof Nowak confirming dissenting views and concerns about biosecurity**

2

**Barbara Nowak** <bfnowak@gmail.com>

Wed, Jun 20, 2018,  
7:51 AM

to Craig

Dear all,  
some comments for Tassal amendment, some relate to the other amendment and application as well. I've tried to reply to Gabi's questions in the document. Considering the high mortalities in Tasmania and representation from Huon, including statements "But none of it will matter if we don't get biosecurity and environment right" and "Biosecurity should be top consideration", criticism of Adaptive Agreement Process and Prof Hammell's predictions of the consequences of inaction, it is obvious that we need to make sure that biosecurity in Storm Bay is as good as it can get. Single year class in a management area is a common practice in salmon industry worldwide and should also be in Tasmania. Wellboats should be used for all fish movements. Currently neither is recommended. Reporting of mortalities at some level above expected should be also considered.

Happy to discuss this further

Unfortunately, I won't be at the next meeting so please email me if you need more information I'm still waiting for some information which may affect my current thinking - Huon storm damage report and current response to POMV

Best regards

Barbara

**Barbara Nowak** <bfnowak@gmail.com>

Jul 2, 2018,  
8:53 AM

to Louise, Colin, Gabrielle, David, Craig, Pheroze, Heather, Jock\_campbell, Pamela, John

Dear all,  
hope all is going well

I'm working on the documents and have a lot of concerns about biosecurity, will email my comments as soon as possible but they won't be complete yet as I'm lacking some information.

I would really like to see:

- the POMV response from Petuna details as promised
- POMV response from Tassal
- expert comments if the storm we had in May is really one in 50 years or considering climate change can we expect more of those and if possible with what frequency - should we invite someone to the meeting - the fish loss during storm creates a significant biosecurity risk and we need to have some assessment as to how common those events are really essential so we can estimate the risk
- would be good to get Rod to the meeting (I can image 5 July maybe too tight for him so maybe 19 July)

Best regards

Barbara

Looking forward to hearing from you

**Barbara Nowak <bfnowak@gmail.com>**

Jul 2, 2018,  
8:34 PM

to Colin, Louise, Gabrielle, David, Craig, Pheroze, Heather, Jock\_campbell, Pamela, John, Graham

Dear all,

here are some of my comments for one of the ammendments - I have send similar comments and 3 papers around 20 June but they are not incorporated in the current draft, possibly after discussion at the last meeting? I have now included them directly in the draft so if the Panel decided not to include those for some reason could you please let me know? As I'm not sure why my previous comments were not included I didn't put all references in the document in case if there was some decision/discussion I didn't want to spend time to type what the Panel would later delete.

Most of the comments here are applicable to all three applications.

As HAC said in their presentation "biosecurity should be top consideration" and I do have some general comments:

Storm Bay should be single year class farming zone and there should be a common fish health monitoring system and sharing of information between the operators

I have another major concern about storm events - HAC lost significant numbers of fish, the company presents itself as most advanced and experienced in high energy environments. Loss of so many fish is a serious biosecurity concern to other farmed salmon. If storm events like the one we experienced in May were predicted to occur on more regular basis we should take this into account when making our recommendations. Based on the information from companies on POMV - HAC says they would use hospital site - but there is no site identified as such in the application so I'm not sure what they are talking about and the response by Petuna requires laboratory analysis and diagnosis to be completed, followed up by a meeting and only then it appears a decision is made, I've asked Dave to ask them what does it translate to in time (days) to decision but it seems to be quite slow.

There is also a question about fish movement - unless all companies have barges there will be some transport in open water which can also be a biosecurity risk.

Considering that quarantine in cage farming is really difficult if not impossible all of this is quite concerning.

Looking forward to seeing you on Thursday

All the best

Barbara

**Barbara Nowak <bfnowak@gmail.com>**

Fri, Jul 6, 2018,  
6:08 AM

to Pheroze, Gabrielle, Craig, Colin, Louise, Heather, Jock\_campbell, Pamela, David

Dear all,

hope all is going well.

As vaccination was suggested as a reason why POMV won't be a problem in the future I checked all my notes and we have the following information:

Email from Adam Main TSGA forwarded to all of us by Dave:

**update on current research on vaccine against POMV, including realistic assessment when a vaccine may be available for the salmon industry to use-**The industry aims to first vaccinate fish in August 2018. The vaccination in 2018 will be subject to approval by DAWR and the issuing of a permit for the use of materials in the vaccine. The industry is currently finalising Manufacturing Agreements with an Australian based manufacturer. With respect to the current research being undertaken at the Centre of Excellence Aquatic Animal Health

and Vaccines (Mt Pleasant), the project is either on or ahead of schedule. The industry has also just started a new POMV Epidemiology Project.

**BUT:**

- Dr Steve Percival HAC said during hearings that the experimental vaccine had the same effect as adjuvant alone, which suggests that it is not working properly as a vaccine. He also said that there is no evidence for increased protection after exposure/first infection which suggests that effective vaccination may be hard to achieve.
- Dr Jeremy Carson said during Blue Future conference (December 2017) that there were difficulties with experimental challenge and it was unreliable

If as suggested we are going to use potential development of vaccine against POMV as a reason for lowering biosecurity standards then we should ask DPIPWE for detailed update on vaccine research. Furthermore, even if the vaccine against POMV was effective, as you are aware the industry expects new pathogen/disease to emerge every 3-5 years, so even if the vaccine was .

I've also looked at my notes from Blu Future conference and the following people advocated single year class areas for salmon and said it was common practice in their countries:

- Regin Jacobsen, Faroe Islands (minimum distance 5-10 km depending on currents)
- Debes Hammershaims Christiansen, Faroe Islands
- Larry Hammell, Canada

Please note that not every country had a speaker talking about biosecurity.

I'm also attaching information from other countries about single year class stocking, this is in addition to some scientific papers I've emailed previously

Please let me know if you would like to see more information or if you have any specific questions

**Best regards**

Barbara

**Barbara Nowak <bfnowak@gmail.com>**

Jul 26, 2018,  
7:47 PM

to Gabrielle, Craig, Colin, Louise, Heather, Jock\_campbell@bigpond.com, Pamela, Pheroze, David

Dear all,

really sorry - I have been flying most of today (unfortunately no internet on domestic Qantas yet) and didn't get this email until now, in the meantime on the plane did my own edits, please see attached. Most are just comments, a few changes of wording for biosecurity and a couple of typos.

My main concern is the statement I pasted below. It sounds like we are denying climate change. Of course it will alter the hazards, including biosecurity, a lot has been published about it. We should discuss if we want to say why we are not concerned about the alterations (adaptive management? or company's problem?) but we can't say that there will be changes.

I also question whether we should be getting into a discussion on stocking density - isn't biomass our main concern?

Really sorry for the lateness of this email

**Best regards**

Barbara

The Panel does not consider that the effects of climate change will alter the hazards that are currently managed under the existing and modified management controls and therefore does not consider that any further modifications are required at this time.

**Barbara Nowak <bfnowak@gmail.com>**

Sun, Aug 12, 2018,  
5:04 PM

to Gabrielle, Craig, Pheroze, Colin, Heather, David, Jock\_campbell, Pamela, Louise

Dear all,  
I thought I'll just send a few general comments before sending the detailed comments on the drafts.

While it is good to see the Biosecurity Plan and the industry moving in the right direction, I don't think it means that we should just automatically recommend approvals, even if we think that the Minister will approve the amendments and application anyway. As you know from my previous emails, my presentation and statements at the meetings I have been against Storm Bay North from the beginning and this was not due to the submission from another company, so that company changing their mind does not affect my views. North of Trumpeter Bay amendment makes sense from the point of view of biosecurity/sustainable salmon farming and we improved it further using management controls and recommendations.. Amendment to Tasman Peninsula and Norfolk Bay is more questionable, but Storm Bay North is the worst proposition out of the three of them as it puts another farming area in close proximity to the amendment for Tasman Peninsula and increases biosecurity risks in Storm Bay.

I have been told a number of times that the proposed development and sites in Storm Bay were decided when POMV wasn't a problem in the South and biosecurity was not an issue. Well, now it is. Instead of carrying on as nothing has happened we should take the information about POMV which is available now into account and apply caution while additional information is collected to ensure that the salmon farming development in Storm Bay is sustainable in a long term. It is much easier to be cautious now than unscramble the situation later as it will have to be done in almost all other salmon farming areas. If we're for adaptive management for environmental impact why not use the same approach for biosecurity - as we have new information available - POMV is in Storm Bay we should reconsider what development should take place in the near future. We should make recommendations based on facts available now and not when salmon farming in Storm Bay was considered for the first time, we also have more understanding of potential risks and risk factors based on international and Tasmanian situation. We will know more when the FRDC project on POMV (in which Larry Hammell is involved) is completed (2017-182 due to be completed by the end of August 2019), this should inform the extent of salmon industry development. We may also have more information about the vaccine by then. All presenters from Blue Futures conference and Tasmanian salmon industry at the time were advising caution and following best world standards for biosecurity - I'm not sure why we are now ignoring this advice.

I've attached a couple of recent papers and I'm happy to provide more scientific literature if anyone is interested. I agree that it is hard to put a number on a minimum separation but I would suggest > 5 km and preferably closer to 10 km and the further the better and the distance between companies should be more than within companies. While other members of the Panel disagreed at the last meeting, lowering biomass (particularly when the separation cannot be achieved) and closed transport have both been shown to reduce risk for viral disease outbreaks in salmon farming and should be recommended, this is even acknowledged by the industry in their Biosecurity Plan.

Looking forward to hearing from you  
Best regards  
Barbara

**Barbara Nowak <bfnowak@gmail.com>**

Wed, Aug 15, 2018,  
9:18 PM

to Colin, Pheroze, Craig, Gabrielle, Louise, Heather, David, Jock\_campbell@bigpond.com Pamela, John

Hello,  
just to explain the highlighted paragraph (sorry, I was sure I wrote a comment there)

The Panel accepted that two tidal cycles in Storm Bay, a distance of 5-10km, would reduce the risk of pathogen transfer and disease outbreak. However, in the case of POMV infection, which has been one of the most significant diseases to impact on the Tasmanian salmon industry, the Panel noted that the risk could not be eliminated because of the highly dispersive environment of Storm Bay, its physical

connection to other farming regions such as D'Entrecasteaux Channel and the fact that wild fish can be a cause of pathogen transfer[PI] .

[PI]Unclear why this para is highlighted.

The second sentence is incorrect as in the first sentence we are talking about reducing risk and not elimination of the risk (I thought we agreed that we were not talking about zero risk), so the sentence should not say that the risk could not be eliminated only that "In the case of POMV infection (...), the Panel noted the lack of information on the epidemiology of the disease and highly dispersive environment of Storm Bay (...).

Larger distance would reduce the risk. This is true no matter if there is highly dispersive environment or potential involvement of wild fish as carriers. Possibly the risk would be reduced more for some diseases than others but it is true even for POMV and POMV is not the only potential disease in farmed salmon so we shouldn't focus only on POMV but on biosecurity in general.

The comment about wild salmonids (change in the text questioned by Pheroze) should really be wild trout. Farmed salmon can be carriers of a range of pathogens (RLO, V.anguillarum) which trout can be more sensitive to than salmon. According to Jeremy Lyle farmed Atlantic salmon are moving up the rivers and I believe it can create risks of infections to wild populations of trout. I'm not saying that it is a high risk, only stated that it "may infect wild populations" which is true.

Best regards  
Barbara

**From:** Barbara Nowak [mailto:[bfnowak@gmail.com](mailto:bfnowak@gmail.com)]  
**Sent:** Wednesday, 22 August 2018 7:17 AM  
**To:** Colin Buxton  
**Cc:** Craig Midgley; Pheroze Jungalwalla; Scott, Pamela (DoJ); Louise; Heather Chong; [Jock\\_campbell@bigpond.com](mailto:Jock_campbell@bigpond.com); [David.jarvis@dpiwwe.tas.gov.au](mailto:David.jarvis@dpiwwe.tas.gov.au)  
**Subject:** Re: Draft letters

Dear all,  
I would like to raise my (hopefully shared by the Panel) concerns that while we are using adaptive management for environmental purposes we are unable to use new knowledge to improve marine farming planning with regard to biosecurity. Since the new developments in Storm Bay were planned when biosecurity and specifically POMV were not an issue, now that we know there is a problem the plan should be adapted to take the new situation into account. Apparently we can't do this. I would like to raise this concern in the letters or in another document whichever is most appropriate. I would appreciate an advice how we can best approach this, if in the letters than I would like to add it or if we need to write a separate document or a letter.

Otherwise I'm Ok with the letter as edited by Colin and replied to some comments in the text.

Best regards  
Barbara

**From:** Barbara Nowak [mailto:[bfnowak@gmail.com](mailto:bfnowak@gmail.com)]  
**Sent:** Monday, 27 August 2018 05:33  
**To:** Colin Buxton <[colin.buxton@utas.edu.au](mailto:colin.buxton@utas.edu.au)>  
**Cc:** Craig Midgley <[ncmidg@bigpond.net.au](mailto:ncmidg@bigpond.net.au)>; Pheroze Jungalwalla <[pherozej@gmail.com](mailto:pherozej@gmail.com)>; Scott, Pamela (DoJ) <[Pamela.Scott@planning.tas.gov.au](mailto:Pamela.Scott@planning.tas.gov.au)>; Louise <[louise@cherrieconsulting.com.au](mailto:louise@cherrieconsulting.com.au)>; Heather Chong <[heather.gew@gmail.com](mailto:heather.gew@gmail.com)>; [Jock\\_campbell@bigpond.com](mailto:Jock_campbell@bigpond.com); Jarvis, David (DPIPWE) <[David.jarvis@dpiwwe.tas.gov.au](mailto:David.jarvis@dpiwwe.tas.gov.au)>  
**Subject:** Re: Draft letters

Sorry for the late reply. What I meant was that since there is a new information on biosecurity risks now which was not available when Storm Bay developments were planned we should apply this

	<p>information to the planned developments and not proceed just because it was planned or promised to the industry in the past. While is it great to see the current industry biosecurity plan it is a compromise where biosecurity for example separation is fitted around the the industry current plans for Storm Bay. Why can't those be changed? As we can see from the problems in the existing salmon farming regions it is going to be much harder to make any retrospective changes to address biosecurity issues than change the current plans. The industry themselves referred to the need for unscrambling when they talked to us about other farming regions like MH or SE Region. Why put the industry in the same position again so they will have to unscramble Storm Bay, why not change the plan or at the very least wait for the results of POMV epidemiology project (funded by FRDC and with Larry Hammel's involvement) before adding another risk to those which already exist. This is an opportunity to improve biosecurity management from the start and we seem to be stuck in the past. To be sustainable an industry development should be planned based on the current best world practice. While the optimum separation will depend on local conditions and pathogen there is no denying that further is better and that separation of companies should be more than sites within company, these principles are accepted by all biosecurity experts, including Larry Hammel who talked about them being used in the new developments in New Foundland. POMV is not the last pathogen to affect Tasmanian salmon industry, why create an environment where disease outbreaks and new diseases are more likely to occur. Tasmanian salmon sustainability does not depend only on the environment but also on biosecurity.</p> <p>Best regards</p> <p>Barbara</p>
<p>3. 3</p>	<p><b><u>Email requesting amendment to minutes</u></b></p> <p>Barbara Nowak &lt;bfnowak@gmail.com&gt; Tue, Jul 31, 2018, 6:45 AM to Colin, Gabrielle, Louise, Heather, Jock_campbell@bigpond.com, Pamela, Pheroze, Craig, David</p> <p>Dear all,</p> <p>sorry I haven't been responding but teaching all day yesterday and then driving to Hobart. I can't see that my comments sent on 29 July included in the last draft being discussed (with further comments from Pheroze) so I'm confused which version to read. I would like my changes to be incorporated in the next draft.</p> <p>I also have a problem with some statements in minutes from the last meeting. I am concerned that we keep reducing the best practice to suit the industry today without a concern for long term sustainability I hope we can discuss this today</p> <p>Best regards</p> <p>Barbara</p>
<p>3. 4</p>	<p><b><u>Emails about concerns regarding the process</u></b></p> <p>From: <b>Barbara Nowak</b> &lt;bfnowak@gmail.com&gt; 10 May 2018 Email sent to DPIPWE following a conversation</p> <p>further to our conversation here is my concern. If you look at page 17 in the middle column under Planning it says "Panel recommends to the Minister that the proposal should be approved" and there is no other option so it looks like rubber stamping. I think it should be changed to "Panel makes a recommendation" or at least an asterisk should be added and explained that the recommendation can be either way.</p> <p>Please let me know if you would like to discuss this further</p> <p>From: <b>Barbara Nowak</b> &lt;bfnowak@gmail.com&gt; Date: Wed, Jul 11, 2018 at 11:32 AM Subject: Re: Single Year class? To: Craig Midgley &lt;ncmidg@bigpond.net.au&gt;</p>

Dear Craig

thank you for your email and forwarding the email from Pheroze.

I agree with most of what Pheroze is saying and would like to meet with company reps and CVO to discuss further. I believe that the Panel is trying to reduce biosecurity risks not to eliminate them as it would be impossible in cage farming environment. While the Panel is considering industry interests it has to be long term interests and the industry themselves shared with us their concerns and told us that they needed someone to direct them.

In the end it will be the Minister's decision but that doesn't mean that we should rubber stamp what we think the Minister is going to say, we just have to accept that the Minister may disagree with us.

Looking forward to seeing you at the meeting

Best regards

Barbara

#### **4. Statements that adaptive management was misunderstood and that it is “...internationally best practice”**

Particular reference was made to Ms. Cherrie not understanding adaptive management and the specific use of this in marine farming. This is offensive and baseless for the following reasons:

- Ms. Cherrie has 25 years’ experience in environmental management for large businesses and adaptive management forms a *small* part of the harm prevention strategy for all operations. It is the normal iterative process of learning, responding and adjusting management actions over time. Contemporary risk management does not rely heavily on adaptive management but rather: identifies plausible harm scenarios; determines indicators, triggers and management actions; actively builds knowledge through studies so that gaps are progressively filled. Contemporary management monitors closely and responds strongly to triggers without being forced by Regulatory action because this can cause reputational damage and result in harm that requires remediation. Adaptive management is also a poor basis for a strong long-term financial strategy because the share market does not like uncertainty.
- The assertion is that adaptive management requires an operation to exist first before it can be applied is somewhat flawed. Whilst it is true that the *application* of adaptive management actions occurs only in the operational phase, significant planning can be done in the pre-operational phase to set the business up for success. Plans can be developed in the pre-operational phase based on projected inputs and outputs, and drawing upon global experiences. Mining operations have significant forward plans in place before a single stone is turned and these are linked to their Environmental Licence to ensure they are submitted and approved prior to operation. Marine farming need not be any different. Mature and sustainable businesses plan.
- Ms. Cherrie repeatedly requested additional information on management plans and strategies to respond to changing conditions during operations (e.g. response to poor conditions under cages, management of mass mortalities, waste management plans, monitoring of physiochemical parameters). Because these were not provided, she had to assume that adaptive management would be applied as the predominant strategy during operations. To that end her personal investigations into historical performance became incredibly important. Had they earned the right to grow? Unfortunately, the results of her due diligence identified the following issues:
  - failure to determine the physiochemical indicators necessary to trigger early action, instead finding an over-reliance on visual indicators.
  - alarmingly slow response to visual surveys of concern, and in some cases response was only taken when pushed by the EPA. In the worst example the operator took 8 months to take operational actions on a heavily impacted benthos and only did so after repeated correspondence with the EPA. By this time the benthos was covered with a significant bacterial mat and an opportunistic worm. Ms. Cherrie personally viewed the footage and determined it to be highly concerning (attempted to inform the Panel but was not supported as per statements below\*).
- Adaptive management in Tasmania is not best practice because the basis relies heavily on visual indicators, missing early opportunities to act, and the powers available to the Regulator have not consistently been used. Even the EPA Review of Tasmanian and International Regulatory Requirements for Salmonid Aquaculture’ draft report February 2020 states that:



*“For the past 5 years, the regulator has required approximately 50% of all environmental monitoring surveys at finfish farms outside of Macquarie Harbour to occur at or near peak feed input, while approximately 30% being undertaken during fallowing. In comparison internationally, environmental monitoring is undertaken when the likelihood of impacts from fish farming are at their greatest (i.e. at or near peak production). Formalising and implementing a tiered environmental performance-based monitoring program at or near peak production into the new ‘Environmental Standard’ to provide a robust and defensible environmental monitoring program, will enable consistency with international practice and provide further security for sustainable growth of salmonid farming in Tasmania”.*

- In the case of Macquarie Harbour the use of adaptive management was flawed from the outset because of the failure to utilise existing information to inform decisions (refer 5). To assert that bottom water DO levels were not known is incorrect. It was simply ignored through the failure of due diligence.
- Adaptive management should only be adopted where there is uncertainty or knowledge gaps that cannot be filled. The known gaps to responsible development have been long standing. The biogeochemical model was not in place despite promises, and yet the Panel approved the request for amendments regardless. This undermines adaptive management because it does not show genuine intent to fill critical gaps despite there being adequate time and available resources to do so.

In addition, adaptive management should be cognisant of natural values that require protection. Ms. Cherrie has raised concerns about natural values mapping. Prof Buxton has pointed to the Integrated Marine and Coastal Regionalisation of Australia Version 4. In the Storm Bay context this is the Bruny Bioregion. However, Ms. Cherrie’s concern was that this work is 20 years old and only focuses on coastal areas of Storm Bay to a depth of 40m. Given the scale of expansion this is inadequate to fully understand impacts on sensitive receptors.

***5. That Macquarie Harbour issues were due to a lack of knowledge and that the Panel made the right decision to recommend expansion at that time***

Critical data were available but not utilised. The EIA for the expansion did not show or describe modelling results for bottom water in Macquarie Harbour (for oxygen or any other parameter) despite a decade of detailed water column measurements available prior to the expansion of marine farming in 2011/2012. Circulation within the harbour and oxygen characteristics were well documented and understood. This information was made available to the modellers. Either the model did not include bottom waters which could be considered negligent, or the proponent chose not to include the results, thus providing an incomplete picture of potential impacts. This was not simply “garbage in = garbage out” in the model, but rather poor assessment by the Panel and Marine Farm Planning branch\*\* to not identify this major omission and request additional information about oxygen in bottom waters that was known to be an issue. The impacts in Macquarie Harbour were predictable based on the information that was available at the time. This omission also undermines adaptive management because that strategy should only be used where there are knowledge gaps. Any uncertainty about DO was only because the data was ignored.

Our concern, and the reason we have responded to this point, is that ignoring data has the same impact as not having data or having incorrect data. It does not provide a solid foundation for growth. Models require sound inputs and need to be validated at some point after commencement of the modelled activity. Nonetheless in the case of Storm Bay we view the biogeochemical model as a critical foundation (refer 2).

\*\* We would like to ensure our support of the staff within the Marine Branch is noted and to convey that they have been historically understaffed in spite of Government pushes under the Salmon Growth Plan.

## **6. Statements that we were treated fairly**

It is with regret that we are now forced to discuss the below issues in order to redress the Inquiry comments made. We have avoided commenting on our treatment because we felt it would detract from our key messages. However, it does underpin why we could not get a fair hearing and in light of the claims made by Panel members it is now necessary for us to discuss this.

For Prof Buxton to describe our treatment as fair is grossly inaccurate but predictable. The Panel was dominated by his opinion and indeed the Hansard of their hearing matches very well with our experience (domination by a single person making unsubstantiated statements). Challenging those statements brought us into direct conflict and the response was to ignore or belittle us. There was no support by other members of the Panel and the Chair did not intervene or support us as new members.

Unfair treatment was evident by the following:

- Ms. Cherrie was not permitted to present her due diligence findings to the Panel because it was labelled as “new information” and too late in the process (described below\*). Despite this, industry was allowed to present on at least two occasions and provided continual new information and alternate approaches (e.g. biosecurity plan proposal, hospitalisation of sick fish).

\*Applications for amendment included seriously inadequate sections on environmental management (approx. 8-10 pages for each). In order to form opinions Ms. Cherrie requested more information including:

- history of adaptive management responses to indicators of harm (not provided)
- details of physiochemical sampling program below cages given the reliance on visual indicators (not provided)
- operational plans in key areas such as mortality management, waste management, marine debris etc (not provided)

After many months of requesting information upon which to formulate advice Ms. Cherrie undertook her own due diligence directly with the EPA Director. This resulted in her finding extremely concerning information on the failures of adaptive management (refer \*). She prepared a presentation for the Panel Meeting 21 July 2018 to outline issues and possible solutions. Before she could present the dominant Panel member berated Ms. Cherrie, stating “You have had exactly the same amount of time as everyone else to give your opinions and it is simply too late to present new information”. Ms. Cherrie advised that, despite her requests, she had only just received information the day before from the EPA Director and sat up until midnight to prepare this presentation. He continued his barrage and Ms. Cherrie sat down without presenting. She received no support from the Chair or other members and none expressed an interest in her findings. Prof Nowak requested the presentation out of session.

- Undermining members and twisting advice that was inconvenient  
For example, Prof Nowak provided well researched global advice that the distance between leases should be more than 5km and preferably more than 10km. One Panel member suggested we get a “biosecurity expert” to give a second opinion. After obvious consultation with industry (this is inferred and cannot be proven) they said “what about 4km?” because that would allow for all three developments to proceed. That is what appeared in the report

despite Prof Nowak's clear objection. Neither the reports nor minutes adequately reflected dissenting views and, as previous stated, dissention was extremely difficult.

- Disrespectful and bullying behaviour  
Unfortunately, the nature of bullying is subtle and often contended. For this reason, we have not previously discussed behaviours, however they were sustained and targeted throughout our time on the Panel.

One Panel member was the dominant and controlled all meetings and the Panel members looked for their cues to that member. After a short period we began to see flaws in his statements and requested supporting evidence. It was mainly Ms. Cherrie requesting more information. In response he displayed dismissive and bullying behaviour sustained and targeted largely at Ms. Cherrie. This included:

- Openly stating Ms. Cherrie was wrong even when she offered evidence for her statements. On one occasion he was corrected by a member of the Marine Branch and simply scoffed and still did not accept her statement.
- Eye rolling, tongue clicking, huffing when we were speaking. After a few meetings the member ceased looking at Ms. Cherrie when she was speaking, choosing instead to look elsewhere in the room. Whilst these are subtle and non-verbal they go to the heart of the insidious nature of bullying. It is designed to ostracise, belittle, and disrespect in a manner that is easily denied.
- Taking a contrary opinion on every occasion. At one stage Ms. Cherrie, tiring of this, tested him. He asked her if she thought Macquarie Harbour would ever recover. She stated (contrary to her beliefs) "Probably with enough time". He scoffed and said "But what about the Maugean Skate, that's possibly been pushed to the brink of extinction!!". It was interesting to see in the Hansard that he now states Macquarie Harbour will recover. It was simple belligerence.

At no time did other Panel members over-ride the dominant member or request to hear the information Ms. Cherrie was trying to present other than Prof Nowak out of session. In this respect they were complicit in her disrespectful treatment.

Attending meetings became an extremely unpleasant experience that we had to steel ourselves for. This was unfortunate given our underlying motivation to assist with good governance and robust advice to support a sustainable salmon industry.

Prof Nowak was a direct witness to the disrespectful treatment endured by Ms. Cherrie and is happy to provide additional information.

We tried in a professional and respectful way to get a fairer hearing. We did this by:

- Emailing concerns about our treatment (refer Evidence 3.1).
- Meetings with the Chair on two occasions. He confirmed that "...some members are difficult" and that he would try. No changes resulted from these meetings. At no time did the Chair or Panel members intervene.
- Ms. Cherrie met with John Adams of the Marine Branch and the Chair on Monday 13 August 2018 to advise that meetings were becoming untenable, that information was not being provided, and that it was likely we would resign. John committed to attending meetings but nothing changed.

- Prof Nowak met with John Adams to discuss hers and Ms. Cherrie's concerns and potential resignation and was advised that the Chair was the only point of contact and that it was not possible to resign from the Panel.

It is miraculous that we endured this treatment for as long as we did and confirms our commitment to improving salmon farming for the betterment of operators and the environment and to regain trust by the Tasmanian community. Unfortunately, our efforts failed and we had no other option but to resign.

## **Appendix 1 – Conflicts of Interest disclosures**

### **Discussion of Conflicts reflected in MFPRP Report:**

[Draft Amendment No.5 MFPRP Report, August 2018, Page 83](#)

“At the public hearing, a representor queried whether Professor Barbara Nowak had a conflict of interest arising from research funding received from Tassal Operations Pty Ltd listed on Professor Nowak’s University of Tasmania research profile. Professor Nowak has declared that she supervises a Phd student who receives a scholarship of \$8,000 per year over three years (a total of \$24,000). The scholarship is funded by Tassal Operations Pty Ltd and is used by the student in their research into gill health in hatcheries. The Panel did not consider this to be a conflict of interest.”

**Pecuniary interests were disclosed at the commencement of our appointments. These were sent separately and collated by Marine Branch staff. At this time we have no access to the collated version. Our separate returns are provided below:**

**Conflict of Interest Register completed by Ms. Cherrie**

## Marine Farming Planning Review Panel

1 Franklin Wharf, Hobart, 7000, Tasmania, Australia

Correspondence to be addressed to the Executive Officer, GPO Box 44, Hobart, Tasmania, 7001



Tasmania

**Table 1: Declaration of MFPRP members' pecuniary interests**

Member	Interest declared	Declared Updated/On
Mr Craig Midgley	[REDACTED]	19 July 2018
Ms Pamela Scott	[REDACTED]	3 Oct 2017
Ms Louise Cherrie	[REDACTED]	19 July 2018
Ms Heather Chong	[REDACTED]	19 July 2018
Mr Pheroze Jangalwala	[REDACTED]	19 July 2018
Prof Colin Buxton	[REDACTED]	19 July 2018
Mr Jock Campbell	[REDACTED]	3 Oct 2017
Prof Barbara Nowak	Partner is employed by TCT	23 Jan 2018

### **Marine Farming Planning Act 1995 - SCHEDULE 2 - Membership of Panel**

#### **6. Disclosure of interests**

(1) If a member has or acquires an interest that would conflict with the proper performance of the member's duties in relation to a matter being considered or about to be considered by the Panel, the member must disclose the nature of that interest at a meeting of the Panel.

(2) A disclosure under [subclause \(1\)](#) is to be recorded in the minutes of the meeting of the Panel and the member, unless the Panel otherwise determines, must not –

- (a) be present during any deliberation of the Panel with respect to that matter; or
- (b) take part in any decision of the Panel with respect to that matter.

(3) For the purpose of making a determination by the Panel under [subclause \(2\)](#), a member who has a direct or indirect pecuniary interest in the matter to which the disclosure relates must not take part in making the determination.

## Conflict of Interest Register completed by Prof Nowak

### Marine Farming Planning Review Panel

1 Franklin Wharf, Hobart, 7000, Tasmania, Australia

Correspondence to be addressed to the Executive Officer, GPO Box 44, Hobart, Tasmania, 7001



**Table 1: Declaration of MFPRP members' pecuniary interests**

Member	Interest declared	Declared Updated/On
Mr Craig Midgley	[REDACTED]	19 July 2018
Ms Pamela Scott	[REDACTED]	3 Oct 2017
Ms Louise Cherrie	[REDACTED]	19 July 2018
Ms Heather Chong	[REDACTED]	19 July 2018
Mr Pheroze Jungalwalla	[REDACTED]	19 July 2018
Prof Colin Buxton	[REDACTED]	19 July 2018
Mr Jock Campbell	[REDACTED]	3 Oct 2017
Prof Barbara Nowak	Professor IMAS UTAS Partner is employed by TCT Collaborative project with CSIRO on gill pathology in salmon receives \$8000/year for 3 years towards PhD student scholarship	23 Jan 2018

### Marine Farming Planning Act 1995 - SCHEDULE 2 - Membership of Panel

#### 6. Disclosure of interests

(1) If a member has or acquires an interest that would conflict with the proper performance of the member's duties in relation to a matter being considered or about to be considered by the Panel, the member must disclose the nature of that interest at a meeting of the Panel.

(2) A disclosure under [subclause \(1\)](#) is to be recorded in the minutes of the meeting of the Panel and the member, unless the Panel otherwise determines, must not –

(a) be present during any deliberation of the Panel with respect to that matter; or

(b) take part in any decision of the Panel with respect to that matter.

(3) For the purpose of making a determination by the Panel under [subclause \(2\)](#), a member who has a direct or indirect pecuniary interest in the matter to which the disclosure relates must not take part in making the determination.

Continued over

### Update to pecuniary interest register by Prof Nowak

From: Barbara Nowak [mailto:[bfnowak@gmail.com](mailto:bfnowak@gmail.com)]

Sent: Wednesday, 8 August 2018 8:40 AM

To: Jarvis, David (DPIPWE) <[David.Jarvis@dpiuwe.tas.gov.au](mailto:David.Jarvis@dpiuwe.tas.gov.au)>

Subject: pecuniary interest



Dave,

i would like to update my pecuniary interests, please see below

Best regards

Barbara

NAME REDACTED – we have known each other for over 15 years and worked together on PROJECT DETAILS REDACTED, currently we are collaborating on PROJECT DETAILS REDACTED and catch up for coffee or a drink when we are both in Hobart.

From: **Jarvis, David (DPIPWE)** <David.Jarvis@dpiuwe.tas.gov.au>

Date: Wed, Aug 8, 2018 at 9:15 AM

Subject: RE: pecuniary interest

To: Barbara Nowak <bfnowak@gmail.com>

Thanks Barbara, I have recorded in the Register as below.

Professional working relationship with NAME REDACTED for over 15 years

## **APPENDIX D: Process Flow Charts**

## **Re Sub-Committee - Finfish Farming in Tasmania Inquiry**

Request from Sub-Committee for additional information from DPIPWE in relation to “Finfish Farming in Tasmania Inquiry”

1. Summary of planning, allocation and operational (licensing) elements of finfish marine farming and linkage to relevant legislation.

Flow charts for

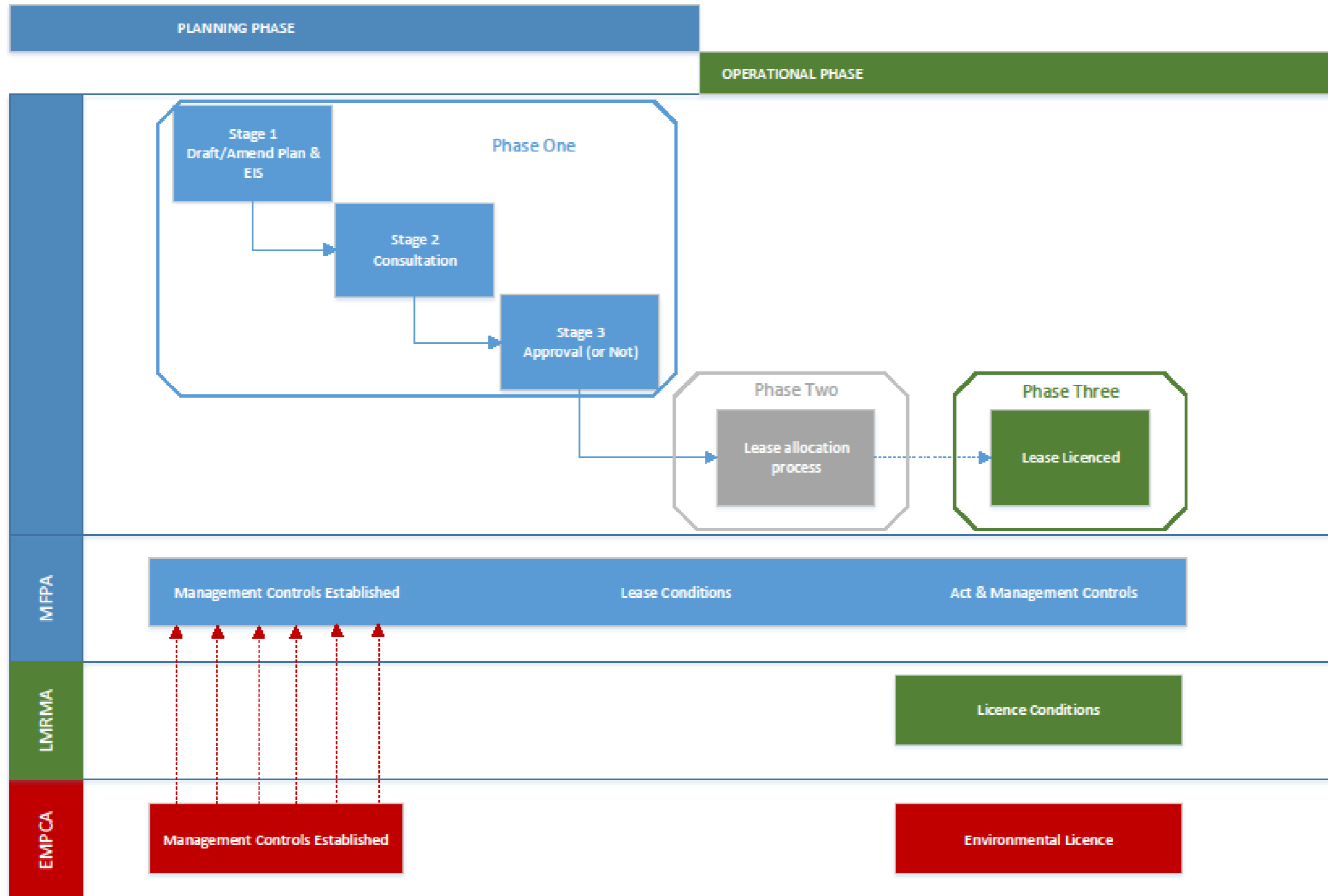
- a. Phase 1 - planning (creation and amendment of MFDPs)
  - b. Phase 2 - allocation of leases
  - c. Phase 3 - granting marine farming licences
2. Details of finfish marine farming development plans, zones, leases and licences in effect, and baseline information collected.
  3. Determinations made relating to biomass and Total Permissible Dissolved Nitrogen Output (TPDNO).

1. Summary of planning, allocation and operational (licensing) elements of finfish marine farming and linkage to relevant legislation.

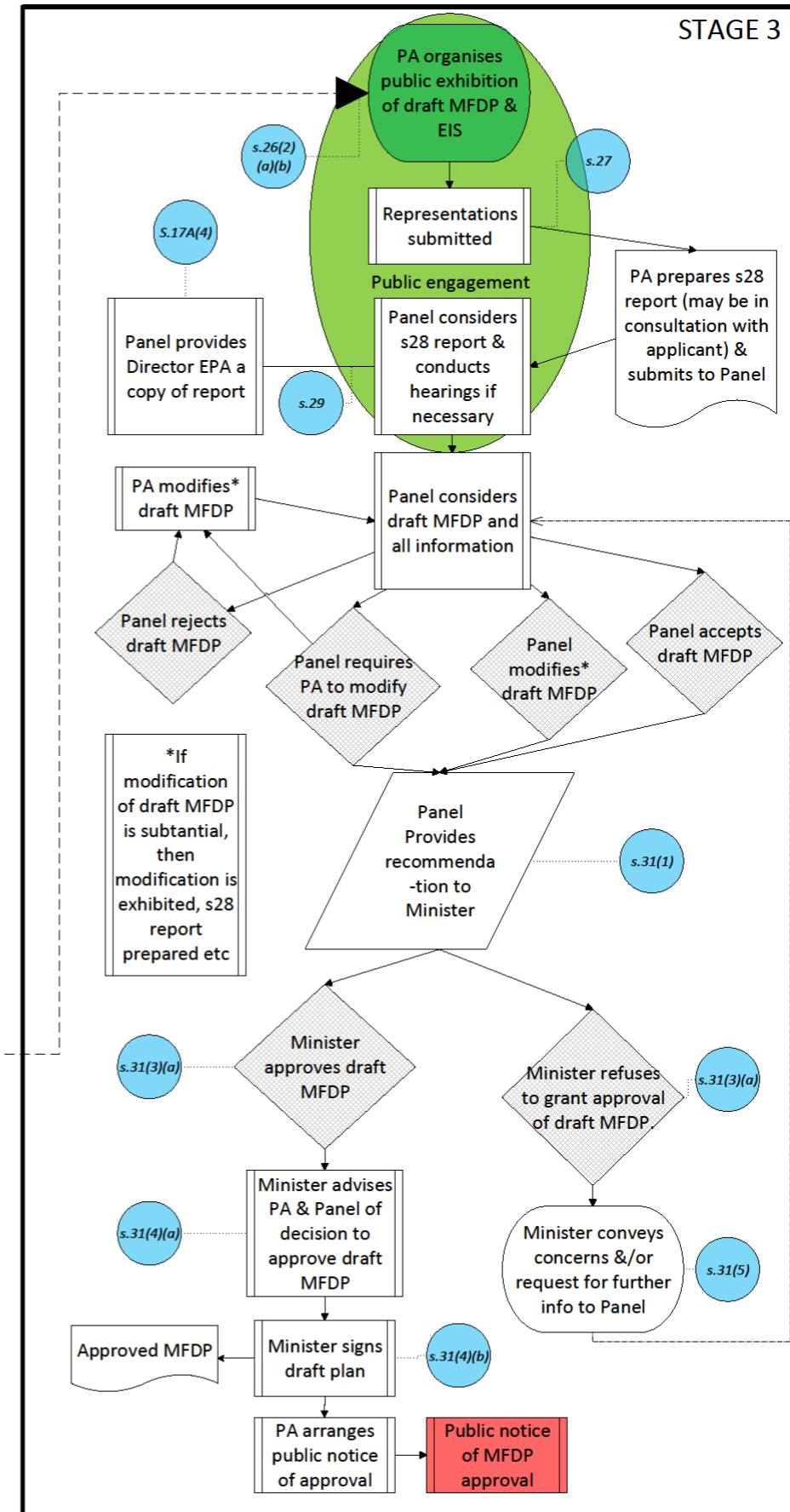
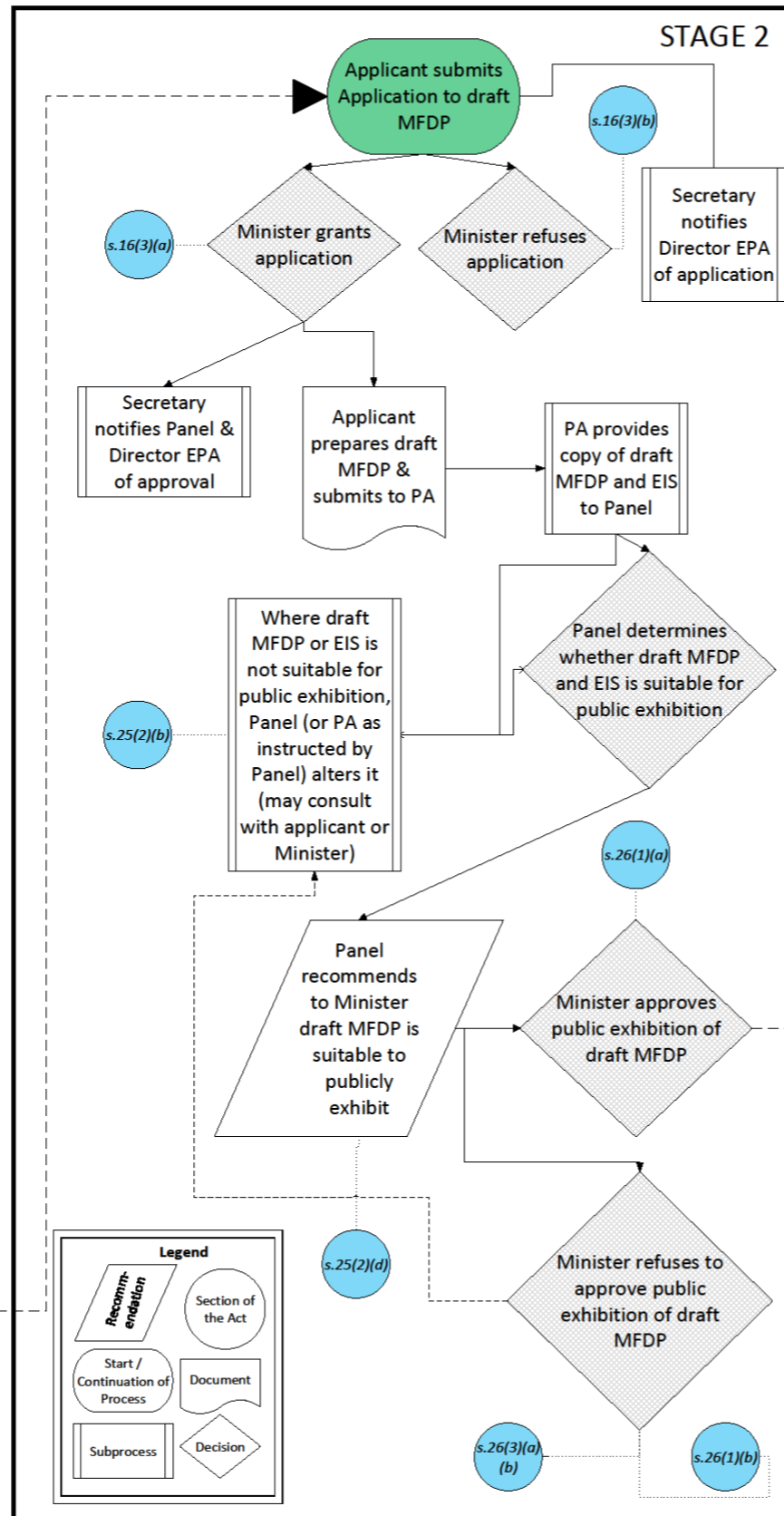
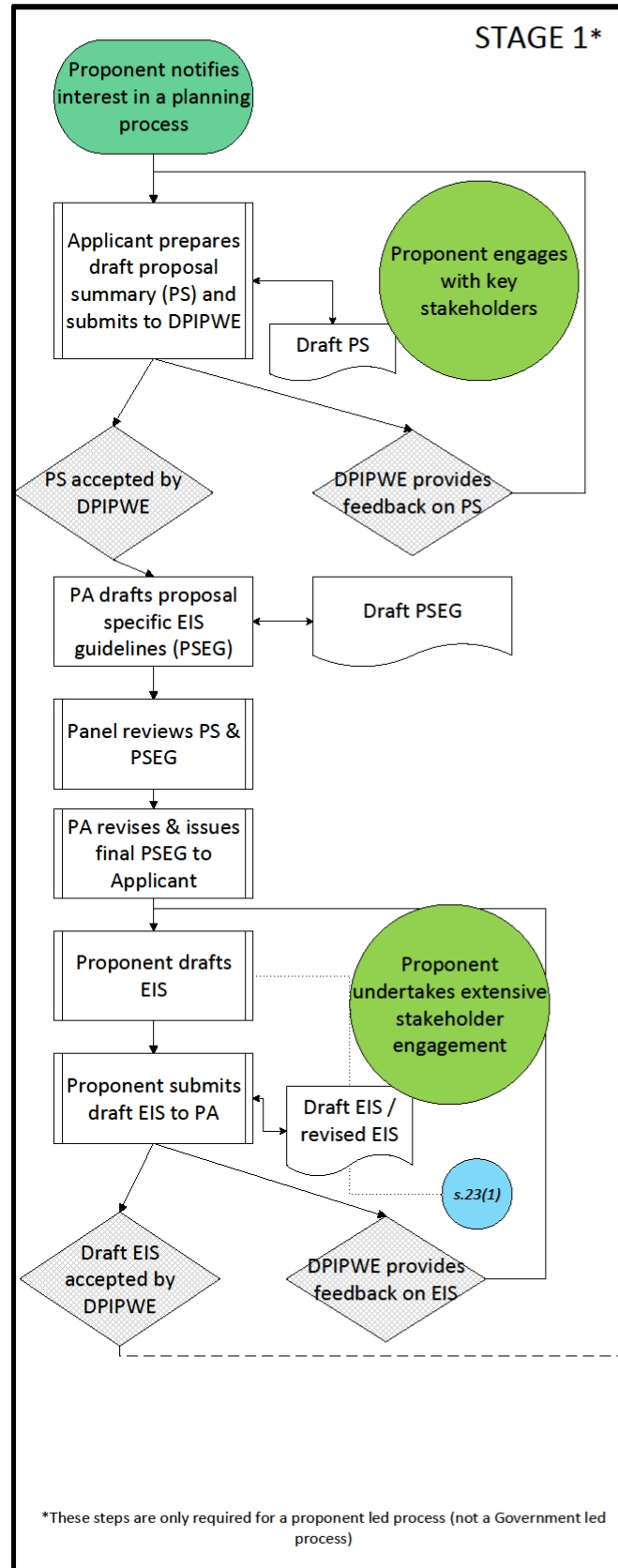
Phase 1 - Planning involves 3 stages (detailed in following flow charts)

Phase 2 – Allocation process for marine farming lease area(s)

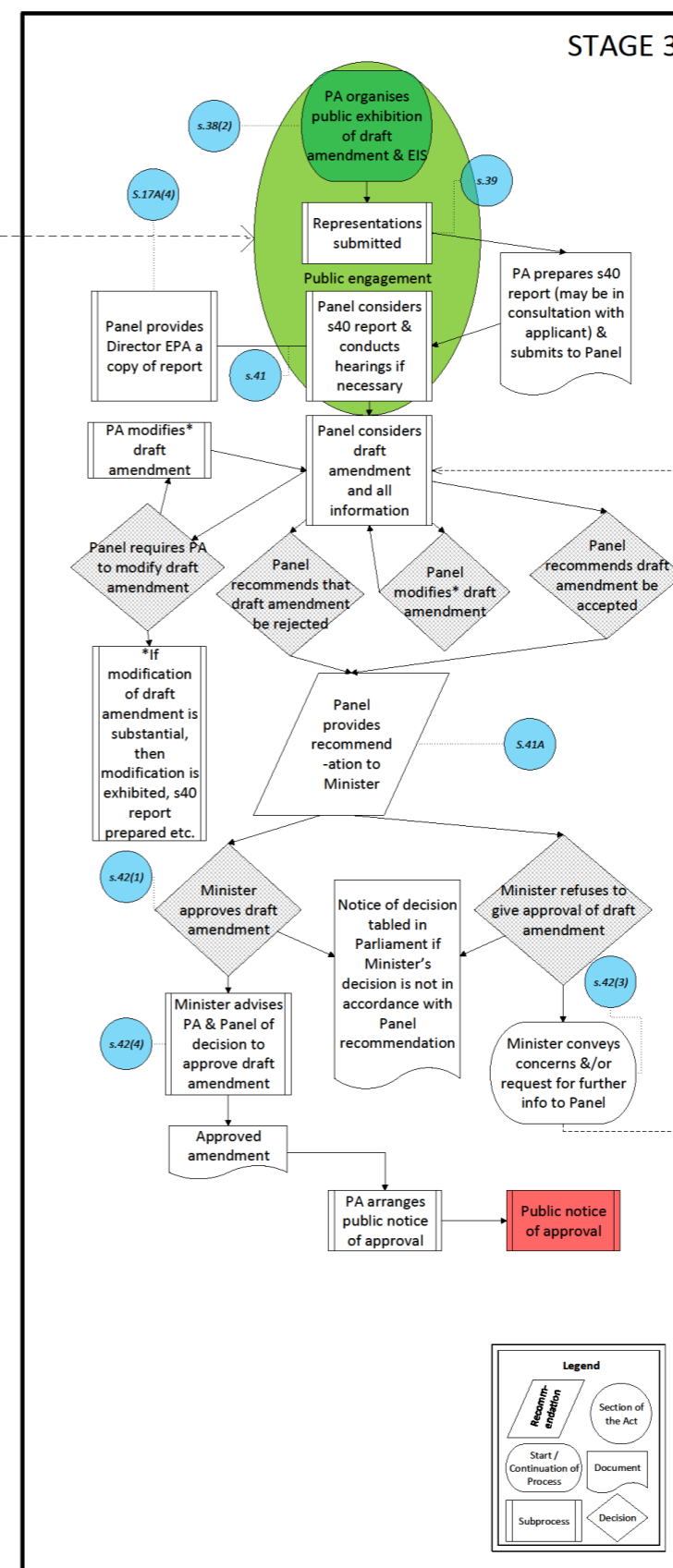
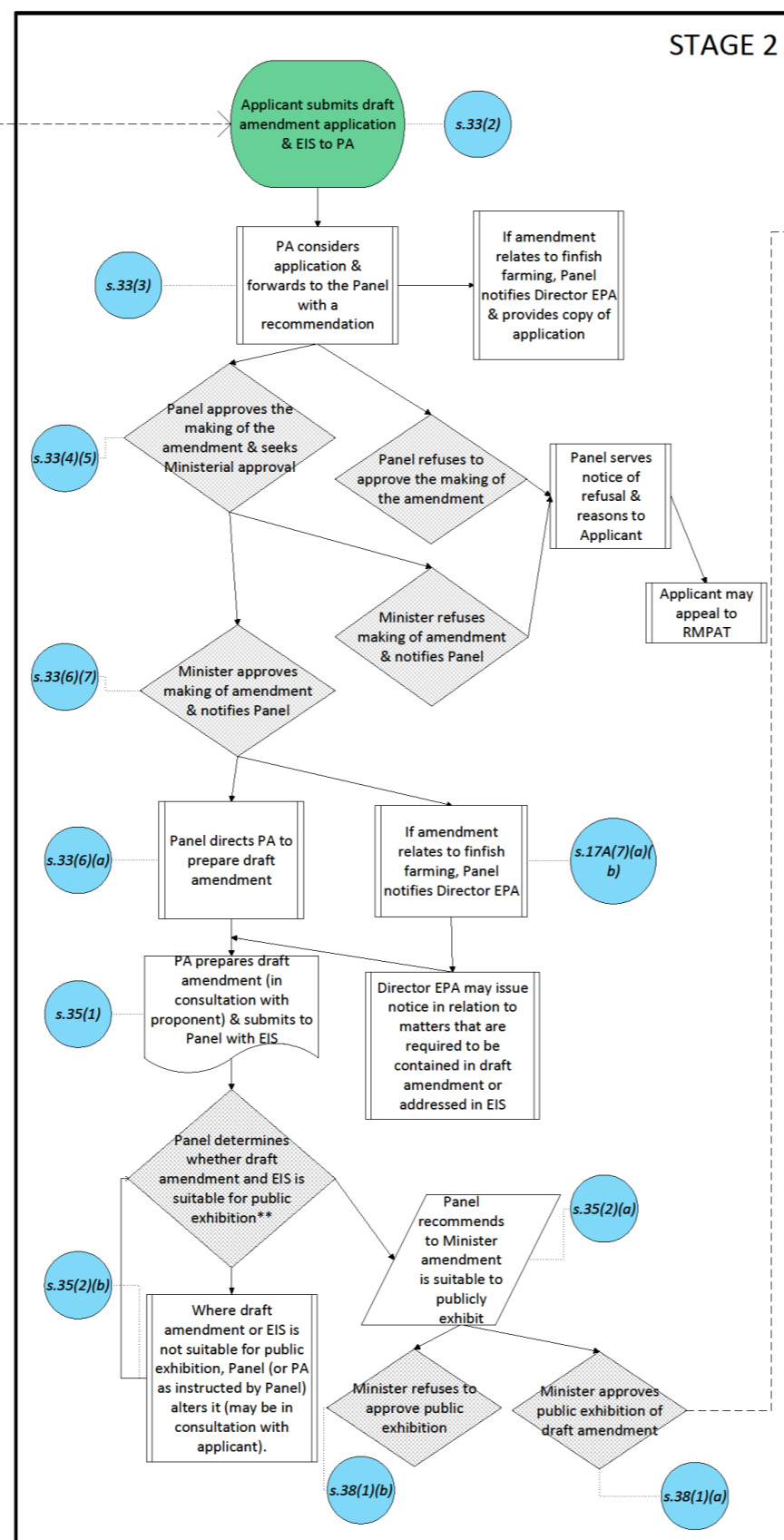
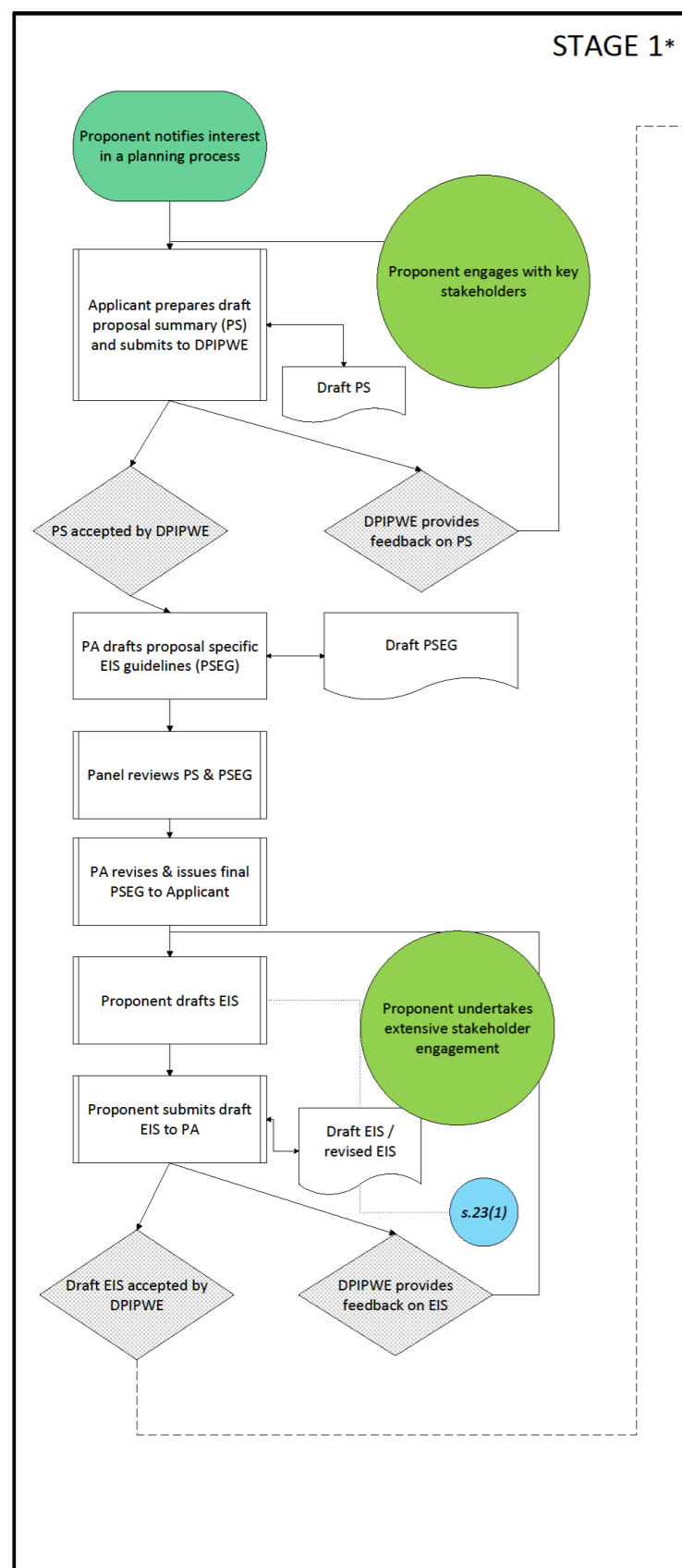
Phase 3 – Licensing and operation of marine farming lease areas



### Process associated with making of a Marine Farming Development Plan

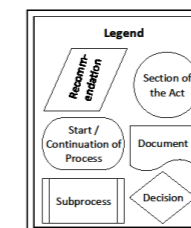


Process associated with making of an amendment to a Marine Farming Development Plan



\* These steps are only required for a proponent led process (not a Government led process)

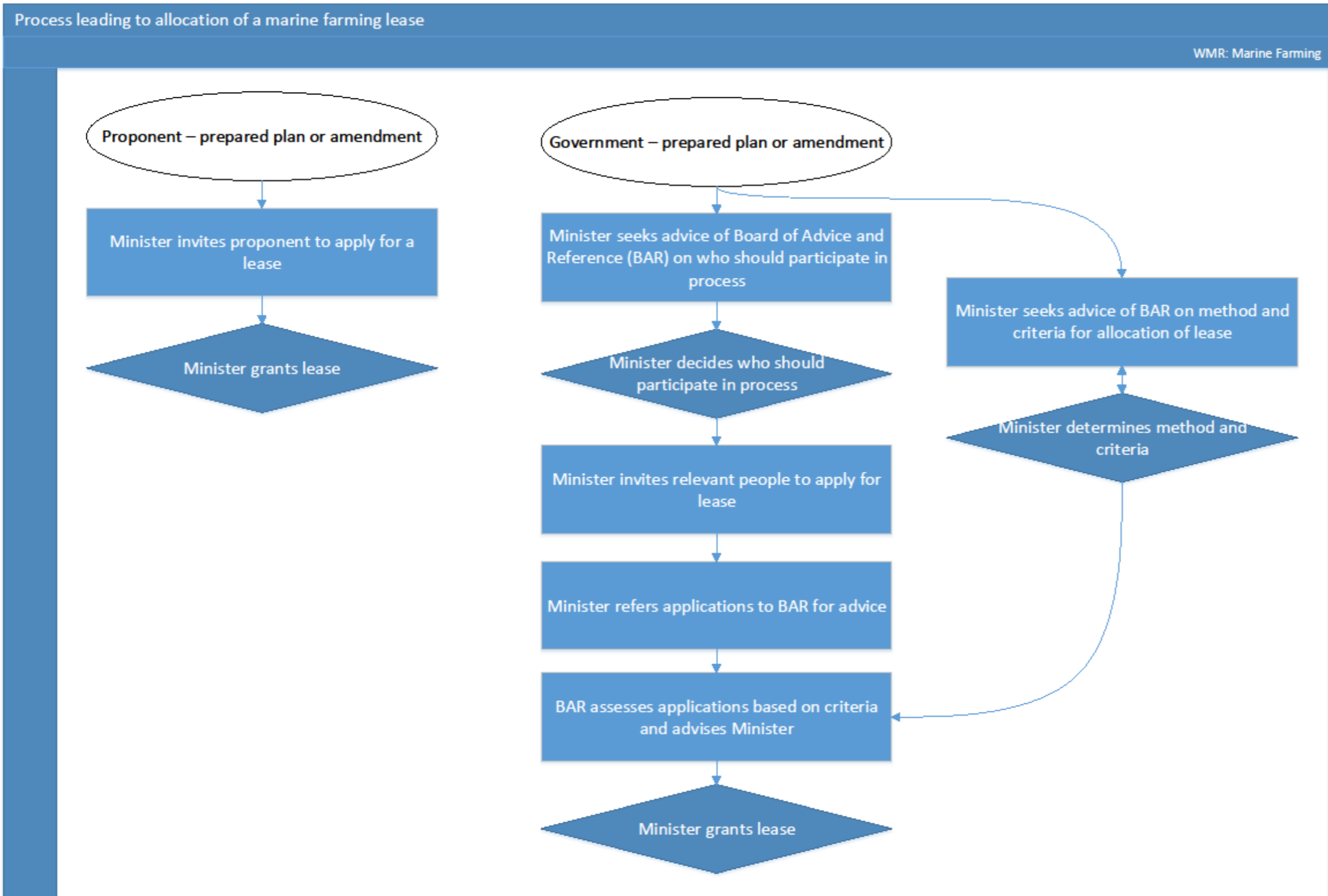
\*\*If an amendment is to correct an error, not of a substantial nature, or is to remove an anomaly, the Panel may recommend that provisions relating to EIS, public exhibition and hearings do not apply and proceeds to step "Panel considers draft amendment and all information" in stage 3.



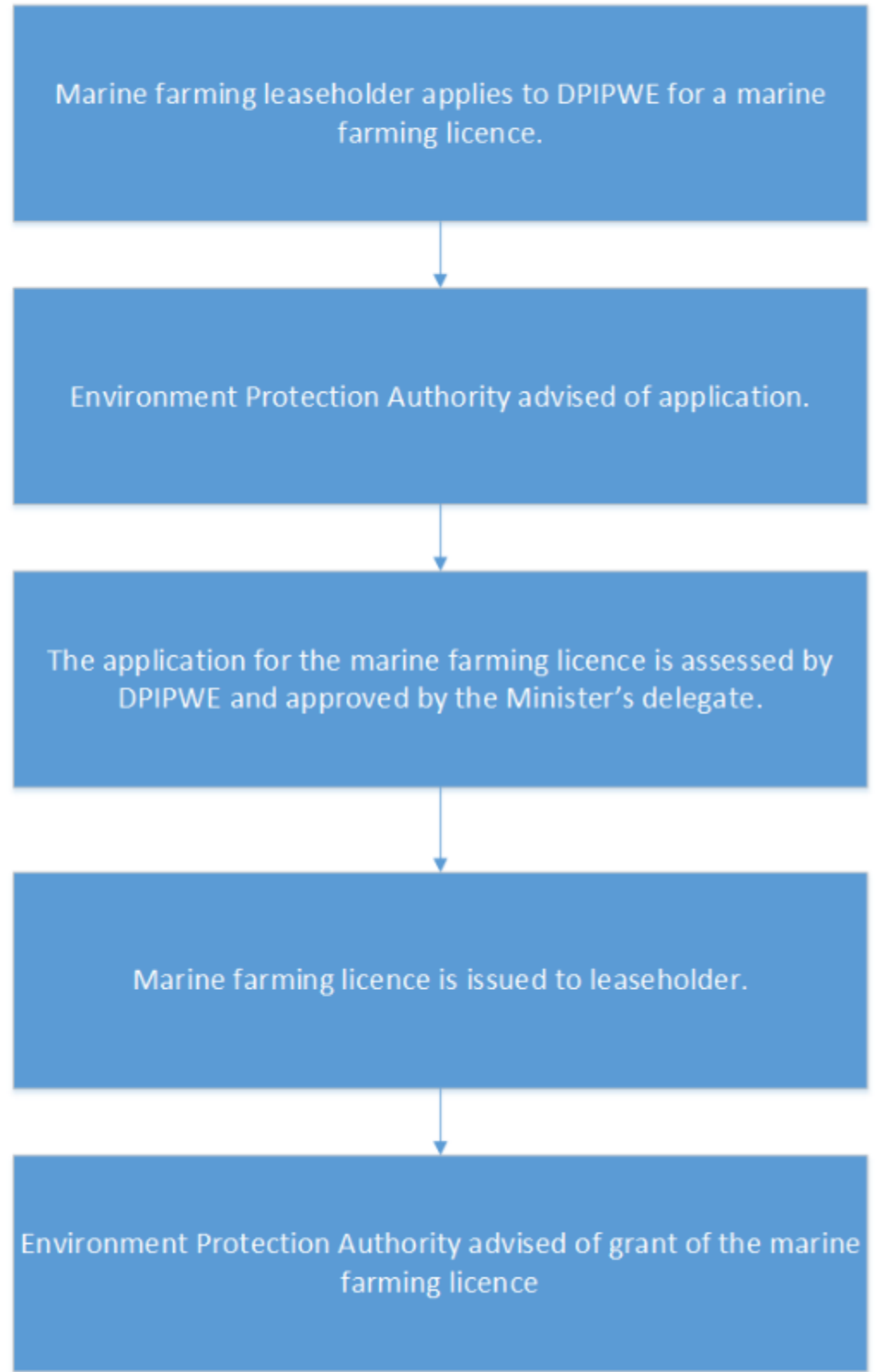
## Documentation associated with making of a new, or an amendment to an existing, Marine Farming Development Plan (MFDP)

- Documentation requirements; and
- Stakeholders involved

Document type &/ or name	Flowchart reference	Description
Proposal Summary template	Stage 1 (new Plan, amendment to a Plan)	A template document created/prepared by Planning Authority (PA), in consultation with other referral parties/stakeholders including EPA, Biosecurity Tasmania, Natural & Cultural Heritage & MaST, issued to a proponent seeking to make or amend a MFDP. A proponent populates the template with key information about the proposed marine farming development and submits a 'Proposal Summary' to the PA (refer Figure 1b, step one).
Proposal Summary		The purpose of a Proposal Summary (PS) is to provide the PA and Marine Farming Planning Review (Panel) with sufficient, relevant preliminary information to enable a decision about the most appropriate planning pathway/processes (dictated by the MFPA) that apply to the proposal. The PS may be considered analogous to an Expression of Interest.
Generic Environmental Impact Statement Guidelines		A guideline document prepared by the Planning Authority (PA) for proponents of marine farming development plans. Generic EIS guidelines will be publicly available (e.g. online), where proponents and other interested parties can examine and consider its requirements at any time.
Proposal Specific EIS Guidelines		A 'proposal specific' EIS guideline prepared and issued by the PA, following consultation with referral parties/stakeholders including EPA, Biosecurity Tasmania, Natural & Cultural Heritage & MaST. The generic EIS guideline is tailored as necessary to cater for information contained in a proponent's PS document. The Panel usually considers, and may recommend adjustments to, a 'proposal specific' EIS guideline prior to it being issued to a proponent seeking to make or amend a MFDP.
EIS		The purpose of an EIS is to assist the Panel and the public to understand the environmental consequences of a draft amendment to the extent that is reasonable and practicable for informed decision making.
Draft Plan, or draft amendment to a Plan	Stage 2 (new Plan, amendment to a Plan)	A draft Plan, or a draft amendment to a Plan is a planning document that sets out areas where marine farming can occur ('zones'). Leases may be granted within these zones, up to the maximum leasable area that is set by the Plan. The Plans also specify which types of marine farming can take place within each zone (such as finfish or shellfish) and contain management controls to mitigate and manage potential negative effects of farming within the plan area.
Section 28 or section 40 report	Stage 3 (new Plan, amendment to a Plan)	A 'section 28' or 'section 40' report is a document prepared by the PA for the Panel following a draft Plan's period of public consultation. A s28 report is compiled in the case of the making of a new Plan. A s40 report is compiled in the case of a draft amendment to a Plan. Each type of report considers and evaluates all submissions received during the public exhibition period and must comprise: <ul style="list-style-type: none"> <li>a) A copy of each representation; and</li> <li>b) A statement concerning the number of hearings requested; and</li> <li>c) A statement of the PA's opinion as to the merit of each representation; and</li> <li>d) A statement regarding: <ul style="list-style-type: none"> <li>i. the need for any modification of a draft Plan (or draft amendment); and</li> <li>ii. the impact of any representation on the draft Plan (or draft amendment)</li> </ul> </li> <li>e) Any appropriate recommendation in relation to the draft Plan (or draft amendment)</li> </ul>
Final signed Plan, or amendment to a Plan		In the event the Minister approves a new Plan, or an amendment to a Plan, he/she gives authority to the Plan by signing it. A copy of the Plan is placed on the DPIPWE website.
Panel report		For each marine farming proposal (e.g. draft Plan) considered by the Panel, it produces a public report. A Panel report sets out the matters it considered in making its determination, under the relevant section of the Marine Farming Planning Act 1995 (the Act), in relation to the given marine farming proposal (e.g. a draft Plan).







2. Details of finfish marine farming development plans, zones, leases and licences in effect, and baseline information collected.

Information on all current finfish Marine Farming Development Plan areas, approval dates and designated finfish zones in Tasmania is presented below including the number of finfish marine farming leases and marine farming licences currently in effect. Note that to stock marine farming equipment with finfish in a marine farming lease area requires an authorisation from the EPA in the form of an Environmental Licence.

Phase 1 - Planning			Phase 2 – Lease allocation		Phase 3 - Licensing	
Marine Farming Development Plan areas	First Approved	Current Plan Approved	Finfish Zones	Finfish Leases <sup>+</sup>	Finfish Marine Farming Licences	Commencement of finfish marine farming conditional on baseline survey
D'Entrecasteaux Channel and Huon River	October 1996 (Huon River and Port Esperance) February 1997 (D'Entrecasteaux Channel)	Oct-19	49 <sup>1</sup>	29	28	Yes
Furneaux Islands (no operating salmon farm) <sup>^</sup>	Jun-00	Jun-00	10	0	0	N/A
Great Oyster Bay and Mercury Passage	Nov-98	Feb-17	1	1	1	Yes
Macquarie Harbour	Nov-98	Sep-16	11 <sup>2</sup>	10	10	Yes
Storm Bay North	Apr-19	Apr-19	1	1	0	Yes
Storm Bay off Trumpeter Bay North Bruny Island	Jul-98	Sep-18	5 <sup>3</sup>	2	2	Yes
Tamar Estuary	Mar-01	Jul-19	1	1	1	Yes
Tasman Peninsula and Norfolk Bay	Oct-96	Sep-18	15 <sup>4</sup>	8	8	Yes
			93	52	50	

<sup>+</sup>Finfish Leases are marine farming lease areas within designated finfish zones that have finfish rental rates specified.

<sup>^</sup>No finfish farming leases allocated within this MFDP area.

<sup>1</sup> 20 of the 49 zones do not hold finfish leases. These remaining zones were established for Finfish, Shellfish and seaweeds and predominantly contain shellfish lease areas.

<sup>2</sup> One finfish lease area occupies two zones.

<sup>3</sup> One finfish lease area occupies four zones, and the other occupies a single zone.

<sup>4</sup> 15 zones established for Finfish, Shellfish and seaweeds. Other lease classifications, for example shellfish, occupy the balance of zones.

**Baseline Survey requirements:**

Information on the background environmental characteristics of the region, proposed MFDP area and zones therein is presented in EIS documentation. All EISs include site suitability assessments for each proposed zone(s).

Following establishment of an MFDP or an amendment to an MFDP, the allocation of a lease area and licensing of the marine farming lease area is conditional on the completion of a lease-specific baseline environmental survey to collect data on a range of indicators.

The specification of baseline environmental requirements, assessment of all data and determination of any site specific management triggers is determined by the EPA.



3. Determinations relating to biomass and Total Permissible Dissolved Nitrogen Output (TPDNO).

Management controls are prescribed in each MFDP area and apply to all marine farming lease holders within the area. The table below identifies determinations made by the Secretary DPIPWE under these controls prior to the transfer of responsibility for environmental regulation to the EPA in mid 2016. These determinations were plan area wide determinations that applied to all finfish lease holders.

It should be noted that marine farming licences also contain conditions relating to marine farming operations on a lease specific basis.

A copy of generic finfish marine farming licence conditions pre-EPA transfer is attached, and copies of all current of marine farming licences are publicly available on Government's [salmon data portal](#)

MFDP	First Approved	Current Plan Approved	Controls/Conditions imposed <b>prior</b> to regulation by EPA (mid - 2016)
D'Entrecasteaux Channel and Huon River	October 1996 (Huon River and Port Esperance) February 1997 (D'Entrecasteaux Channel)	Oct-19	<p><b>Dec 2008</b> Secretary DPIPWE determination of TPDNO across area covered by Huon and Channel MFDPs =&gt; 2,225 Tonnes TPDNO</p> <p><b>Mar 2015</b> Secretary DPIPWE determination of TPDNO across area covered by Huon and Channel MFDPs =&gt; 2,275 Tonnes TPDNO</p> <p>At various times between 2008 and mid-2016 the Secretary re-apportioned the distribution of the determined TPDNO across leaseholders within the respective MFDP areas.</p> <p>Subsequent to the transfer of environmental regulation to the EPA, further TPDNO determinations have been made by the Director, EPA under delegation from the Secretary (As of October 2019 the management control to set TPDNO specifies the Director is responsible).</p>
Furneaux Islands (no operating salmon farm)^	Jun-00	Jun-00	N/A
Great Oyster Bay and Mercury Passage	Nov-98	Feb-17	Currently no determination is in place. Management controls for the MFDP were amended in August 2016 to give responsibility for determinations to the Director.
Macquarie Harbour	Nov-98	Sep-16	<p><b>Oct 2015</b> Secretary DPIPWE determination of Biomass for period 9 Oct 2015 to 30 June 2016 =&gt; 19.88 Tonnes/Hectare (Huon Aquaculture &amp; Southern Ocean Trout)</p> <p><b>Oct 2015</b> Secretary DPIPWE determination of Biomass for period 9 Oct 2015 to 30 June 2016=&gt; 34.21 Tonnes/Hectare (Tassal Operations &amp; Aquatas P/L)</p> <p><b>Oct 2015</b> Secretary DPIPWE determination of Biomass for period 9 Oct 2015 to 30 June 2016=&gt; 14.42 Tonnes/Hectare (Petuna Aquaculture P/L)</p> <p><b>April 2016</b> Secretary DPIPWE determination of Biomass for period 1 July 2016 to 30 June 2017=&gt; 20.44 Tonnes/Hectare (Huon Aquaculture &amp; Southern Ocean Trout)</p> <p><b>April 2016</b> Secretary DPIPWE determination of Biomass for period 1 July 2016 to 30 June 2017=&gt; 33.58 Tonnes/Hectare (Tassal Operations &amp; Aquatas P/L)</p> <p><b>April 2016</b> Secretary DPIPWE determination of Biomass for period 1 July 2016 to 30 June 2017=&gt;17.79 Tonnes/Hectare (Petuna Aquaculture P/L)</p> <p>Subsequent to the transfer of environmental regulation to the EPA, further Biomass determinations have been made by the Director, EPA under delegation from the Secretary.</p>
Storm Bay North	Apr-19	Apr-19	Currently no determination is in place. Under management controls specified in the MFDP, responsibility for determinations sits with the Director EPA.

Storm Bay off Trumpeter Bay North Bruny Island	Jul-98	Sep-18	Currently no determination is in place.  Under management controls specified in the MFDP, responsibility for determinations sits with the Director EPA.
Tamar Estuary	Mar-01	Jul-19	Currently no determination is in place.  Under management controls specified in the MFDP, responsibility for determinations sits with the Director EPA.
Tasman Peninsula and Norfolk Bay	Oct-96	Sep-18	Currently no determination is in place.  Under management controls specified in the MFDP, responsibility for determinations sits with the Director EPA.



## **APPENDIX E: Summary of template-based submissions**

<b>Sub No.</b>	<b>Issue raised</b>
7	Fish are not native to Tasmania and will destroy what is left of natural ecology
8	Companies need to be held accountable
9	Fears running into pipes and other floating items when on boat with family Visual and environmental pollution Listeria outbreaks need to be reported publicly
10	Inability to catch fish, flounder in north west bay area Oceans cannot cope with amount of effluent
11	Visual pollution in Huon Valley Concern with plastic washing up at beach at Orford
12	Government is prioritising profit over community wishes and damage to waterways Fish waste and equipment are dangerous to marine life and other water users Costs outweigh gains and expansion of the industry is irresponsible
13	Government is allowing one industry to sit above all others and plundering our natural assets.
14	Inevitability of environmental degradation in Macquarie Harbour
15	No additional issues raised
16	Accountability and stewardship of shared resources Sustainable management of resources Maintain goodwill within the community
17	Fish farms are sites of pollution, animal cruelty, sailing hazards
18	Reduction in seabirds, snapping shrimps Marine vegetation corresponding with increase of fish farms Increase in fish farm objects adrift causing hazard to vessels
19	Destruction of environment observed in new fish pen locations Increase in fish farm debris on shorelines
20	Uncontrolled fish farm expansion destroying natural environment Increase in noise and light pollution Degradation of marine environment near pens Increased road traffic Loss of quiet local atmosphere on water and roads
21	Natural ecosystems exploited by expansion Natural fish stocks need protection
22	Sound pollution



	Proximity of pollutants to marine reserves set aside for recreational diving and scientific research
23	Concentrations of fish wastes causing environmental harm.
24	Smell of death from decaying flora and fauna near the fish farm
25	Fish farms destroying the environment
26	Fish farm industry provides jobs, done well except in Strahan
27	Fish farm pollution in NW Bay Oyster and mussel stocks depleted
28	Environmental degradation, diminishing of cultural and societal benefits of untouched coastline Increase in fish farm debris on shore, don't like the look of the pens
29	Collections of baseline data prior to new projects Consideration for social and lifestyle impact on residents Independent monitoring and oversight of stocking Pollutants
30	No additional issues raised
31	Exploitation of Tasmania to benefit a small group Lack of transparency
32	No additional issues raised
33	Natural values assessment of Storm Bay required Review infrastructure failure in major weather events and preventative measures; best practise standards Learn from Macquarie Harbour Management control Biogeochemical model for lower Derwent Estuary Pollution controls for Derwent Estuary MFRP include community rep' and independent marine scientist Lease applications, renewals, expansions reviewed by MFRP in public hearings Fish farm compliance officers Marine debris enforcement of penalties Commonwealth Blue Charter principles Whale proof netting GPS locators Operator indentifiable ropes, nets, pipes Classify pens as autonomous marine vessels Review use of firecrackers in seal management

	<p>Independent review of environmental impact statements submitted with MFDP</p> <p>Independent review of biosecurity plans MFDP</p> <p>Lease condition enforcement</p> <p>Marine, safety and fish health training and accreditation records submitted with MFDP</p>
34	Huon river: more green algae, no more flathead near fish pens
35	<p>Light and noise pollution from fish pens</p> <p>Loss of visual amenity</p> <p>Reduction in water quality near fish pens</p> <p>Inconsistent farming practises compared to land based</p> <p>Reduction in property values when fish pens located nearby</p> <p>No community consultation in expansion and development</p> <p>Insufficient industrial monitoring</p>
36	No additional issues raised
37	<p>Negative impact from increase in marine traffic in Channel and Dennes Point</p> <p>Disturbed sleep from increase in night time noise and light on fish pens</p> <p>Lack of community consultation</p> <p>Loss of amenity</p> <p>Destruction of coastline</p> <p>Industry profits not shared by community</p>
38	Fish farm debris on beaches
39	<p>Noise, smell, visual pollution</p> <p>Decline in recreational fish availability</p>
40	<p>Sailing routes blocked by pens</p> <p>Noise pollution</p> <p>Fish pen debris on beaches</p> <p>Increase in algal blooms near pens</p> <p>Reduction in flathead</p> <p>Community interaction discouraged</p>
41	No additional issues raised
42	<p>Need to take the advice of key scientists</p> <p>Lack of baseline studies</p> <p>Profits at the expense of the environment</p> <p>Regulatory processes required</p> <p>Shore based production</p>

43	<p>Long term fish pen pollution and debris causing loss of local amenity</p> <p>Increase in shore slime with reduction in abalone and flathead</p> <p>Scientific analysis required before more fish farms</p>
44	<p>Intensive farming marine feed lots</p> <p>Noise and light pollution from fish pens</p> <p>Pen debris and dead seals on shoreline</p>
45	No additional issues raised
46	<p>White Beach algal blooms from fish pens</p> <p>Reduction in local environment to feed foreign markets</p> <p>Profits not shared through the community</p> <p>Risk to swimming beaches if fish farms located nearby</p> <p>Light, noise and traffic pollution</p> <p>Diseases spread to native fish</p> <p>Escaped salmon attract seals which attract sharks</p>
47	<p>Increased pollution in Sting Ray Bay with fish farm</p> <p>Visual pollution with huge pens</p> <p>Marine debris</p> <p>Reduction in wild caught flathead</p>
48	Detrimental impact on coastal reserves
49	The pollution of a few has an impact on everyone
50	<p>Money driving poor decisions</p> <p>Industry needs to be a conscious contributor</p>
51	No additional issues raised
52	No additional issues raised
53	<p>Fragile marine environment</p> <p>Need for greater scrutiny and monitoring</p>
54	Concerns over intensive fish farming practises which overload environment
55	Negative visual and environmental impact
56	<p>Marine debris from fish farm pens</p> <p>Closed door EPA process</p> <p>Damage to environment</p>
57	Unhappy having fish farms near local surfing beaches
58	<p>Reduction in property values due to proximity of fish farms</p> <p>Noise and light pollution</p>
59	Nuisance noise pollution

60	<p>Polluting and dirty industry</p> <p>Short term gains of a few</p> <p>No benefit to community</p> <p>Loss of visual amenity</p> <p>Loss of clean and green Tasmania image</p>
61	<p>Community not benefiting from profits</p> <p>Loss of environmental amenity</p> <p>Degradation of natural resources</p> <p>Industry not living up to its marketing image</p> <p>Independent review of industry</p> <p>Return portion of profits to community</p>
62	<p>Environmental pollution from fish farms</p> <p>Impact on native plant and fish species</p> <p>Increased community consultation and transparency required</p> <p>Independent water quality and environmental studies</p>
63	<p>No additional issues raised</p>
64	<p>Increase in algae at Stingray Bay near fish farm</p>
65	<p>Negative environmental impact</p>
66	<p>toxic sludge and hazardous marine debris from fish farms</p> <p>Negative impact on native endangered and threatened species</p> <p>Dead whale killed by fish farm rope</p> <p>Risks to future of environment</p>
67	<p>Lack of governance of fish farming industry</p> <p>Lack of environmental monitoring</p> <p>Independent inspections</p> <p>Support of industry over community</p> <p>Noise pollution</p> <p>Lack of environmental protection</p>
68	<p>Lack of regulation</p> <p>Lack of community consultation by industry and government</p> <p>Noise pollution</p> <p>Loss of visual amenity</p> <p>Marine debris from fish pens</p> <p>Insufficient regulation</p> <p>Community concerns dismissed by industry</p>

69	<p>Negative impact on town water supply at Okehampton Bay</p> <p>Marine debris from fish farms on shoreline</p> <p>Reduction in flathead</p> <p>Negative impact environment</p>
70	<p>Improve community consultation</p> <p>Ignored by industry, local and state government</p> <p>Noise and environmental pollution from fish pens</p> <p>Unrestrained industry</p> <p>Lack of scrutiny</p>
71	<p>Noise, visual and debris pollution</p> <p>Overgrowth of seaweed from fish farm nutrient overload</p> <p>Increase in marine traffic</p> <p>Unrestrained industry growth</p> <p>Unregulated industry</p> <p>Fish farms have monopoly on rights to water ways</p> <p>Locals now prohibited from entering formerly accessible areas</p> <p>No community consultation</p> <p>Scientists ignored, no independent monitoring of pollutants</p>
72	<p>Fish farm debris on remote beaches</p> <p>Reduction in water quality in Storm Bay</p> <p>Negative impact on local community, marine life, ecosystems</p>
73	<p>Fish farm debris on Bruny Island</p> <p>Noise and light pollution from fish pens</p> <p>Curfews required</p> <p>Increase of weed growth on shoreline near fish pens – reduction in environmental values</p>
74	<p>No additional issues raised</p>
75	<p>Additional stresses on environment from fish farm impact</p> <p>Loss of biodiversity in fish farm areas</p>
76	<p>Decline in quality of marine environment since fish farming began</p> <p>Marine debris from fish pens</p> <p>Reduction to Tasmania's clean green image and lifestyle</p> <p>No benefit to local communities</p> <p>Audit required into use of industry plastic and recycling</p>
77	<p>No additional issues raised</p>

78	<p>Light and noise pollution from fish pens</p> <p>Increase in shoreline algae in fish farm areas</p> <p>Loss of visual amenity</p> <p>Diseased fish</p> <p>Limit pens, limit stock in pens</p> <p>Increase scientific investigation</p>
79	Fish farms impinge on freedom to use waterways
80	<p>Negative impact on natural environment</p> <p>Ecologically unsustainable</p>
81	Industry has no concern for environmental impact
82	<p>Pollution of waterways from fish farms</p> <p>Marine debris</p> <p>Sensitive ecosystems</p> <p>Negative impact on enjoyment of areas by locals</p> <p>Reduction of sea kelp, increase silt in Channel fish farm area</p>
83	<p>Negative impact on public resources and income for commercial fishers</p> <p>Lack of public consultation</p> <p>Corruption</p>
84	Increase in community conflict which have fish farm industries
85	<p>Fear of backlash for complaining about fish farms</p> <p>Community division</p>
86	Negative impact on clean green Tasmanian image
87	<p>Animal welfare concerns for penned fish</p> <p>Marine debris on beaches</p> <p>Lack of responsibility by industry</p>
88	No additional issues raised
89	<p>Reduction in quality of marine environment at Port Arthur</p> <p>Marine debris on beaches across southern Tasmania</p> <p>Destruction of natural environment</p>
90	No additional issues raised
91	No additional issues raised
92	No additional issues raised
93	Degradation of marine environment
94	No additional issues raised
95	Marine debris on beaches across southern Tasmania

96	<p>Degradation of water quality near fish farms in Channel</p> <p>Small community gain for massive negative impact</p> <p>Loss of visual amenity</p>
97	<p>Sight of fish pens has negative visual impact</p> <p>Reduction of clean green Tasmanian image</p> <p>Disregard of scientific information</p>
98	<p>Damage to boat from fish farm debris</p> <p>Fish farm waste has negative impact on shorelines</p> <p>Industry should clean up after itself</p>
99	<p>Since White Beach fish farms: Increase in marine debris and algae on beach</p> <p>Die-off of seakelp on sea bed, covered in slime</p> <p>No baseline studies</p> <p>Concern with increase of nutrient load on ecosystem</p> <p>Industry funding of local schools prevents school parents complaining</p> <p>Community concerns ignored</p>
100	<p>No additional issues raised</p>
101	<p>Visual eyesore</p> <p>Negative impact on shoreline</p>
102	<p>Marine debris</p> <p>Negative environmental impact</p>
103	<p>Marine debris at Nubeena</p> <p>Damage to ecosystem at Macquarie Harbour and Franklin</p> <p>Reduction on clean green image of Tasmania</p> <p>Lack of financial return to communities</p>
104	<p>Reduction in water quality</p> <p>Marine debris on shores</p> <p>Damage to environment</p>
105	<p>Negative impact on local surfing areas</p> <p>Deterioration in water quality</p>
106	<p>Increase in light pollution at Nubeena</p> <p>Unrestrained sprawl of fish pens</p> <p>Loss of visual amenity</p> <p>Loss of peaceful environment due to increase in noise</p> <p>Resultant loss of health and well being</p> <p>Excess nutrient flow into waterways</p>

	<p>Insufficient community contribution while taking huge profits</p> <p>Buying social license by funding school programs – cynical</p> <p>Negative animal welfare with intensive farming practises</p> <p>Unsustainable industry growth</p>
107	<p>Scientists ignored</p> <p>Improper processes</p>
108	<p>Negative impact on native species, sea bed under fish pens</p>
109	<p>Negative impact on local surfing areas</p>
110	<p>Lunawanna - Quiet rural area turned into industrial area that operates around the clock</p> <p>Noise and light pollution</p> <p>Unrestrained hours of operation</p> <p>Insufficient assessment of environmental impact</p> <p>Increase in algal blooms</p>
111	<p>Lack of enforcement of zero tolerance debris limits</p> <p>Unrestrained expansion</p> <p>Industry not charged enough to use waterways</p>
112	<p>Negative impact on environmental living zone</p> <p>Formerly quiet area now busy and noisy</p> <p>Now an industrial area with no consultation or ability to complain</p> <p>Noise pollution at all hours</p> <p>Damage to environment by industrial fish farm practises</p> <p>Heavy industry in residential area</p> <p>Expansion without transparency or control</p> <p>Impact on residents is ignored</p>
113	<p>Marine debris</p> <p>Insufficient industry controls</p> <p>Negative environmental impact</p> <p>Reduction in residential property prices in sight of fish farms</p>
114	<p>Increase in marine debris</p> <p>Fish farms spreading unrestrained into clean areas and ruining them</p>
115	<p>Death of marine habitat in fish farm areas</p> <p>Reduction in native marine species</p> <p>Lack of transparency, independent assessment, science ignored</p> <p>Visible and intrusive light and noise pollution</p>



	<p>Unrestrained overstocking</p> <p>Increased automation results in fewer jobs</p> <p>Negative impact on natural environment</p> <p>Insufficient environmental impact study</p> <p>No community consultation or confidence in industry</p>
116	<p>Negative impact on abalone fishing by fish pen proximity</p> <p>Loss of clean green Tasmania image</p> <p>Marine debris from pens</p> <p>Damage to waterways</p> <p>Unrestrained development</p>
117	<p>Damage to natural environment</p> <p>Killing Tasmanian waterways to feed other countries</p>
118	<p>No additional issues raised</p>
119	<p>Negative impact on local swimming beach now fish farm is there</p>
120	<p>Negative impact on recreational fishing stock</p> <p>Loss of visual amenity</p>

# **APPENDIX F: MAST Summary of Infringement Notices**

Attachment 1

Marine Debris reported to MAST

CM record Refer File	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
10150								
15/28906,								
15/28900,	29/01/2015	Yellow channel marker	Member of public reported yellow channel marker floating by Birch's Bay	Birch's Bay				
15/28909								
15/104395	7/05/2015	Feed bin	Feed bin loose and ashore eastern side of harbour	Macquarie Harbour				
15/106576	14/06/2015	trawl net	report of discarded trawl net floating	between Pedra Branca and Eddystone Rock				
16/17920,								
16/17919	3/10/2015	20m length of pipe	floating pipe washed against rocks, person tried to secure pipe injuring his thumb	Huon Island			thumb - required amputation	
15/115642	xx/10/2015	small sections of pipe	2 small sections of pipe located by Tassal, unusual pipe coupler	Mickey's Beach				
15/115615,								
15/115617,								
15/115618,								
15/115641,								
15/115717	7/10/2015	length of pipe	length of pipe floating Esperance Narrows - possibly water pipe, near old jetty	Esperance Narrows				
16/17920,								
16/1623	29/12/2015	20-30m length of black pipe	yacht hit object(pipe) near Brooks Bay	Brooks Bay, Huon River - sighted next day between Satellite and Huon Islands	Rec vessel		nil	
16/39893	xx/01/2016	Debris	abandoned mooring/marker Coles Bay area, vessel nearly ran into debris	Coles Bay	Rec vessel		Nil	
16/2277,								
16/2276,								
16/2239	20/01/2016	0.5 tonne fish bin	0.5 tonne fish bin lost off Tassal controlled vessel at boat ramp due to rough weather	Middleton				
16/6945	21/02/2016	floating pipe	Peppermint Bay passenger ferry hit floating pipe	Between Tinderbox and Nebraska Beach	Commercial vessel		Nil	
16/11549,	Feb/March 2016	floating pipe	20m grey pipe	Snake Island	Rec vessel			Phone
16/11556,								
16/11564,								
16/11631	xx/05/2016	Line	alleged fouled anchor/winch of rec vessel on lines from pen (inside zone)	Shepherds Lease, North West Bay	Rec vessel		nil	

Marine Debris reported to MAST

CM record Refer File 10150	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
16/13160	2/06/2016	fish pens	Facebook post requests look at Hospital Bay as pens are all over the place	Hospital Bay				
16/37115, 16/37107	27/06/2016	Poly pipe	poly pipe floating just beneath surface, vessel hit pipe	Rabit Island, mouth of Esperance	Rec vessel		nil	
16/38300, 16/37753	2/07/2016	Longlines and floats	Photo taken	Spring Bay				
16/38297 photo, 16/38295 photos	4/07/2016	Debris	Photos taken	Meads Creek, Great Taylors Bay, Satellite Island, Bruny Island shore				
16/38811	7/07/2016	Pipe, mooring and ropeline	Debris found outside lease between Badgers and Creeses lease	Nubeena				
16/38728, 16/38297 photo, 16/38259, 16/38213, 16/38208	11/07/2016	Pens	Pens along shore outside marked area	Hospital Bay to Whale Point				
16/38806, 16/38286 photo, 16/38212	11/07/2016	water pipe & line	Water pipe at Flathead Bay, trailing line outside lease area Hideaway Bay	Flathead Bay, Hideaway Bay, Huon River				
16/38258	13/07/2016	Pen	Pen came loose, net in pen but pen was empty	Middle Harbour				
16/39905	xx/08/2016	length of pipe	pipe found on beach	South Arm				
16/51201	14/08/2016	length of pipe	Tourism operator contacted Tassal to recover unknown pipe	Sarah Island, Macquarie Harbour				
16/41101, 16/41531, 16/41511, 16/41474	17/08/2016	Large bathing mamba pipe 85 m	HAC reported large 315mm diam very heavy duty pipe 85 m length missing from lease area	Trumpeter Bay, Storm Bay				
16/41556	23/08/2016	debris	drums, rope and buoys collected and put onshore	Adams Bay, Bruny				
16/41555	23/08/2016	Length of pipe, rope and buoys	large length of pipe, buoy and rope found on beach	Southport Bluff Beach				

Marine Debris reported to MAST

CM record Refer File 10150	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
16/42490, 16/42494	2/09/2016	Buoy outside lease	Buoy found to be outside lease boundary, western side of lease	Trumpeter Bay				
16/42799	8/09/2016	large red buoy	large red buoy found by Tassal while searching for large black buoy Trial Bay	Trial Bay				
16/42822, 16/42788	8/09/2016	Large black lease buoy	Public advice large 750-1.2 m high black buoy heading south off Trial Bay	Trial Bay				
16/42823	8/09/2016	Piece of kit	Public advice - piece of kit, possibly from local oyster farm	Kayes Beach				
16/43244, 16/43243, 16/43276, 16/43287, 16/43266	xx/09/2016	water pipe	Rec vessel collided with water pipe floating just below surface, 1-2km west of boat ramp	Swan River	Rec vessel		nil	
16/52789	17/10/2016	length of pipe	floating pipe					
16/48271	xx/11/2016	length of pipe	vessel sustained damage to prop and shaft after hitting a 30 m length of pipe	Tasman Peninsula	Rec vessel		Nil	
16/48273, 16/48164, 16/48161	6/11/2016	30 m length of pipe	SLST reported to MAST	Mouth of Huon River, Channel	Commercial vessel		Nil	
16/48251, 16/48252, 16/48253	10/11/2016	80-100 m Length of pipe, length of rope	floating pipe and rope	Lower Channel	MAST vessel		nil	
16/48798	14/11/2016	Lengths of pipe	Pipe located on beach	Ocean Beach, Strahan				
16/51208	15/11/2016	100 m length of pipe	Pipe and other marine debris collected	Ocean Beach, Strahan				
16/51201 17/4553, 17/4527, 17/4087	17/11/2016	50 m length of pipe	Reported by Parks to Tassal	Kelly Basin, Macquarie Harbour				
16/51201, 16/49463 16/52103, 16/52080	23/11/2016	debris	Collected debris	Conleys Beach, South Bruny Island				
	21/11/2016	150 m length of pipe	Reported to MAST, length of pipe	Ocean Beach, Strahan				
	10/12/2016	15 m length of pipe	passenger vessel Minke hit submerged pipe	Apollo Bay, between Roberts and Kinghorne Points	Commercial vessel		Nil	

Marine Debris reported to MAST

CM record Refer File 10150	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
16/51983	18/12/2016	fish farm infrastructure	large fish farm structure washed into Charlotte Cove	Charlotte Cove				
17/1882,								
17/142,								
17/109,								
17/108,								
16/52841,								
16/52823,		60-90 m length of pipe	vessel collided with pipe floating below the surface	Shipsterns Bluff, due south	Rec vessel		Nil	
16/52822,	23/12/2016	pipe		Southern side Louise Bay, Trumpeter Bay	Commercial vessel		Nil	
17/111								
17/844,	10/01/2017	50m length of pipe	pipe on shore that will float free					
17/845								
17/1882	16/01/2017	70 m length of pipe	Amateur boat found pipe floating on shore	Nubeena				
17/2720				Lowana Point, King River, Macquarie Harbour				
17/8202,	24/01/2017	pipe debris	pipe located along the shore					
17/8552,								
17/8201,								
17/8049,								
17/8048,								
17/8047,								
17/8046	20/03/2017	168 Mamba	HAC missing mamba	Southern Zone				
17/9820,								
17/9823,								
17/10091,								
17/10128	5/04/2017	floating pipe	120m + floating pipe (140m)	South Tinpot, northern end of Conleys Beach	MAST vessel			
17/11226,								
17/11287,								
17/11213	28/04/2017	pipe structure	infrastructure sighted on shoreline (pen)	Near Snake Island, Channel	Rec vessel		Nil	
17/11673	29/04/2017	debris	Collected debris and stored above height tide mark	South Bruny Island, Conleys Beach	Rec vessel		Nil	
			Boat owner reported yellow fish farm marker located on northern side of bay in 3m of water & old black mussel buoy and mark	Missionary Bay & Soldiers Point			nil	
17/11870	4/05/2017	fish farm marker & black mussel buoy						

Marine Debris reported to MAST

CM record Refer File 10150	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
17/13176, 17/13177, 17/13183	27/05/2017 22/06/2017	floating structure	Marine debris found on beach ?	Carlton Beach	MAST vessel			
17/21083, 17/21022	10/09/2017	floating buoys	floating buoys outside lease	Okehampton Bay				
17/21686, 17/21685, 17/21672, 17/21757, 17/21777	17/09/2017	floating line	floating line outside lease area - 2-3 m under surface	Okehampton Bay				
17/24000	16/10/2017	trip line	trip line 2.4m depth same position as 17/09	Okehampton Bay	MAST vessel			
	16/10/2017	black buoys, white buoys	a few black buoys observed, also a couple of white buoys struggling to stay afloat	Mercury Passage	MAST vessel			
	17/10/2017	cardinals leaning over - unmarked buoys supporting mooring lines outside	SB1 poorly marked, cardinals leaning over, one cardinal appeared to be sinking - SB2 no corner marks - series of unmarked buoys supporting large moorings lines some distance from loan pen	Trumpeter Bay	MAST vessel			
17/24021, 17/24020, 17/24019, 17/24018	17/10/2017	Rope	Rope floating below surface - outside lease area	Lippies	MAST vessel			
17/24124	18/10/2017	Rope and 20-30 m length of floating pipe	Rope located, floating length of pipe	Tinpot	MAST vessel			
17/25137 17/25210	27/10/2017 31/10/2017	unmarked fish pen Old spar buoy	unmarked fish pen end of marine farm lease potential old lease marker	Trumpeter Bay Birches Bay	Rec vessel			
	7/12/2017	marine farming gear	gear out of area	Great Oyster Bay				
	12/12/2017	floating pipe	7m length pipe	South of Shipsterns Bluff	Rec vessel		Nil	
17/30310	15/12/2017	floating pipe	60m poly pipe (100mm diameter)	Little Taylors Bay Bruny Island	Rec vessel			

Marine Debris reported to MAST

CM record Refer File 10150	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
17/30330, 17/30307 19/28576	17/12/2017	Rope	large amount of rope collected	3 Miles south Partridge Island	Commercial vessel		Nil	
See 17/30707	18/12/2017	Mooring lines	mooring lines outside lease area	Lippies	Commercial vessel		Nil	
17/30157, 17/30946	19/12/2017	floating pipe	floating pipe outside lease	Long Bay - Port Arthur				
17/30454	21/12/2017	large black buoy	floating large black buoy	Parsons Bay - Nubeena				
17/30946, 18/000090	week of 18-22/12/2017	two lengths of pipe, 60 m length of pipe, 15m length of grey pipe	various lengths/types of pipe collected	between Nubeena and Port Arthur, mile off Cape Raoul, Tunnel Bay	Comm vessels			
18/28	31/12/2017	corner marker	corner mark found on beach	South of Darlington, Maria Island				
	8/01/2018	large black buoy	large fish farm buoy	North of Variety Bay - bottom end	Commercial vessel		nil	
	12/01/2018	120m length of poly pipe	Poly Pipe	Tinpot area	Rec vessel		nil	
18/2436, 18/2435, 18/2434 - also 18/3805 18/3778	24/01/2018	150-200m poly pipe	Poly Pipe	NW Betsy	Rec vessel		Nil	
18/4010, 18/4038	5/02/2018	portion of pen liner	marine farm pen freshwater liner damaged, portion of liner missing	Storm Bay near Shipsterns Bluff			Nil	
18/4021, 18/3907, 18/3809, 18/5069	5/02/2018	pipe	length of pipe	Hope Beach	Commercial vessel		Nil	
18/4123, 18/4124, 18/4111	7/02/2018	floating pipe	Length of pipe	Possibly Trumpeter	Rec vessel			
18/6460	28/02/2018	marker buoy	1.2 m grey grid marker buoy	Lippies Lease				
	5/03/2018	large black buoy	large black buoy reported floating	River Derwent (near Howrah)				



Marine Debris reported to MAST

CM record Refer File 10150	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
18/7684, 18/7685, 18/7828	9/03/2018	poly pipe	6 metre length of black poly pipe floating	D'Entrecasteaux Channel (approx 1.5nm NW Ventenat Pt				
18/7785	13/03/2018	poly pipe	length of poly pipe is on shore	Lookout Bay, south of Trumpeter Pt				
18/9239, 18/9230	28/03/2018	Lines	two lines trailing fee from moorings, back into bay approx 50m	Shelter Cove	Rec vessel		Nil	
18/10015, 18/10496, 18/12078, 18/12124, 18/12138, 18/15157, 18/15234, 18/16111	28/03/2018	fish pen	unlit finfish pen floating outside lease boundary, with seal corralled within	Zuidpool, D'Entrecasteaux Channel	Rec vessel		Nil	
18/10739, 18/11164	9/04/2018	Corner marker	Yellow corner marker	Chuckle Head, Channel	Rec vessel		Nil	
18/10844	11/04/2018	fish pen	fish pen floating free	south of Birch's Bay				
18/11352, 18/11353	23/04/2018	sheet of plastic liner	large sheet of plastic liner 10m x 4m floating	NW Bay				
18/11765, 18/11757, 18/11758,	30/04/2018	black pipe	large length of black pipe located onshore	Lodge Bay, opposite Quarantine Bay				
18/12614	10&11/05/2018	Feed bins, bird stand, black buoy, pens/collars	length of black pipe located	Robeys Beach, Maria Island				
18/12629	10/05/2018	Large black buoy	5 fish pens	Kingston, Hinsby Beach, South Arm, Verona Sands				
18/12648	11/05/2018	pontoon structure	4x4m poly pipe	GTB lease floating past South Arm floating past Tarooma, Crayfish Point				
18/12633	11/05/2018	Numerous items	farm debris, predator poles, walkway plates, fish pens	Storm Bay, Arch Rock, Roaring Beach, Kingston Beach, Strahan				

Marine Debris reported to MAST

CM record Refer File 10150	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
18/12790	11/05/2018	floating pontoon/structure debris, pipe,		Long Beach, Sandy Bay				
18/12813	13/05/2018	polystyrene	debris on rocks	Pot Bay, South Arm				
18/12676	14/05/2018	marine debris	platform and black pipe	Howrah				
18/12686	14/05/2018	piping	floating pipe					
18/12724, 18/12818	14/05/2018	debris	fish farm debris, feed pipe, feed spinner	between Iron Pot and Betsey Island				
18/12824	15/05/2018	large 3m buoy, 40m length feed pipe		Hope Beach				
18/13469	23/05/2018	length of pipe	short length of pipe (3m)	Nubeena				
18/14583	5/06/2018	SW corner mark	damaged SW corner mark	Mussel lease Mercury Passage				
18/14585	1/06/2018	SE corner mark	SE corner mark missing	Pelias lease, Macquarie Harbour				
18/15731, 18/15901	18/06/2018	large black mooring buoy	floating large black mooring buoy with HAC markings	Huon River near Charlottes Cove				
18/16637	24/06/2018	fish farm debris	debris from fish farm floating off boat ramp	Dorans Road, Ralphs Bay				
18/18638	7/07/2018	fish farm punt	fish farm punt adrift	Midway Point causeway				
18/18720	10/07/2018	grid can buoy	black grid can buoy	Storm Bay				
Phone call to Hopkins	22/08/2018	Grid can	grid can adrift	Lippies Lease southern D'Entrecasteaux Channel				
18/21902, 18/22095, 18/21961	24/08/2018	3 fish pens	3 fish farm pens partially outside boundaries of lease by some	Okehampton Bay				
18/21958	28/08/2018	corner markers	2 southern corner markers lost from lease	Pelias lease, Macquarie Harbour				
18/22490	28/08/2018	unmarked lease with black floats and lines	marine farm equipment spread through area of lease 231 presenting hazard due to area not being marked correctly	Moulting Bay, St Helens				
	30/08/2018	large black grid can buoy	large black grid can buoy come adrift	Storm Bay lease				

Marine Debris reported to MAST

CM record Refer File	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
18/22478, 18/22463	2/09/2018	cable	vessel picked up a cable outside lease area	Rosebanks/Sykes Cove area	Rec vessel		Nil	
18/22440	4/09/2018	2 x white floats and large rope - mooring pick up rope drifting	while polystyrene floats and 10 m large rope floating 20 m out side lease, 3 moorings not in allocated positions, pick up rope for 11126 was in excess of 15m in length and drifting towards navigation channel	Okehampton / Spring Bay				
18/22518	5/09/2018	lengths of pipe, emergency spill kit	3 lengths of pipe found along shore & Srutex spill kit bin	Tin Pot Bay				
18/22806, 18/22809	5/09/2018	Green buoys with lengths of rope, white buoys	green buoys and lengths of rope attached outside marked zone area by 25 and 30 metres white buoys on boundary and another 8 metres outside marked area	Redcliffs (Roaring)				
18/26113, 18/26685, 18/26830	9/09/2018 8/09/2018	large black grid can numerous white polystyrene buoys	large black grid can large white buoys x 60	Okehampton Bay western shore Maria Island, Return Pt north				
18/28487, 18/28493, 18/28816, 18/28829, 18/28830	28/10/2019	bird cages	large plastic bird cages x 2	Sykes Cove	rec vessel		nil	
18/27529, 18/28182 18/27558, 18/28642	29/10/2018 xx/11/2018 15/11/2018 16/11/2018	pipe length of pipe part of pontoon structure	12 met feed pipe 40/100 m length of black pipe (100mm width) part of pontoon structure floating/adrift	Dover foreshore 0.5nm North West Tinpot Bell Bay	public rec vessel		nil	Phone
18/28641	22/11/2018	float deep ocean lander frame	float loose deep ocean lander frame	Tamar River Ocean Beach, West Coast				

Marine Debris reported to MAST

CM record Refer File 10150	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
	23/11/2018	barge spud	barge spud (20m length 355mm diameter steel tube lost	Berth #7 Port of Burnie				
18/28431	24/11/2018	grid can	grid can broken free from fish farm	between Yellow Bluff and Iron Pot				
18/28179	27/11/2018	black grid can buoy	black grid can buoy lost from lease	Lippies Lease - D'Entrecasteaux Channel			nil	
18/28529,								
18/28598	2/12/2018	black poly pipe	Poly pipe found on rocks	Cremorne beach				
18/28850	5/12/2018	rope, buoys, pipe	various lengths rope/pipe/buoys	Stinky Creek, Roaring Beach				
18/29224	7/12/2018	pipe	length of pipe	Simpsons Bay, Bruny Island				
	Date between Nov & Dec 2018							
19/1329		length of heavy rope	length of heavy rope attached to large black mooring buoy	North West Bay	Rec vessel			Email
19/120,								
19/122,								
19/123,19/124, 19/641	28/12/2018	large black buoy	large black buoy	5nm west of Tasman Island				Text Message
	30/12/2018	large length of white pipe	Large length of white pipe located on beach	Goats Beach, South Arm				Photo
19/118	31/12/2018	Tyres/inner tubes	tyres and inner tubes tied together found on beach	Saltworks and Lisdillon Beach				Email
19/51,								
19/50	1/01/2019	Black floating buoy	black floating buoy	Spring Bay				MAST
19/654	8/01/2019	length of pipe	8m length black ploy pipe floating near boat ramp	White Beach, Wedge Bay				Email
19/675,	9/01/2018	pieces of pipes	pieces of pipes sighted	Chuckle Head Point, Little Fancy, Bruny Island				Text Message
19/2866	19/01/2019	marker buoy	Special mark	Banwell Beach, East Coast				Text Message
19/2848,								
19/2882,								
19/2895,								
19/2900,	26/01/2019,		large pipe found, not a risk to navigation,					
19/2946	29/01/2019	large grey pipe	NW corner of South Tinpot Bay	South Tinpot Bay				Email
	27/01/2019	length of pipe	50/100 m length black pipe (100mm width)	East of Partridge Island				Phone

Marine Debris reported to MAST

CM record Refer File	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
19/4461, 19/5041	9/02/2019	Length of pipe	length of pipe reported south of Dover near Lippias	Dover				
19/4461, 19/5028, 19/5041	9/02/2019	Length of rope	length of rope reported fouled prop	Okehampton		Y		
19/5330, 19/5339, 19/5350, 19/5343	15/02/2019	Length of rope	length of rope fouled prop	West of Quarries, D'Entrecasteaux Channel	Rec vessel	Y	No	Email TMR
19/5333	15/02/2019	Pen outside line of markers	pen well outside lease markers	Police Point				Email
19/5844, 19/5845	21/02/2019	yellow eastern marker	yellow eastern marker washed ashore	Fleurty's Point D'Entrecasteaux Channel				Email
19/6758, 19/6859	25/02/2019	yellow buoy without tower	muscle farm yellow buoy without the tower drifting	Mercury Passage, Lachlan Island				Text Message
19/6868	4/03/2019	black pipe	Length of black pipe marked with numbers & large black plastic sheet	Apex Pt Cove, Nubeena	Rec vessel		No	Phone & Email
19/7413	5/03/2019	rope	15-20m length 100 mm diameter floating	D'Entrecasteaux Channel				Text Message
19/7528	8/03/2019	white pipe	floating rope	Mercury Passage, Okehampton	Rec vessel		No	Text Message
19/8367	16/03/2019	black pipe/swarf	12-14m length of pipe located	D'Entrecasteaux Channel	Commercial vessel		No	Email
19/8690	6/03/2019	black pipe/swarf mooring buoys & rope	black pipe/swarf cut showing blue section	Simpsons Point, Bruny Island				Email
19/8663, 19/8816	6/03/2019	rope	mooring buoys and rope outside lease	Macquarie Harbour	MAST vessel		No	Visual
19/9287, 19/9347	26/03/2019	black pipe	20m length of black pipe 50mm diameter on shoreline	North of Alonnah	MAST vessel		No	Visual
19/9976	28/03/2019	length of rope	length of rope (red/grey) almost caught around prop of fishing vessel	Bruny shore near Cape Queen Elizabeth	Commercial vessel		No	Phone
19/9978	4/04/2019	black floating object	black floating object	Barnes Bay	MAST vessel		No	Visual
19/9978	3/04/2019	black pipe & object	large diameter black pipe and black object	Dennes Point, Storm Bay	Comm		No	Email

Marine Debris reported to MAST

CM record Refer File 10150	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
	9/04/2019	Black plastic container	black plastic container 2m x 1m drifting	Middleton				
	10/04/2019	green and black feed pipe	length of green and black feed pipe 40 m x 100mm diameter	Okehampton Bay	Comm		No	Phone advice
19/10675	12/04/2019	pens	pens near shore	Gordon	Rec vessel		No	Email
19/10708	12/04/2019	black pipe	black pipe marked 331 on shore	White Beach	Rec vessel		No	Email
19/10867	15/04/2019	Pontoon	pontoon sighted, unsure if drifting or attached to bottom	Norfolk Bay			No	Email
19/11120, 19/11371	18/04/2019	pipe	55m length grey pipe	Cape Pillar	Comm		No	Facebook
	22/04/2019	ropes and bucket	ropes and buckets wasted up on beach	Great Taylors Bay, Bruny Island				GE Alarm
	22/04/2019	buoy	buoy hazard, buoy ropes heavily encrusted with barnacles	Flinders Bay	Rec vessel		No	Email
	3/05/2019	black poly pipe	100ft length black poly pipe 100mm diameter on beach	Butlers Beach, between Taylors Bay and Partridge Narrows			No	GE Alarm
	21/05/2019	pipe	possible part of pen 1m long	Alonnah			No	GE Alarm
19/14509	7/06/2019	Grid can	Grid can/buoy missing - broken from mooring	Trumpeter Bay			No	E-mail
	25/06/2019	poly pipe	length of poly pipe floating eastern end of Canal	Denison Canal, Dunalley				Phone advice
19/16572	4/07/2019	floating raft	raft floating in water - blue drums and wood	Frederick Henry Bay				GE Alarm
19/16700, 19/16701, 19/17027	8/07/2019	Grid cans	9 Missing grid cans from 2 sites	Franklin & Tablehead Central				E-mail
19/018919	2/08/2019	Polyurethane	Polyurethane on beach	Hope Beach, South Arm				GE Alarm
19/19011	2/08/2019	white cloths	White cloths	Stinky Creek, Nubeena				
19/19126	6/08/2019	Pipe	Solid pipe with an attached additional pipe washed up on beach	Point Winifred, Lunawanna, Bruny Island				GE Alarm
	19/08/2019	30-50 M Black pipe	Black pipe - boat hit it at 50km / hr	South Bruny	runabout	Y	no	email
	19/08/2019	pink float	fink float with some equipment drifting	Crayfish Point	Rec		no	TMR email advice
	22/08/2019	Grid can	Black grid can	Trumpeter Bay lease	Comm			email
19/23241	2/09/2019	Pipe	7-8m length of pipe	Mills Reef, Alonnah				GE Alarm

Marine Debris reported to MAST

CM record Refer File	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
10150	3/09/2019	Pipe	100m length of pipe Yellow Special mark with length of line floating	Tin Pot	MFB		no	Phone
19/20955	5/09/2019	Special Mark & line	grid can (cambuoy) missing	Tranmere				Phone call
	7/09/2019	grid can	large red light marker	Okehampton				Email
	9/09/2019	marker	large white float washed ashore	Marion Bay Beach				Email
	19/09/2019	large white float	Yellow marker on rocks	Lindisfarne				Email
	20/09/2019	Yellow marker	piece of marine farming equipment 1.3 x 1.3 m <sup>2</sup> x 300mm grey in colour	Taroona				Email
	30/10/2019	marine farm equipment	large black grid can broken its mooring	Soldiers Point, D'Entrecasteaux Channel				
19/025336	31/10/2019	large black grid can	Buoys sighted on shore	Garden Island lease				
	Mid Oct 2019	Buoys	200 buoys on shore	Maria Island				
	26/11/2019	Black plastic	black plastic partial piece	Eaglehawk Neck				
	2/12/2019	Plastic	large plastic debris	Goats beach, South Arm				
19/29183	4/12/2019	Rope and buoys	rope and buoys	Betsy Island beach towards Iron Pot				GE Alarm
19/29081	8/12/2019	Pipe	30 m length black pipe	Sarah Island				GE Alarm
19/28735, 19/28577, 19/28578, 19/18579	5/01/2020	black pipe	length of black pipe 15m x 50mm	D'Entrecasteaux Channel	Comm	Y	No	Email
20/673, 20/698, 20/749	6/01/2020	rope	substantial size and length of rope	Variety Bay	Comm			Text Message
20/712, 20/717	8/01/2020	rope	length of rope	One Tree Point, Bruny Island				Email
Se above	9/02/2020	buoys	numerous buoys on shore	Powder Jetty North West Bay				Email
20/3952	21/02/2020	plastic sheeting	clear plastic submerged (sharp edges) 70-80cm wide	south of Chinamans, Maria Island				
20/5265, 20/5272	25/02/2020	pipe	length of black pipe	South end Snug Beach				GE Alarm
20/5476, 20/5477, 20/5676	26/02/2020	piece of cage	piece of cage located on beach	Okehampton, Mercury Passage				Message
20/5276	2/03/2020	grid can	black grid can missing	Rebounds Beach, South Arm				Email
				D'Entrecasteaux Channel (southern end)				

Marine Debris reported to MAST

CM record Refer File	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
10150								
20/5635	2/03/2020	buoys, baskets and rope	Black buoys, oyster baskets and rope	Eaglehawk Neck foreshore heading towards Taranna				GE Alarm
20/7785	7/03/2020	Buoy	Black buoy	Great Taylors Bay				Tassal direct
	8/03/2020	Pipe	60m of 90mm feedpipe	Variety Bay				Hotline
20/7946	11/03/2020	Pipe	78m pipe	Clifton Beach				Anon and GE alarm
20/8022	21/03/2020	Grid can	Grid can missing	West of Wedge Island				
	8/04/2020	Plastic pylon	plastic pylon found	Alonnah Beach Bruny Island				GE Alarm
20/9345	23/04/2020	Plastic bin cover	cream/yellow plastic bin cover	Lower D'Entrecasteaux Channel				Email
20/13028	12/06/2020	buoys and line	approx 130 buoys along shore	Mercury Passage, Maria Island & Okehampton	MAST vessel		Nil	Visual
20/15461,								
20/15469	6/07/2020	infrastructure	2m length fish farm pen infrastructure	Mickeys Beach, Eggs and Bacon Bay				
20/15955	10/07/2020	Ropes and pvc	Ropes and PVC	Umbrella Point, Bruny Island				GE Alarm
20/17489,								
20/17492	27/07/2020	buoy	large rubber buoy	Wattle Grove, Huon				GE Alarm
20/18747,								
20/18754	7/08/2020	pipe and rope	lengths of pipe and rope	Goats Beach, South Arm				Phone
20/18748	7/08/2020	pipe	length of pipe 40m	West of Wedge Island, Storm Bay				Phone
20/18755	7/08/2020	pipe	length of white pipe found on rocks	Opossum Bay				Email
20/18887,								Text
20/19033	8/08/2020	rope	8 x 80m lengths of rope	Goats Beach, South Arm				Message
20/19001,								
20/19276,								Text
20/19286	10/08/2020	pipe	80m length white and black pipe	Norfolk Bay/Slopen Island				Message
20/18997	11/08/2020	ropes and containers	ropes and containers	Sunset Bay Beach				GE Alarm
20/19277	11/08/2020	rope	large amount of rope debris	Unknown				Text
								Message



Marine Debris reported to MAST

CM record Refer File	DATE	TYPE of Debris	TITLE - DESCRIPTION	LOCATION	VESSEL/s involved	Incident Y/N	INJURY	Notification Type - Phone, email etc
10150								
20/19282,								
20/19294,								
20/19299,								
20/19329	9/08/2020	pipe	Rec vessel hit black pipe 50mm thick wall	Storm Bay	Rec	Yes	No	Phone
20/19546,								
20/19869	18/08/2020	black grid can	missing black grid can from MF141	Zuidpool North				Email
20/19788,			10m length of 120mm 8 plait rope lost from MF141	Zuidpool North				Email
20/19790	16/08/2020	rope						
	28/08/2020	pipe	20m length feed pipe missing Lippiess Lease	Lower D'Entrecasteaux Channel				
	6/09/2020	pipe	Length of white pipe	Frederick Henry Bay	Rec PWC			Facebook

**APPENDIX G: DPIPWE Question on  
Notice Response dated 9/2/2021**

Department of Primary Industries, Parks, Water &  
Environment

Hobart GPO Box 44, Hobart, Tasmania, 7001  
Ph 1300 368 550  
Web [www.dpipwe.tas.gov.au](http://www.dpipwe.tas.gov.au)



Hon Meg Webb MLC  
Inquiry Chair  
Sessional Committee Government Administration 'A'  
Sub-Committee: Fin Fish Farming in Tasmania Inquiry

Via email to Ms Jenny Mannering at [jenny.mannering@parliament.tas.gov.au](mailto:jenny.mannering@parliament.tas.gov.au)

Dear Ms Webb

**Legislative Council Sub-Committee Inquiry into Fin Fish Farming in Tasmania.**

Thank you for your letter dated 22 December 2020 seeking further clarification in relation to fish escape incidents, native fish loss and bird interactions and deaths.

Please find attached the additional information as requested by the Sub-Committee to assist with the preparation of the inquiry report.

I note that the Director, Environment Protection Authority (EPA) will respond directly to the Sub-Committee for questions within the EPA's jurisdiction.

Yours sincerely



Tim Baker  
**SECRETARY**

9 February 2021

## Department of Primary Industries, Parks, Water and Environment

### Response to Sub-Committee – Fin Fish Farming in Tasmania Inquiry

Date prepared: 22 January 2020

#### 1) Fish escape incidents

##### 1.1 What regulatory requirements are in place broadly and what specific licence conditions apply in relation to the escape of farmed fish?

###### Marine Fin Fish Farms

All Marine Farm Licences require that Licence holders shall not release into State waters any fish unless authorised in the licence.

All Marine Farming Development Plans (MFDP) contain Management Controls relevant to fish escapes as follows:

###### *Fish Escapes*

- *Lessees must not intentionally release into State waters fish of the species authorised in the relevant marine farming licence unless authorised to do so by that licence.*
- *Lessees must report to the Manager, Marine Farming Branch any significant incident of fish escapes within 24 hours of becoming aware of the escape. A significant escape is defined as any loss of licensed species to the marine environment in excess of 500 individuals at any one time.*
- *Lessees must recover escaped fish when and in a manner as directed by the Secretary\*.*

\*As taken from the D'Entrecasteaux Channel and Huon River MFDP

<https://dpiwwe.tas.gov.au/Documents/DEntrecasteaux%20Channel%20and%20Huon%20River%20MFDP.pdf>

###### *Additionally:*

- All Environmental Licences require Environmental Licence holders to report to the Director, EPA of any significant incident of fish escapes within 24 hours of becoming aware of the escape. A significant escape is defined as any loss of licenced species to the marine environment in excess of 500 individuals at any one time.

###### Inland Fish Farms

- Fish farming activities require a fish farm licence under the *Inland Fisheries Act 1995*.
- Conditions of a Fish Farm Licence include the implementation of a fish farm management plan approved by the Director, that addresses fish biosecurity.
- The Director Inland Fisheries is responsible for the regulation of fish escapes into the freshwater environment. All holders of an Inland Fisheries Licence must report to the Director, Inland Fisheries, of any loss of licenced species to the freshwater environment.

## **1.2 What biosecurity risks are presented by fish escape incidents? How are these risks assessed?**

Biosecurity Tasmania is not aware of any specific studies into the biosecurity risks caused by farmed fish escapes in the Tasmanian context. However, routine testing conducted by the Department as part of the Tasmanian Salmon Health Surveillance Program (the Program) provides data about the prevalence and distribution of diseases that affect the industry.

In all cases to date, the Program has determined the pathogens appear to have originated from native Tasmanian sources. Examples include POMV and reovirus, both of which have been detected in wild fish in and around salmon cages.

In comparison to wild fish populations, the number of individuals in stocked fish cages and their relative proximity to one another creates an increased opportunity for disease risk to amplify. It is therefore considered that, although escapees may present a low risk to wild populations of fish, the greatest risk is that escaped salmon carrying disease could transmit pathogens to other farmed fish should they come in close contact with stocked cages.

With regard to the longevity of escaped salmon potentially carrying disease, it is assumed that reduced population densities would limit transmission consistent with the already mentioned amplification risk. In addition, nutritional stress is likely to cause diseased fish to drop out of the marine environment relatively quickly. However, no formal testing of this theory has been undertaken by the Department.

Movement of escaped fish between growing regions could also present a biosecurity risk, but again the risk is considered higher for other farmed salmon than for wild fish populations. Such movements could occur via the natural movement of escaped salmon into another growing region (assuming they disperse far enough from the point of escape), or through mechanical movement whereby recreational fishers catch salmon in one region and later use it as bait in another.

## **1.3 What other environmental harm risks are presented by fish escape incidents? How are these risks assessed?**

*Jurisdiction of the EPA*

## **1.4 In response to fish escape incidents, what measures may be taken either by the company involved or by the EPA or Department to minimise biosecurity risks and environmental harm?**

Communication between companies about fish escapes allows an informed decision-making process to be implemented regarding planned movements of stocked pens and/or harvesting operations in the area.

Targeted messaging from the Department can assist to increase biosecurity awareness among recreational anglers. For example, Biosecurity Tasmania assisted the Marine Farming Branch with Facebook messaging regarding responsible use of salmon as bait in

cray fish pots after a recent fish escape event occurred just prior to the opening of the recreational cray fishing season.

Under the respective Marine Farming Development Plan(s), there are management control(s) that the Secretary, DPIPWE may utilise to instruct the leaseholder to recover the escaped fish. In practicality, escapee fish are thought to disperse from the lease area relatively quickly. In some cases, leaseholders have engaged contract fishermen to attempt to recapture escapee fish, however this approach isn't always appropriate. More recent escapee events have been publicly disclosed enabling a rapid recreational fishing effort increase.

Fish escapes from inland fish farms are reported to the Inland Fisheries Service (IFS). A review of the Fish Farm Management Plan is undertaken by the company in consultation with the IFS to identify improvements that will prevent future escapes.

**1.5 After specific fish escape incidents, how is the environmental or biosecurity impact of that escape incident measured or assessed?**

Biosecurity Tasmania is aware that IMAS run an escaped fish survey using recreational angler reports of salmon catches. Biosecurity Tasmania has not been directly involved in this survey.

Reported fish kill events provide another means of monitoring the impact of salmon escapes on wild fish populations. However, to date there has been no evidence collected by the Department that suggests a link between salmon escapes and wild fish kills.

There is no regulatory requirement within the Marine Farming Licence or MFDP Management Controls that requires the leaseholder, or licence holder to assess the environmental or biosecurity impact of escaped salmonids.

The impact of inland fish farm escape incidents is not measured; however the escape is assessed for disease risk.

**1.6 Over the past 5 years, please provide the Committee with details of fish escapes including: (a) the responsible company; (b) the number of fish in each escape; and (c) the identified cause of each fish escape incident?**

Date of Escape	Company	No. Fish Reported as Escaped	Marine/Hatchery	Reason for Escape
June 2016	Mountain Stream Hatchery	Unknown (thousands)	Hatchery	Inundation during major flood event.
24/02/2016	Huon Aquaculture	Between 300 and 2,000	Marine	Hole in net
16-Apr-16	Huon Aquaculture	unknown	Marine	Net tear
10-Jul-17	Huon Aquaculture	11,000	Marine	Hole found in net during crowding for bath

15-May-18	Huon Aquaculture	~60,000	Marine	Storm Event - The feed bin in this pen separated from the float and caused a large hole in the netting, it is believed this is the area where the fish escaped.
18-May-18	Huon Aquaculture	~48,000	Marine	Storm Event - The feed bin in this pen separated from the float and caused a large hole in the netting, it is believed this is the area where the fish escaped.
29-Jan-19	Petuna	~9,000	Marine	Harvest numbers of fish from a single pen significantly lower (ca 9,000) than predicted. Could not rule out potential escape event however a range of potential causes for reduced harvest; <ul style="list-style-type: none"> <li>• Pen had been subject to prolonged seal strike over a period of approx. 6 months.</li> <li>• Holes identified not large enough to have caused a single escape event.</li> <li>• Significant portion of fish in this pen also lost through POMV.</li> </ul>
June 2019	Petuna	4,000	Hatchery	Salmon smolts discharged into Brumbies Creek from loading operations and poor screening.
May 2020	SALTAS	250	Hatchery	Salmon smolts discharged into the River Derwent upstream of Wayatinah Lagoon from loading operations and poor screening.
11-Nov-19	Petuna	58,000	Marine	Mooring line damage to 3 nets (smolt)
23-Nov-20	Huon Aquaculture	50,000 - 52,000	Marine	A fire broke out on a pen damaging a third of the pen, burning through and melting the pen infrastructure above and just below the water line.
2-Dec-20	Huon Aquaculture	Between 120,000 and 130,000	Marine	Net tear in inner net (approximately 4m below the surface down to the base of the net) caused by net cleaning operations.

### 1.7 What actions have been taken by the EPA or the Department in relation to fish escapes over the past 5 years?

- DPIPWE and EPA ensure the Marine Farm Licence and/or lease holder had complied with the relevant conditions for the reporting significant incident of fish escapes, within 24 hours of becoming aware of the escape, to the Manager, Marine Farming Branch.
- Both DPIPWE and EPA coordinate investigations into potential causes and consequences of fish escapes, including meetings with company staff (Marine and Inland).
- DPIPWE and EPA coordinate research studies through the Sustainable Marine Resource Collaboration Agreement with the Institute for Marine and Antarctic Studies to understand the dispersal, survival and potential impacts of escaped salmonids (see, for example, Lyle, 2019).

- DPIPWE provides advice to recreational fishers to encourage responsible fishing of escaped salmonids via social and other media.
- DPIPWE coordinates communications about escapes with MAST to ensure that messages about safe boating practices were communicated timely to recreational fishers.

**1.8 How many fish escaped in the two recent incidents experienced by Huon Aquaculture? How is this number verified?**

- November 2020 – 50,000 to 52,000
- December 2020 – 120,000 to 130,000
- Number of individual escapees is verified by the Marine Farm Licence holder (when a stock count of the remaining fish is completed) this information is provided to the Manager, Marine Farming Branch.

All Marine Farm Licences contain conditions that enable the Director, Marine Resources to request records to be provided to enable compliance audit of the production data if required.

*The licence holder in respect of marine farming operations unless otherwise required by the Secretary of the Department of Primary Industries, Parks, Water and Environment shall:-*

- a) *keep records of all fish brought onto and taken off the area to which this licence relates. Those records must show:-*
  - i. *the date of each movement;*
  - ii. *a description of each consignment of fish being moved, including species, class and quantity of fish;*
  - iii. *for fish taken off the area, the place to which each consignment of fish was sent;* iv. *for fish brought onto the area, the place from which the fish came.*
- b) *keep the records at (a) above in a manner and form that enables rapid access to the information in the event of an emergency.*
- c) *keep the records at (a) above for not less than five years from the date of production of the record.*
- d) *supply the records at (a) above to the Director, Marine Resources upon request.\**

\*As taken from Marine Farming Licence 217 available at <https://dpiipwe.tas.gov.au/Documents/217lic.pdf>

**1.9 How did the EPA or Department respond to the two recent incidences of Huon Aquaculture fish escapes?**

- The Marine Farming Branch (DPIPWE) ensured the Marine Farm Licence and/or lease holder had complied with the relevant conditions for the reporting significant incident of fish escapes, within 24 hours of becoming aware of the escape, to the Manager, Marine Farming Branch.



- The Department conducted on the ground surveys at boat ramps in key hot spot areas five days after the first escape event to collect data relevant to fisher participation, fish dispersal, condition, and stomach contents. The survey was designed in collaboration with IMAS and will contribute to a larger escapee monitoring project (detailed below).
- The Marine Farming Branch is a member of the working group for the project developed by IMAS through the Sustainable Marine Research Collaboration Agreement (SMRCA) to monitor escapees from the November and December 2020 events with the aim to:
  - Characterise spatial and temporal patterns of escaped salmonids; and
  - Assess the condition of the escaped salmon over time; and
- Assess the impacts on native fauna.
- This project includes field sampling to catch escapees, assess their condition and analyse their gut content, which will help to provide relevant local information about the behaviour, dispersal and survival of escaped Atlantic salmon in Tasmania.
- As well as participating in the project working group, the Department has assisted IMAS with project field work.

## 2) Native fish loss

### 2.1 Is native fish death within salmon pens identified as an issue associated with the fin fish industry?

The fate of native fish that are trapped in fish pens during bathing and harvesting was raised during public hearings conducted by the Marine Farming Planning Review Panel relating to the Storm Bay planning processes. The Panel's addressed the issue in its reports, for example, [Marine Farming Planning Review Panel Report 22 August 2018 for draft Amendment No. 5 to the Tasman Peninsula and Norfolk Bay MFDP](#) (see 3.1.2.1 p12, 3.1.2.2 p13). The Panel indicates that it received advice that there are incidences of native fish species being trapped in pens. Any request for further information about the advice received by the Panel would need to be directed to the Panel.

Native fish species, primarily small schooling pelagic schooling species including both jack and blue mackerel, redbait, Australian sardine and blue sprat, may be found in association with marine farming equipment owing to the habitat (structure, protection, food source etc) this equipment provides and the potential availability of both natural food sources that may also be attracted to the marine farming equipment and/or as a result of the feed provided to the farmed species (salmonids).

These native species are common within the marine environment and with the exception of blue sprat, are commercially targeted species within the Commonwealth managed small pelagic fishery and are considered not overfished: [Small Pelagic Fishery | Australian Fisheries Management Authority \(afma.gov.au\)](#).

Native fish may move in and out of the confines of marine farming equipment (pens) until such time as their size prevents their movement past the containing net(s).

The Department understands that industry practices aim to exclude native fish wherever possible and that live fish are returned to State waters. There are a number of reasons for the industry to do so. Large numbers of any native species found in salmon pens may pose a potential biosecurity risk. Anecdotally, native species of an appropriate size may feed on salmon pellets. Further, some native species actively predate on smolt and cause injury by fin nipping.

Exclusion methods include manual removal and release of native fish by dipnet at appropriate times during farm management, such as during stocking, grading, bathing and harvest operations and management of smolt net deployments to limit opportunity for native fish to enter the net.

It would not be expected that the farmed species (salmon) would show any interest (predation) in the native species due to the readily available supply of pellets.

The operation most likely to cause mortality of entrapped native fish is bathing in fresh water, which is likely to be fatal for most marine species. Some estuarine species, such as mullet, have a greater tolerance for low salinity and may survive freshwater bathing. Regardless, the Department understands that it is widespread industry practice to remove native fish to the greatest extent practicable prior to bathing.

Further, the Department understands that the methods and equipment used for bathing using well boats, which is now the standard method of bathing in farming areas where routine bathing is required, excludes most native fish prior to bathing (and returns them to the wild).

Any request for more detailed operational information relating to management of wild fish should be referred to the industry.

Three permits, issued under the *Living Marine Resources Management Act 1995* (LMRMA), have been granted to Tassal to allow them to undertake sampling of wild fish to document the species, prevalence, numbers and potential mortality. Reporting to the Department in accordance with these permits, to date, indicates a very low level of interaction.

Any resulting mortalities of any native species associated with marine farming operations would be expected to be on very low scale relative to their abundance in the surrounding environment.

## **2.2 Are there other identified causes of native fish death associated with the fin fish industry**

Not in the context of wild finfish, such as those described above. Fish is defined under the *Living Marine Resources Management Act 1995* as:

*any aquatic organism of any species, whether dead or alive, which, in the normal course of events, spends part or all of its life in the aquatic environment*

As this definition is very broad and includes microbes, a more strictly correct response would be that native 'fish' may be 'killed' at all stages of marine farming operations.

## **2.3 What regulatory requirements are in place broadly and what specific licence conditions apply in relation to native fish death related to fish farming operations?**

All Marine Farming Development Plans (MFDP) contain management controls. Some of these controls may be relevant to native fish. Examples may include controls on monitoring, waste and disease:

*3.4.2 Lessees must keep the following records for each lease area held by the lessee and retain these records for a period of 5 years;*

*3.4.2.3 The names and quantities and date of use, of all chemicals which have been used on the lease area. This must include, but is not confined to, therapeutants, anaesthetics, antibiotics, hormones, pigments, antifoulants, disinfectants and cleansers.*

*3.7.2 All mortalities arising in connection with marine farming operations must be disposed of at a site that has the necessary approvals to receive this material.*

*3.8.1 Lessees must notify an inspector of any suspicion of a notifiable disease in accordance with the Animal Health Act 1995.*

*3.8.2 Lessees must remove dead fish from cages and report mortalities in accordance with any direction from the Secretary or Director, EPA.*

*3.8.3 Lessees must participate in any fish health management plan or fish biosecurity program as directed in writing by the Chief Veterinary Officer or Secretary.\**

\*As taken from the D'Entrecasteaux Channel and Huon River MFDP <https://dpiwwe.tas.gov.au/Documents/DEntrecasteaux%20Channel%20and%20Huon%20River%20MFDP.pdf>

More specifically, a marine farming licence authorises the holder of the licence to carry out marine farming in accordance with the licence. The licences specify salmonids as the species that may be farmed under the licence. Native fish are not authorised to be farmed. Marine farming includes the farming, culturing, enhancement, or breeding of fish for trade, business, or research. So, a salmonid farmer has no authority to commercially benefit from native species that may be incidentally caught. Pursuant to management controls (e.g. 3.7.2 above), the dead fish must be disposed of. With no capacity to benefit from entrapment of

native fish and for fish health, biosecurity and economic reasons, there is a strong incentive for industry to minimise interactions with native fish.

**2.4 Is the incidence of native fish death related to fish farming operations (e.g. native fish death within salmon pens) quantified and reported on to regulators?**

There are no direct reporting requirements for native fish that die in the course of salmonid farming operations, except in an unusual situation, for example, if a notifiable disease is suspected.

Three permits, issued under the *Living Marine Resources Management Act 1995* (LMRMA), have been granted to Tassal to allow them to undertake sampling of wild fish to document the species, prevalence, numbers and disease sampling.

Such permits include requirement to provide a report relating to activities under the permit.

**2.5 If companies are required to report, please provide a breakdown of the reported data for the previous 5 years by company, including number of native fish deaths and location/lease.**

No native fish deaths have been reported to be the Department by salmon farmers.

**2.6 In what way is the broad impact of native fish death associated with the fin fish industry measured or assessed?**

There are no specific reporting or assessment requirements. If research recommends an alternative or new management approach in relation to the management of effects of marine farming on wild fish, existing management controls would be suitable to initiate a management change. Additionally, powers under the *Environmental Management and Pollution Control Act 1994* or other relevant legislation may be exercised by the appropriate authority.

Catch and effort data collected for Tasmanian commercial fish and shellfish fisheries is reported annually by IMAS, to provide information about the status of fish stocks and trends. Reporting includes scalefish (e.g. Tiger Flathead and School Whiting), rock lobster and abalone. When trends in commercial fisheries stocks become evident, appropriate management responses are investigated. To date, such responses have not included specific requirements relating to finfish farms.

Reference Cited:

Lyle, J.M. 2019. *Fishing for Atlantic salmon following a major escape event: inferences about dispersal, survival and ecological impact*, Institute for Marine and Antarctic Studies, University of Tasmania.

### 3) Bird interactions and deaths

#### 3.1 What are identified as the main causes of bird interactions and deaths associated with the fin fish industry?

The main causes of bird interactions and deaths associated with the marine fin fish farming industry are entanglement in netting on fish pens (including aerial bird exclusion nets), and drowning (sometimes in association with entanglement). Birds are attracted to pens due to the presence of fish food pellets (e.g. gulls) or to the farmed smolt/mature fish themselves (e.g. cormorants, raptors, petrels, terns, penguins). Farm infrastructure also presents roosting (perching for rest) opportunities for birds.

#### 3.2 What regulatory requirements are in place broadly and what specific licence conditions apply in relation to bird interactions and deaths related to fish farming operations?

Most native birds involved in interactions with marine fin fish farming operations are listed as Specially Protected, Protected or Partly Protected under the *Wildlife (General) Regulations 2010* of the *Tasmanian Nature Conservation Act 2002*. Some species are also listed as threatened under the *Tasmanian Threatened Species Protection Act 1995*. Both sets of legislation provide broad protections to listed species.

The Minimum Requirements 2018A for the Mitigation of Seal Interactions with Aquaculture Staff and Infrastructure in Tasmania (the “Minimum Requirements 2018A”, supplementary to the Seal Management Framework 2018) is the industry-agreed policy document used to manage interactions between marine fin fish farming operations and protected wildlife in Tasmania. However, the requirements of the Seal Management Framework apply only to infrastructure and operations on a marine farming lease if a marine farming company seeks to use approved seal deterrent devices and management options on that lease.

When relevant, Section 1 (MRWEM) of the Minimum Requirements 2018A stipulates the regulatory requirements for industry regarding mitigation and response to bird interactions and deaths. These include specific infrastructure (wildlife exclusion netting) requirements (throughout the section), as well as handling and reporting requirements when entanglements do occur. i.e. Section 1.12, pg. 16:

##### **1.12 Requirements in relation to approved Wildlife Exclusion Measures**

1.12.1 Specially Protected, Protected or Partly Protected Wildlife, as defined and listed in the *Wildlife (General) Regulations 2010*, that become entrapped and/or entangled in any marine farming netting, infrastructure or equipment must be reported to DPIPW according to the following procedure:

- (i) If the wildlife is entangled and alive, immediate attempts to release the entangled wildlife must be made (except marine mammals – the Marine Conservation Program must be contacted (0427942537) immediately for

instruction regarding appropriate and safe response to live entangled seals, whales and dolphins);

(ii) If the immediate attempts to release entangled wildlife are unsuccessful then, the entanglement must, within one hour of the commencement of the attempt, be reported to a DPIPWE Contact Officer;

(iii) If the entangled wildlife is injured, a DPIPWE Contact Officer must be contacted before a decision can be made to release;

(iv) If the entangled wildlife is deceased then the carcass is to be immediately recovered and held. A DPIPWE Contact Officer must be contacted for advice regarding carcass disposal within four hours after carcass recovery; *and*

(v) A monthly report (Wildlife Incident Record sheet) for each marine farming lease held by a marine farming lease holder must be submitted to DPIPWE detailing numbers of all wildlife mortalities, injuries, entanglements and entrapments detected in wildlife exclusion netting or marine farming infrastructure. A report must be submitted for each marine farming lease even if there has been no wildlife incidents at a lease.

In addition, clauses in some Marine Farm Development Plans (MFDPs) specify the following:

3.13.9 Lessees must not undertake or cause or permit another person to deliberately interact with wildlife except in accordance with the Nature Conservation Act 2002.

3.13.10 Lessees must comply with any operational requirements notified by the Secretary in relation to managing, mitigating or avoiding interactions with wildlife as defined by the Nature Conservation Act 2002.

(NOTE – it is understood that the intention is to update all MFDPs to include these prescriptions).

### **3.3 Is the incidence of bird interactions and deaths related to fish farming operations quantified and reported on to regulators?**

The incidence of bird entanglements and deaths related to fish farming operations is quantified and reported to DPIPWE, through the reporting mechanisms outlined in Section 1.12 of the Minimum Requirements 2018A. In addition, some marine fin fish farming companies self-report this information on their own publicly available 'Sustainability Dashboard' websites (previous 12 months only).

### **3.4 If companies are required to report, please provide a breakdown of the reported data for the previous 5 years by company, including the number of bird interactions and deaths and location/lease.**

Companies that access and use seal deterrent devices on marine farming leases are required to report all bird entanglements, injuries and deaths in a "Wildlife Incident Record", submitted monthly to DPIPWE. The format for these returns has changed several

times in the last 5 years, including the number and types of reporting fields. On occasion, reports have been provided in the form of email text only.

Reports, including over the five years from 2016 to 2020 are stored and filed as individual reports, mostly electronically, but including a proportion of reports in hard copy. It has not been aggregated into a central record keeping sheet or tally. Hence, providing a breakdown of report data is currently not straightforward. However, steps are being taken to overhaul and refine DPIPWE record keeping of this data.