Hearing Presentation

Proposed Salmon Farm Relocations

Peter Martin and Nikki Elliot MBChB 2 May 2017

Good morning Your Honour, Mr Crosby and Mr Dormer. My name is Peter Martin. I have been coming to the Marlborough Sounds for 50 years.



Nikki and I love the sounds – and while we're here we: Enjoy the stunning scenery and wildlife – especially in some of the more remote areas





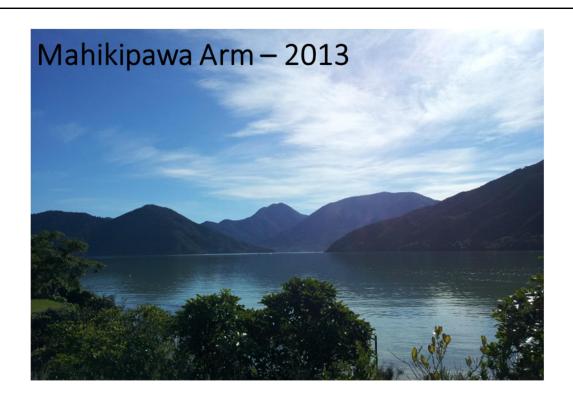
Go exploring in our little boat – only 4.4m but we managed to circumnavigate D'Urville!



We mountain bike (These photos are of us biking the Queen Charlotte Track with a large group friends – which we've done for the last 13+ years)



We do a lot of walking and tramping in the Sounds - as well as; Snorkelling, sometimes spearfishing, and; Fishing (more accurately described as bobbing in the sun listening to birds & staring at the bush)



We $\underline{\text{truly love}}$ to get out and about and experience the beauty of the INNER AND OUTER SOUNDS



Sadly, in my lifetime, I have witnessed the degradation of the inner Pelorus Sound.

The Mahakipawa/Mahau area has gone from hard packed sandy bottom to thick mud and silt. Elephant fish, gurnard, blue cod, mussels and scallops are no longer present. Snapper and flounder are dwindling

We have been heartened to see some recent initiatives aimed at ecosystem restoration in the Marlborough Sounds and surrounding hinterland.

Many of these projects will help improve the degraded benthos (sea floor) and water column.

Some of the recent projects (run by individuals, groups and the MDC) include pest control programmes, wilding pine eradication, and land fallowing / bush regeneration efforts. What is painfully clear is that more restoration and ecosystem improvement work is needed – not further degradation!



Image from:
Marine Treasures of the
Marlborough Sounds
Evidence Against the NZ King
Salmon Application for Salmon
Farms in the Marlborough Sounds
Evidence of Danny Boulton
Sustain Our Sounds 2012

We have dedicated most of our spare time to reviewing this salmon farm relocation proposal — AS WELL as taking time off our fulltime jobs. We've done this not only to speak up for the Sounds we love - but also to honour the memory of Mr Danny Boulton — who worked so tirelessly to protect the Sounds before his death. Danny rallied many of us via Sustain Our Sounds — and we're here to do what he can no longer do.

Main presentation content

- Public awareness issues
- Prohibited areas + alleged "environmental improvement"
- Scientific processes
- Water column effects
- Remote, wilderness aspects marine wildlife + humans

Although we have many concerns – the main areas of focus today will be:

The poor public awareness – and using a section of the RMA to stop the public having any further say on this important issue This is an attempt on PROHIBITED AREAS OF THE SOUNDS presented as "environmental improvement"

We will touch on our concerns about poor scientific processes followed by MPI & NZKS

We'll look at how water column effects have <u>LARGELY</u> been ignored – with <u>unconfirmed monitoring protocols</u>

And finally, we will highlight our concerns about preserving remote wilderness areas – particularly in the outer Pelorus – which are so important to marine wildlife <u>as well as to humans</u>

Poor public awareness

- Area of national significance
- Many New Zealanders completely unaware
- Risks fall on the public of NZ

We are all well aware of the need to grow our economy – just NOT at <u>any</u> <u>cost!</u>

The Marlborough Sounds are iconic, outstandingly beautiful, PUBLIC AREAS Public areas for **all New Zealanders** present and future!!

This was reiterated during the recent Board of Inquiry process (which we will talk about more in a moment) This is <u>undisputedly an area of national</u> <u>significance</u>

With the recent BOI (and Supreme Court) decisions about salmon farming in Marlborough Sounds – we were quite astounded by this proposal – especially when the proposal seeks to largely exclude the public from any further input – 3 months of cursory notification – and no further chance to have input!! Let's talk about public notification?? We have heard and seen MANY notifications about a NZ Transport Agency proposal to change speed limits on the main South Island state highway. Notification about this relocation proposal, we feel, has been FARCICAL IN COMPARISON!!

We have asked our friends, family and workmates over the last several weeks – 100s of people – and none of them had any idea about this proposal before 27 Mar!

Our concern is that poor public awareness may be due to the notification process – <u>as well as</u> being due to DOWNPLAYING OF THE MAGNITUDE OF POTENTIAL EFFECTS.



Of course there are potential positives – BUT - the majority of risks – pollution, biodiversity loss, risk of toxic algal blooms – fall on us – **THE PUBLIC OF NZ**.

WE FEEL we must speak up for thousands of people who love the sounds as much as we do but who are not aware of the threats!

Not aware of potential adverse effects which may fall on them for generations to come

Prohibited areas - No "environmental improvements"

- Intensification and spreading waste further will outweigh improvements in benthic effects
- Total hectares are NOT THE ISSUE
- Water column effects largely ignored

Let us be clear! This is about moving FARMS **LARGELY** into prohibited Coastal Zones in the Pelorus Sound

<u>There is a process for moving into these **PROHIBITED areas**</u> – these areas of national significance. **This is** the BOI process followed in 2012 – which allowed 2 farms – with **strict monitoring requirements** – which have **not yet** <u>been completed properly!!!!</u>

The focus on overall hectares is disingenuous - This is really about a huge increase in feed

<u>IT IS</u> **INTENSIFICATION** of farming, cloaked in false 'environmental improvement' rhetoric

The focus has been taken off the spreading of waste in the water – and effects this will have – Therefore completely overlooking a **huge part of the problem**

Proposal documentation and presentations mention "reducing environmental effects". The NZKS CEO said on TV recently - "We're going to produce more, with a lower environmental impact" - He then said he didn't understand why people weren't pleased.



SO, LET US SPELL IT OUT – it's DISINGENUOUS to say you've reduced environmental impacts by simply IGNORING half of your environmental impact!! THAT'S WHY WE'RE NOT PLEASED!!!

LET'S LOOK AT ANNUAL FEED TONNAGE IN WAITATA

Waitata farms – annual feed tonnage

Two farms - Waitata and Kopaua = currently 4500 T

Crail Bay x2 – non-operational
Forsyth Bay - fallow
Waihinau Bay – fallow
THEREFORE – 4 farms No feed or waste currently

=> Propose 5 "new" farms – Initial feed up to 6000 T

Waitata and Kopaua = currently 4500 T per year — AND they're not yet FULLY monitored! With benthic standards set, but water quality standards still "WORK IN PROGRESS"

The other 4 farms around Waitata – Crail Bay, Forsyth and Wai<u>HI</u>nau – have NO FEED currently

Yet the proposal seeks to add a FURTHER 6000 TONNES IN THE FIRST YEAR!!

THIS IS NOT A REDUCED ENVIRONMENTAL IMPACT!!

We ask the Hearing Panel to:

•Advise the Minister for Primary
Industries that relocations into
Waitata Reach **prohibited zones** have
been inappropriately presented to
the public.

<u>Therefore</u>.... We would like to ask the hearing panel to: Advise the Minister for Primary Industries that relocations into Waitata Reach **prohibited zones** have been inappropriately presented to the public.

This is <u>intensification</u> – MORE WASTE – SPREAD FURTHER!

ANY talk about <u>monitoring</u> and <u>quality standards</u> relates to BENTHIC OR SEA FLOOR effects only – NOT the effects on the water column or on water quality!

SO it begs the question – WOULD there have been more widespread concern if the proposal was more honestly portrayed??



<u>Speaking about 'how things are portrayed'</u> – we understand marketing is important to NZ King Salmon. AND that they can be very selective about the information they portray - What they choose to promote.

ONE example of this is <u>claiming to be</u> an environmentally-conscious, "green" food producer. <u>Their</u> evidence is a 'Best Choice' (green) accreditation in the 'Monterey Bay Aquarium' Seafood Watch

sustainability guide <u>2015</u>. A United States-based farmed seafood ranking site. Why the US you might ask? Perhaps because our own NZ Best Fish Guide <u>2017</u> shows them in the orange "concerns"/ "eat less of" category This handy chart can be found at bestfishguide.org.nz It is a "traffic-light" coloured bar from green to red – best choice to worst

In case this is a little hard to read – in the dark orange area on the left (highlighted by our arrow) it says "Salmon, farmed (Marine) All areas except Canterbury" – again this is the orange "concerns"/ "eat less of" category. **SO NOT GREEN AT ALL**. Consumer NZ provided similar information in their 2013 review of farmed salmon.

choice.

Science not PR

- Bias "selective revealing or suppression of information"
- "Evidence" or findings presented in a particular way?
- Who has the deepest pockets/can stack up more "experts"?

Unfortunately, you can find <u>so-called "evidence"</u> to back any theory if you look hard enough, or present figures in a particular way. The BEST scientific processes avoid bias as much as possible, <u>and</u> are <u>upfront</u> about where bias may have occurred.

Without STRINGENT, TRANSPARENT processes – it simply comes down to who has the deepest pockets and can stack up more "EXPERTS".

MPI talks about being "INDEPENDENT" – BUT clearly state their desire to grow the aquaculture industry – so they are <u>biased</u> <u>towards growth</u>.

Poor Scientific Processes - MPI+NZKS

- Scientific reports provided by companies reliant on NZKS for work
- No conflict of interest disclosures

Nikki reminds me that - in medicine you need to be VERY AWARE of how a study is funded. A study funded by a drug company - conveniently showing great benefits of their drugs and minimising or simply not publishing many of the adverse effects is not to be respected or relied upon. This is true of any studies and reports extolled by a body with a very obvious agenda. Unfortunately, being a small country, it appears that there are not many reporting or monitoring companies who are not in some way reliant on NZKS for a portion of their work. YET STRANGELY, we haven't found a **SINGLE** conflict of interest disclosure on ANY of the 'relocation proposal' reports.

We ask the Hearing Panel to:

 Consider whether the Minister for Primary Industries should require companies providing scientific or other reports to declare potential conflicts of interest and % of income from NZKS (Auditable)

In the interests of transparency - with MPI spending our taxpayer dollars on these types of reports we ask the Hearing Panel to Consider whether the Minister for Primary Industries should require companies providing scientific or other reports to declare potential conflicts of interest and % of income from NZKS. With this information being auditable.

Thank you - Nikki is now going to focus a bit more on the water column...

Water Column

- Benthic outcomes
- Negative cumulative water quality effects
- Inappropriate to make changes without complete assessment of effects

Good morning gentlemen (ladies and gentlemen) – My name is Nikki Elliot. In my work as a Clinical Analyst, I review patient pathways of care and perform clinical safety audits. One of the principles of the work I do is - if we change a process, we have an ethical obligation to ensure there are no negative outcomes of that change— which seems to be a fairly sensible principle to apply to other areas of life... I'll get to that shortly.

I'm going to review the BOI findings with regard to NZ King Salmon's private plan change in 2012 – And how they stressed the importance of BOTH water column and benthic effects.

Despite this – all of the documentation says water column monitoring standards are still "work in progress". It is completely inappropriate to make changes without establishing these.

Let's be very clear - Salmon farming causes cumulative water quality effects — it is scientifically and ethically inappropriate to make changes to nutrient inputs in Waitata Reach, Pelorus Sound, when effects of recently added farms haven't been fully assessed. And most importantly, when quality standards — with strict enforceable limits linked to ecosystem responses have been missing in action for FOUR YEARS! Ecosystem responses at near site and far site locations — with effects on creatures like the King Shag and many others.

Board of Inquiry (BOI)_Final Decision_Vol 1

BOARD OF INQUIRY
NEW ZEALAND KING SALMON REQUESTS FOR PLAN CHANGES AND
APPLICATIONS FOR RESOURCE CONSENTS

IN THE MATTER of the Resource Management Act 1991 (the RMA)

AND

IN THE MATTER of a referral to a Board of Inquiry under Section 147 of the

Act of requests for plan changes and applications for resource consents by The New Zealand King Salmon

Company Limited

This is Volume One – of the Final Decision of the BOARD OF INQUIRY - NEW ZEALAND KING SALMON REQUESTS FOR PLAN CHANGES & APPLICATIONS FOR RESOURCE CONSENTS – dated 22 Feb 2013.

Bear with me while I read a few relevant excerpts: Apologies for busyness of a few of these slides

BOI Feb 2013-Final Decision-Vol 1 p 83

[179] It is the precautionary approach that has, at least in part, given rise to what has become known as the "adaptive management" approach. This provides for ongoing monitoring of the effects of an activity, in order to promote careful and informed environmental decision-making, on the best information available. It is a precautionary technique that provides a pragmatic way forward, enabling development while securing the ongoing protection of the environment, in complex cases where there are ecological or technological uncertainties as to the effects of the proposal.

(highlighting added)

BOI Feb 2013-Final Decision-Vol 1 p 84

[181] After considering the principles applied in these cases for adaptive management to be appropriate in this instance we must be satisfied that:

- There will be good baseline information about the receiving environment;
- [b] The conditions provide for effective monitoring of adverse effects using appropriate indicators;
- [c] Thresholds are set to trigger remedial action before the effects become overly damaging; and
- [d] Effects that might arise can be remedied before they become irreversible.

[182] We propose to apply an adaptive management approach in the context of the above principles.

(highlighting added)

Far Field Effects

[323] Mr Keeley outlined the potential for low level cumulative enrichment through resuspension, horizontal transport and subsequent sedimentation. He considered most sites to be in close proximity to Cook Strait where dilution and wide dispersion of organic particulates would occur. However, some entrained particles may enter the inner Sounds and/or embayments where they would increase natural sedimentation processes. (emphasis added)

[357] ... In conclusion the Minister [of Conservation] submitted that "a precautionary approach is especially warranted" with respect to the wider water column effects. (emphasis added)

Overall Summary and Findings on Effects on the Water Column

"[437]... there remains considerable uncertainty as to the nature of the receiving environment, including the trends in other nutrient sources, and consequently the ability of the Sounds to adequately assimilate a significant increase in nutrients."

(emphasis added)

"[454] ...We find that setting objectives for water quality and the consequential ecosystem response is necessary to manage the potential adverse effects of the nutrient additions. Our task is to ensure that these objectives, as part of the conditions of consent, are reasonably certain and enforceable." (emphasis added)

Discussion and Findings

"[465]...It is within Pelorus Sound that the potential for cumulative effects is of the greatest concern – given the number of proposed farms, the trends in riverine inputs and the King Shag colony at Duffers Reef." (emphasis added)

Discussion and Findings

"[472]...The purpose of the monitoring is to ensure that the environmental quality standards for both the seabed and the water column are met." (emphasis added)

Water Column

"[1212]...Our finding that only two of the zone locations sought in the Waitata Reach can be approved is partly underpinned by our recognition of the (unresolved) uncertainty and risk that exists with regards to the water column effects" (emphasis added)

Remember – this was February 2013!!!! Water column effects were clearly of grave concern – why was this not given priority??

Waitata farms – Monitoring

- Benthic monitoring focus of "relocations"
- Water quality monitoring??

Mr Gillard NZKS Hearing Transcript 19 April 2017 p 17

"The BMP guidelines for water quality are being developed with scientists and we expect these to be implemented within one to two years."

We repeat - benthic monitoring and standards have been the focus of all of the relocation proposal documents and presentations What happened to water column standards?? Mr Gillard NZKS Hearing Transcript 19 April 2017 p 17

"The BMP guidelines for water quality are being developed with scientists and we expect these to be implemented within one to two years."

This is NOT GOOD ENOUGH!!!! We would love to know whether the BOI members envisaged this would still not be prioritised and sorted 4 to 6 years later??!!

Let's have a brief reminder of the annual feed tonnage we're talking about –

Waitata farms - annual feed tonnage

2 farms - Waitata and Kopaua = currently 4500 T

Forsyth Bay - fallow
Crail Bay x2 - non-operational
Waihinau Bay - fallow
THEREFORE - 4 farms No feed or waste currently

=> Propose 5 "new" farms – Initial feed up to 6000 T

Waitata and Kopaua = currently 4500 T – with effects not yet fully assessed Benthic effects maybe **but** water quality effects still "work in progress"

HOW can anyone suggest adding a further 6000T of feed to this situation??!!!

<u>AND</u> have the gall to suggest they're going to have a "LOWER ENVIRONMENTAL IMPACT"???

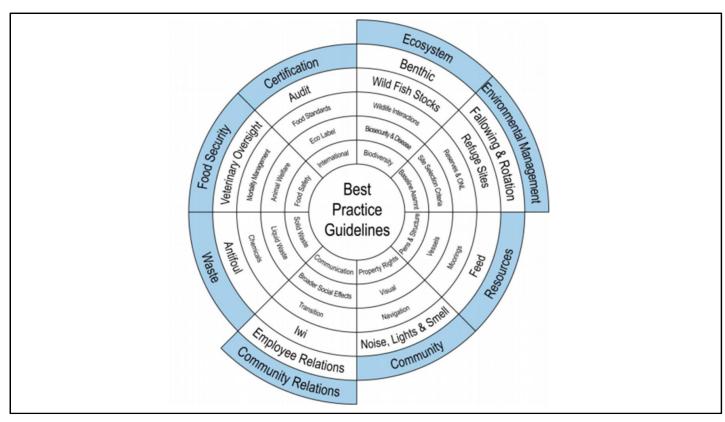
We could NOT understand how the water column monitoring appeared to just be FORGOTTEN?

Best Management Practice guidelines for salmon farms in the Marlborough Sounds: Operations

Final: November 2015



Here's an important document one would think – "Best Management Practice Guidelines for Salmon Farms in the Marlborough Sounds – Operations – Final November 2015".



We read this in interest – and to our dismay - On Page 6 – found the Scope of the document – pictorial representation of the <u>eight key criteria</u> - in a 'wagon wheel' WATER COLUMN DOESN'T EVEN FEATURE!!!!



Modelled water column effects on potential salmon farm relocation sites in Pelorus Sound

Prepared for Ministry for Primary Industries

18 October 2016

Some recent work has been done by NIWA – for MPI - modelling water column effects in Pelorus Sound relating to different feed scenarios in the relocation proposal

NIWA Modelled water column report P 15

On the other hand, our modelling does indicate that all of the alternative scenarios will induce a small quantum of enrichment. Recalling the consent condition that the fish-farms should not cause a statistically significant shift, beyond that which is likely to occur naturally, from a oligotrophic/mesotrophic state towards a eutrophic state, and noting that a quantitative value corresponding to the phrase "statistically significant shift, beyond that which is likely to occur naturally" has not been specified (let alone approved by a review panel), we must admit a note of caution. Whilst we consider it unlikely, it is conceivable that a numerical value for the acceptable quantum of change could be chosen such that none of the alternative scenarios would be deemed acceptable.

Page 15 of the report confirms our concerns about enrichment BUT INTERESTINGLY ALSO supports our concerns about the <u>risks of not specifying certain and enforceable consent conditions</u> – (they may have been warning MPI – but we see the warning as equally applicable to us)

NIWA Modelled water column report P 65

For all of the alternative scenarios, the ²⁷far-field changes tend to manifest themselves in similar locations (i.e., throughout the inner parts of Pelorus including Tawhitinui reach, Mahau and Kenepuru Sounds and their environs). The magnitude of the far-field induced changes appears to be more strongly influenced by the overall feed-loading (summed across all farms) than by the precise location of the farms giving rise to any given overall loading level.

Now we all know models have degrees of risk and uncertainty – but our concerns about Pelorus – in particular the inner Pelorus effects – seem to be supported

Pelorus Sound Degradation Concerns



And remember the sedimentation and runoff already loading the head of this Sound EVERY TIME IT RAINS!



The history of benthic change in Pelorus Sound (Te Hoiere), Marlborough

Prepared for Marlborough District Council

February 2015

And this is well documented in another NIWA report – "The history of benthic change in Pelorus Sound (Te Hoiere) February 2015 – although this is largely focussed on mussel beds and mussel farming – it clearly documents the sediment and water quality concerns in Pelorus.

NIWA – History of benthic change Pelorus

P 36 "...the question could be asked, is the state of the environment monitoring undertaken by MDC adequate to detect long-term changes to soft-sediment habitats? Monitoring our coastal waters and their watersheds is of paramount importance because "history is long; human memory is short" (Swaney et al., 2012). Without appropriate monitoring, gradual degradation can escape our notice, as can the gradual, cumulative impacts which can lead to relatively swift transitions or 'regime shifts' in ecological communities (Scheffer and Carpenter, 2003)" (emphasis added)

One quick quote from P 36 I wanted to mention was

"...the question could be asked, is the state of the environment monitoring undertaken by MDC

adequate to detect long-term changes to soft-sediment habitats? Monitoring our coastal waters and their watersheds is of paramount importance because "history is long; human memory is short" (Swaney et al., 2012). Without appropriate monitoring, gradual degradation can escape our notice, as can the gradual, cumulative impacts which can lead to relatively swift transitions or 'regime shifts' in ecological communities (Scheffer and Carpenter, 2003)"

Sounds familiar - Gradual degradation - cumulative impacts – regime shifts – "tipping points" might be another good term to keep in mind... hence

We ask the Hearing Panel to:

•Find that relocating further salmon farms into Pelorus Sound without confirming water column monitoring processes first cannot be regarded as taking a precautionary approach.

And further we ask..

•Advise the Minister for Primary Industries that any relocations into Pelorus Sound are inappropriate without thorough review of the effects of Waitata and Kopaua farms.

BEFORE anyone tries to start tinkering with the process and literally as well as figuratively muddying the waters!!

• Advise the Minister for Primary Industries that any changes to salmon farming in the Marlborough Sounds must not occur <u>until</u> environmental quality standards for water column ecosystem effects have been confirmed. Without these, <u>certain</u> and <u>enforceable</u> conditions cannot be set and so-called adaptive management is impossible.

Remember what I said earlier about ethical obligation to ensure there are no negative outcomes??

The individuals involved in setting these standards and conditions need to make sure there is <u>unambiguous accountability</u> for salmon farm effects. Without this – it is our belief that NZ King Salmon (aided by MPI) will disagree with findings, claim there is not enough evidence that changes are farm-related – and find numerous ways to ensure they don't have to make any changes— (ie - decrease their feed/pollution)

How can the public of NZ trust NZKS to work within an ECOLOGICALLY SOUND process of adaptive mx when they have failed to do so thus far?? We feel NZKS (AND MPI) have <u>no right</u> to be pushing for changes – when they haven't completed CRUCIAL requirements of previous changes. We suggest that the time and money spent on <u>spurious relocation proposals</u> SHOULD have gone towards <u>completing these requirements first</u>!!!!

No lower environmental impact

Adaptive management steps to increasing feed are meaningless without appropriate agreed safeguards around water column effects

Adaptive management is just a phrase – just jargon, until the process is properly set up. Until then – it's just a way of allowing pollution to be spread further by faster flowing water. Simplistically stating that the sea "assimilates" or "flushes away" pollution is archaic – Archaic and unethical in our view.

Precedents for other 1° producers?

Dairy farmers?

- Waterway stock exclusion?
- Riparian planting?
- Nutrient runoff controls?

Pollution control requirements for one group of intensive farmers – but not another??

Many people have raised concerns about setting dangerous precedents in the primary production sector. NZers are slowly waking up the true costs of allowing intensive agriculture such as dairying to be pushed at <u>almost any cost</u>. Farmers are SLOWLY being required to exclude stock from waterways and work on riparian planting etc. (Eg MDC environment meeting document – noting dairy farmers only have to complete riparian plantings around waterways by 2030!!!) Why should ANOTHER INTENSIVE FARMING group simply be allowed to pollute the sea at will? How would we feel if dairy farmers said – no worries – we'll just collect up the effluent in big tanks and pop it out to sea in a nice high flow area – and by magic it's all "assimilated into the sea"??

We have grave concerns that the Minister is setting dangerous precedents for agriculture groups to challenge their need to remediate / improve water quality and nutrient runoffs. Don't tell me that groups like Dairy NZ or other dairy lobby groups don't have lawyers working on how to exploit what NZKS are getting away with. Will there be challenges to the riparian plantings – "why do we have to control nutrient loads into coastal waters if NZKS don't have to??" or "Unfair that water use and ability to pollute limitations apply to one group of farmers but not the other".

We, the public who suffer the legacy effects of the pollution and generally end up paying for remediation measures, such as projects to regenerate degraded wetlands, sounds, estuaries and coastlines, would rather NEITHER were given a <u>relatively free reign to pollute in first place</u>! SO we ask the hearing panel

 Consider the risks of setting precedents for other primary producers if certain and enforceable conditions around water column ecosystem effects are not confirmed.

Remote Natural Wild

- Outer Pelorus
- Value to humans
- Value to marine mammals

NOW – I would like to talk about the remote natural wild elemental experience of being in the outer Pelorus Sound And the importance of these natural character aspects for humans and marine mammals

You may have picked up how passionate Pete and I are about this area – I've struggled to find the right words to describe quite how enthralling and special it is to be out here.



We set out hideously early (sparrowfart)— chug our way up the sound — with me spotting nikau palms, penguins and if we're lucky dolphins or orca - Getting out to Waitata Reach isn't guaranteed — and we've had to turn back due to inclement conditions numerous times.

But this amazing vista awaits – that vast remote wild – open-sea – feeling of venturing out across the edge of the known world – similar to feeling of heading to the outer extent of Doubtful Sound years back on a kayak trip



Remote – relatively unspoilt – wild – natural – elemental experience is increasingly hard to find in our increasingly industrialised world—but so good for the soul

We would argue that these aspects of the Outer Pelorus have become even more important with the focus on recreational use in Queen Charlotte Sound– This more remote and less populated area – with less humans – is hugely important.

Two more salmon farms are bad enough – but suggesting more encroachment on the open rugged heads area – historic gun emplacements – and slap right in the middle of this awesome vista – is incomprehensible

We've found it quite insulting to read various landscape architects engaged by MPI describe the effects of the relocation proposal on this area described as minor. We feel the focus on <u>residential</u> effects is quite misleading – perhaps deliberately so?? – Have they wilfully ignored the importance of these remote wild natural character aspects – aspects that are **not just important for humans**?

Ministry for Primary Industries 2013 P 10

OVERVIEW OF ECOLOGICAL EFFECTS OF AQUACULTURE

Considerations for marine farmers on managing ecological effects

Marine farmers should take into account the following to manage and mitigate the ecological effects of aquaculture.

LOCATION, LOCATION, LOCATION

Appropriate siting of an aquaculture development is critical to avoiding and reducing many potential adverse ecological effects, and may also result in enhancing the positive effects of an aquaculture activity. However, site selection must first consider the requirements of the species to be farmed. Siting considerations should include:

- Avoid sensitive, rare or endangered habitats, species and communities.
- Dilute and diffuse: Locate your activity in an environment that can tolerate changes resulting from the activity (such as nutrient additions, extractions or

AQUACULTURE SCIENCE REVIEW

MPI convenes the Aquatic Environment Working Group (AEWG) to provide scientific feedback and review of research, including aquaculture. Regional councils and private applicants can request their projects are reviewed by AEWG. Although not a statutory requirement, a science review could be worthwhile particularly for large, novel or potentially contentious aquaculture proposals or research. Learn how to get involved in the working group.

THINK EFFECTS, NOT SPECIES

When applying for or issuing resource consent for an aquaculture activity, consider species groupings (such as shellfish and finfish) rather than individual species, as the environmental effects are very similar and this approach provides more flexibility for innovation. For example, filter-feeding shellfish gives flexibility to farm

(Highlighting added)

Marine mammals – MPI Overview Ecological Effects of Aquaculture 2013 (slides)

Overview of Ecological Effects of Aquaculture P 44

The scale and magnitude of the effect of aquaculture on marine mammals depends largely on the species and its population range, particularly if it is an endangered, threatened, or range-restricted species. Critical species in this regard include Hector's and Maui's dolphins, bottlenose dolphins, orca, Bryde's whales, southern right whales and humpback whales.

The significance of these effects may need to be reconsidered in relation to any larger-scale and offshore aquaculture developments in New Zealand waters.

(Highlighting added)

Large Orca Near Titi Island 2012



It took us a while to work out what this was – but we quickly realised it was the large dorsal fin of some type of whale We watched it from a distance for a long time – and eventually decided it was quite a large orca

Large Orca Near Titi Island 2012



Later we got a better shot when he held his dorsal fin up straighter

Often we have been so enthralled by our marine wildlife encounters we've forgotten to grab a camera –

Te Puraka Point



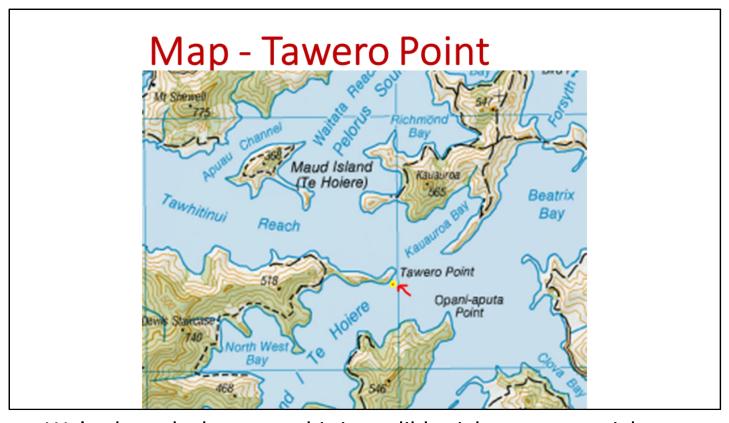
This was the case at Te Puraka Point — Beatrix Bay a year or two later (indicated by yellow and red spot on map) — We were fishing and heard a noise — There were 3-4 possibly female orca coming towards us — and one dived right under the boat! Incredible — then a few minutes a larger orca — possibly the male cruised into the bay — They appeared to be hunting stingray — from the splashing around in the bays. But it was quite sad to see how much their progress was impeded as they had to work around many mussel rafts. Still it was an incredible site — to see these magnificent nationally endangered creatures

Mid Pelorus Sound Jan 2016



Luckily, I did have a camera handy - Jan 2016 – when we were taking friends fishing (for 1st time)

We were just on the Wilsons Bay side of Tawero Point - Examples of young learning beside older dolphins – and how close to shore they can go when not impeded



We've been lucky to see this incredible sight years ago right up in the Mahakipawa arm – A huge group of dolphins – many adults with a young dolphin beside them – presumably learning the ropes – herd fish – and then others cut the fish off – with a large swish of their tails ahead of the rest of the group.



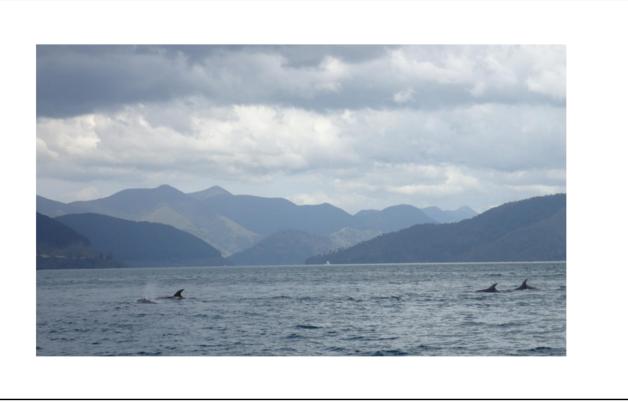
There was also a report in the fishing news a few years later — about a large-scale dolphin herding event in Te Mahia — which left large numbers of snapper — seemingly a bit dazed and confused by the exercise — milling against the jetty. We've also been lucky to see pods of dolphins hunting in Tawhitanui Reach with gannets dive-bombing from above — spectacular sight.

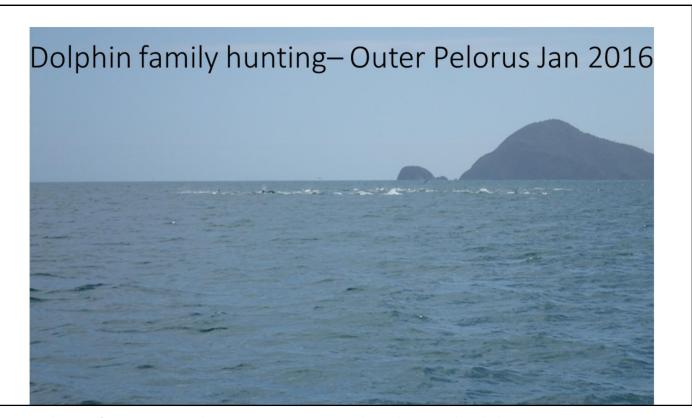


I apologise for quality – <u>clearly</u>, I shouldn't give up my day job and become a wildlife photographer – but you get the idea - we felt incredibly privileged to witness these acrobatics – maybe celebrating a successful day?

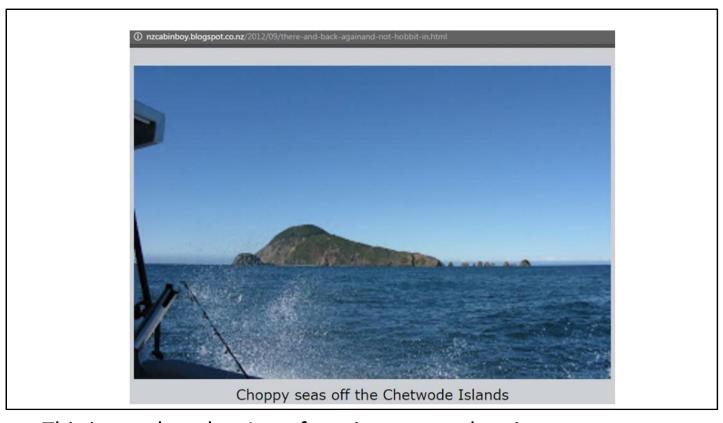


We've certainly treasured every experience of seeing these beautiful, intelligent, social creatures in the wild.





Only a few days later – so we think probably same family – and DOC have confirmed definitely Bottlenose dolphins – We were initially puzzled by what looked like a large long ?wave coming towards us – once we realised it was dolphins coming towards us at a rapid rate – stopped and dug camera out of drybag – they'd moved from Chetwodes a long way towards us.



This is another shot I got from internet – showing Chetwodes (compare island shape – slightly different angle)



the large group raced past us and towards the Blowhole Point side of the Sound.





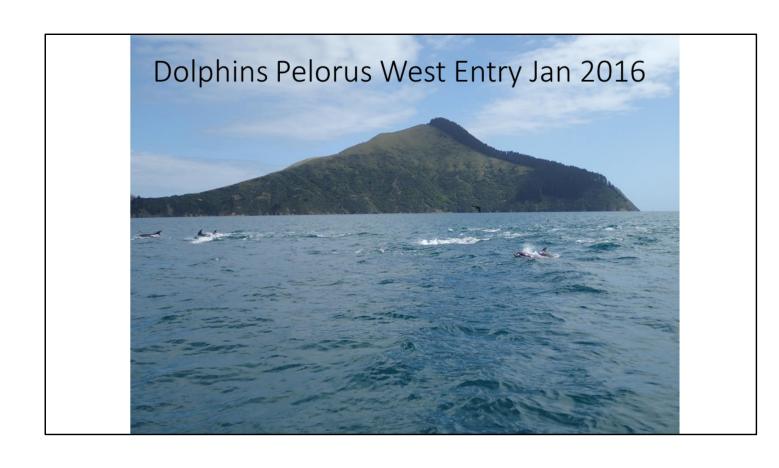


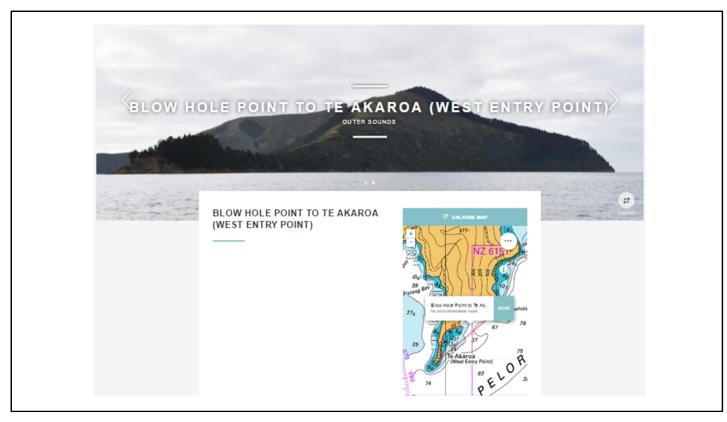


Hunting and swirling round to cut off the fish etc

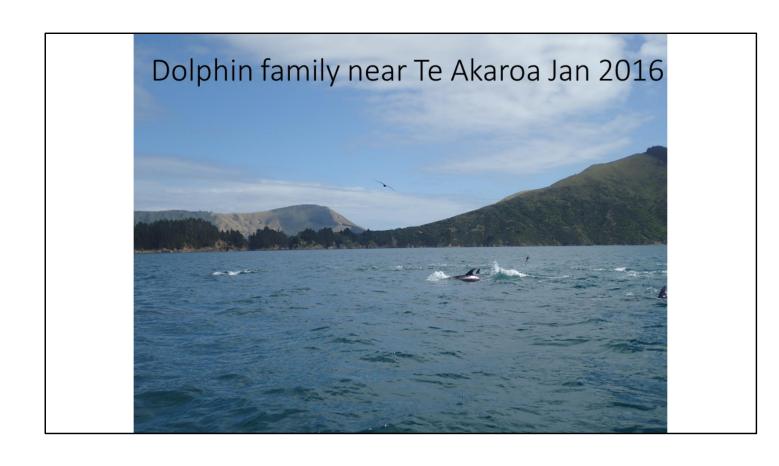








Another image from the Internet to show the same headland shape – definitely in that area.





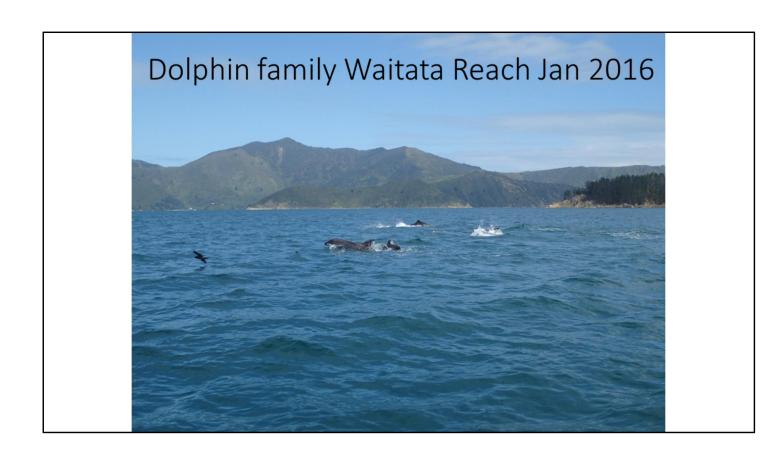
There are several shots showing young learning the ropes beside the older members of the group — whirls and splashes as they cut off the herded fish — and birds getting in on the action.







And the group racing down the middle of the reach towards Maud Island.



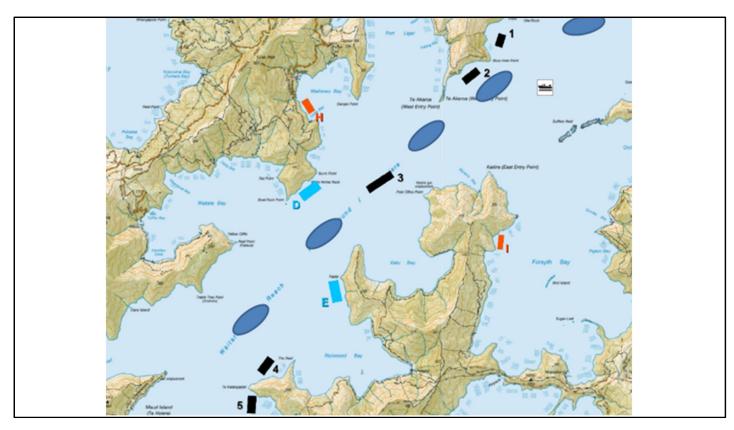






Maud Island is the pyramidal point in the distance down the reach





This map is our attempt to approximate where we were (boat) and the route taken by this large pod of bottlenose dolphins (blue blobs)



We then went out to spend the day by the Chetwodes – where I spent the time gazing at the beautiful bush – especially my favourite nikaus – watching and listening to the tuis and enjoying the sun.



Coming home later in the afternoon – there they were again –



we were thrilled to have a few of them come over to the boat to have a wee look at us. Wild natural areas when humans can quietly observe these magnificent, intelligent, and social creatures are SO IMPORTANT in our over-crowded and industrialised world. And so we ask...

We ask the Hearing Panel to:

 Arrange expert workshops to reexamine potential marine mammal issues – esp. importance of low human interference in Pelorus Sound (Te Hoiere) (sheltered hunting/training area for bottlenose dolphins & orca)

And we know NZKS will say – but we have a Marine Mammal Plan – but simply having a "Plan" is not enough – it's just words. We all know the old saying actions speak louder than words – in this case we believe NZKS actions, supported by MPI – will restrict crucial activity of these magnificent nationally endangered creatures. Particularly in these more remote and less populated areas so important for marine wildlife. And we haven't even touched on sharks – again King Salmon will say risks are low – but on behalf of the dolphins – and us when we're diving in the Outer Pelorus region – we'd rather not any more risk of sharks!! Marine reserves – what about marine mammal reserves?? Outer Pelorus Kaikoura ?Akaroa etc

We ask the Hearing Panel to:

 Consider in more detail whether the proposed amendments to the Marlborough Sounds Resource Management Plan would have sufficient regard to preserving and protecting our indigenous biological diversity, natural character and landscapes, particularly in Pelorus Sound (Te Hoiere)

So, in conclusion – we would like to ask that this Hearing Panel consider our concerns on behalf of our beloved Marlborough Sounds – we have a copy of each of the specific requests for the three of you.

Humans have decimated species after species out of ignorance and greed — we can no longer claim ignorance...

And to everyone involved in the drive to increase salmon farming in Marlborough – yes, jobs are important – but consider where we will all be if we continue to inflict irreparable damage to this environment we all love. Will you be able to look your children and grandchildren in the eye and say you left them more of a legacy than a huge clean-up bill? Thank you