

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.

<i>Evidence for 1</i>	
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	MFPRP final report Nov 2018

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.

Evidence for 2	
2.1	Storm Bay Biogeochemical Modelling & Information System: Supporting sustainable aquaculture expansion in Tasmania (refer https://www.frdc.com.au/project/2017-215)
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 <louise@cherrieconsulting.com.au> 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]
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; 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>
Subject: Re: Panel reports SBTB, TasPen, SBN
Date: 10 August 2018 12:01:14 PM AEST
To: Craig Midgley <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]
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; 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]
Sent: Monday, 27 August 2018 05:33
To: Colin Buxton <colin.buxton@utas.edu.au>
Cc: Craig Midgley <ncmidg@bigpond.net.au>; Pheroze Jungalwalla <pherozej@gmail.com>; Scott, Pamela (DoJ) <Pamela.Scott@planning.tas.gov.au>; Louise <louise@cherrieconsulting.com.au>; Heather Chong <heather.gew@gmail.com>; Jock_campbell@bigpond.com; Jarvis, David (DPIPWE) <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><u>Email requesting amendment to minutes</u></p> <p>Barbara Nowak <bfnowak@gmail.com> 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><u>Emails about concerns regarding the process</u></p> <p>From: Barbara Nowak <bfnowak@gmail.com> 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: Barbara Nowak <bfnowak@gmail.com> Date: Wed, Jul 11, 2018 at 11:32 AM Subject: Re: Single Year class? To: Craig Midgley <ncmidg@bigpond.net.au></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 Jungalwala	[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 Cherie	[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.

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(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]

Sent: Wednesday, 8 August 2018 8:40 AM

To: Jarvis, David (DPIPWE) <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@dpipwe.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