

Contents Page: Robinson-Rowe

All written comments received on the MPI salmon relocation proposal, grouped according to surname/business/organisation/lwi name.

Written Comments Number	Last Name	First Name
38	Robinson	Sian
410	Robinson	Meredith
570	Rodie	Louise
129	Rodigrues	Palepa
236	Rolston	Ron and Lorraine
208	Roman	Cristian
140	Rose	Philip
156	Rosewarne	Julie
386	Rosewarne	Grant
2	Ross	PW and KM
269	Ross	Allan
348	Roughton	Lynal
230	Rowe	Dennis

Written Comments No: 0038

Subject	Submission-Written Comment on the Potential Relocation of Salmon Farms in the Marlborough Sounds
From	[REDACTED]
To	aquaculture submissions
Sent	Friday, 24 February 2017 10:14 a.m.
Attachments	<<Submission on the Proposed Relocation of Marlborough Sounds Salmon Farms.pdf>>

Hi,

Please find attached a PDF Document with my written comment on the potential relocation of salmon farms in the Marlborough Sounds.

If you need any further information, please do not hesitate to contact me via email:

[REDACTED] or phone: [REDACTED]

Thank you for your time.

Regards,
Sian Robinson

Written Comments No: 0038

Sian Robinson

Wellington, 6011

24th February 2017

Submission on the Proposed Marlborough Salmon Farm Relocation

Ministry for Primary Industries

Aquaculture Unit

To Whom it may concern,

I support the relocation of all the proposed Marlborough Sounds salmon farms.

The proposed relocation of the Salmon Farms in Ruakaka Bay, Otanerua, Forsyth Bay, Waihinu Bay, and both farms in Crail Bay to deeper, higher flow sites is a sustainable and beneficial proposal. These are better and more favourable conditions for salmon farming sites, as opposed to the current low flow and shallower farms.

I support the relocation of all of the proposed Marlborough Salmon farms. I believe this move is positive and beneficial to both the sustainability of New Zealand's environment and economy, and the sustainability of New Zealand King Salmon, an exceptional company driving key aquaculture growth for New Zealand. The proposed relocation will create a significant number of full time equivalent jobs.

I have worked at New Zealand King Salmon as a Market Research Intern. I held this position for three months, from December 2016 to the end of February 2017. As a third-year student at Victoria University of Wellington, the opportunity to work at New Zealand King Salmon has enabled me to gain valuable hands-on experience and insight into where I wish my Conjoint Bachelor's degree to lead me. It has been an incredible opportunity to work with a team, and company, of such high caliber. The relocation of all of the proposed salmon farms will create 511 more jobs, and enable 511 people to become a part of the New Zealand King Salmon team, providing them with a high standard of employment.

Thank you for considering my submission supporting the potential relocation of Salmon Farms in the Marlborough Sounds.

Kind Regards,



Sian Robinson

Written Comments No: 0410

Subject	Marlborough Salmon Relocation
From	<u>Meredith Robinson</u>
To	aquaculture.submissions@mpi.govt.nz
Sent	Monday, 27 March 2017 4:54 PM

To whom it may concern,

I am not in favour of the relocation of these 6 farms as I am concerned about the environmental and aesthetic effects on the Marlborough Sounds.

I am concerned about any further increase from nitrate levels generated from uneaten food and most importantly the enormous volume untreated waste generated daily. An equivalent land farm would not be consented if the same level of waste was left to leech into the land and water ways. There is a proven correlation between increased nitrates and toxic algae blooms. Fish, animals and aquatic plants are very susceptible to high nitrate levels. The toxicity of these algae blooms are capable of killing animals and humans if consumed with shellfish inadvertently.


Salmon farming may be better suited as a land based operation. Land based farms would allow better regulation of waste material and ensure the water returning to the environment is at least as good as the water being pumped in.

I am concerned about the levels of copper and zinc from antifouling the nets and equipment.

I am concerned that the reports shown from the Cawthorn Institute and Niwa etc, all rely solely on the increased ocean currents of these new locations, to take the huge volumes of waste away without any consideration of the long term impact of these nitrates and poisons on the environment.

The farms have a huge aesthetic impact on the landscape and detract from a growing tourist market.

Meredith Robinson

 pad

BLLENHEIM 7273

Written Comment No: 0570

Subject	Supplier Salmon Farm Relocation template submission (1) copy.docx
From	<u>Louise Rodie</u>
To	aquaculture submissions
Sent	Monday, 27 March 2017 3:30 p.m.
Attachments	<<Supplier Salmon Farm Relocation template submission (1) copy.docx>>

Louise Rodie



Salmon Farm Relocation

Ministry for Primary Industries

Private Bag 14

Port Nelson

aquaculture.submissions@mpi.govt.nz

To: The Salmon Relocation Advisory Panel

My name is Louise Rodie, I am a self-employed caterer.

I support the potential salmon relocation process being proposed by MPI because I believe the salmon farm relocation will provide for better environmental, social and economic outcomes.

I understand that by relocating farms from lower water flow sites to higher water flows sites fish performance will improve and therefore the health of the salmon. It will also have a lower level of effect on the seabed which will have positive environmental benefits.

Environmentally, adopting the Best Management Practice guidelines that were agreed by the Council and community is the future for aquaculture globally.

There will be more direct and indirect jobs created if this proposal goes ahead resulting in economic improvements for the communities in the top of the south.

Moving some farms away from baches to more remote locations will improve social amenities which is also a good thing especially from a navigation viewpoint.

What will this mean for you as a partner of King Salmon?

I believe it will be beneficial to not only the Marlborough Sounds but the Marlborough District as a whole.

How will this affect your company?

I expect it will only be a positive step forward.

I would not like to be heard by the hearings panel.

Name: Louise Rodie.

Email:

Date: 27 March, 2017.

Phone:

Written Comment No: 0129

Subject	Relocation of 6 NZ King Salmon Farms
From	palepa rodrigues
To	aquaculture submissions
Sent	Tuesday, 28 February 2017 3:24 p.m.

To: Whom it May Concern,

I am writing to you regarding the relocation of 6 NZ King Salmon Farms. I am 100% in favor/support this decision.

1- it benefits the environment and also the salmon

2- it's further away from the people

3- it creates jobs for us kiwis, instead of people living on benefits and are struggling to find jobs, this is a great opportunity

And lastly if we want healthy salmon we need to move them to a high flow area, it's good circulation for the salmon.

If you need anymore information please don't hesitate to contact me at this email address or phone

[REDACTED]

Kind regards

Palepa Rodrigues

Salmon Farm Relocation

Ministry for Primary Industries

Private Bag 14 Port Nelson 7042 New Zealand

To The Salmon Farm Advisory Panel

Submission Comments

We wish to be heard by the advisory panel

Ron Rolston

Lorraine Rolston

[REDACTED] [REDACTED] [REDACTED] Picton [REDACTED]

1. My wife and I live in [REDACTED] We have lived permanently there for 9 years, but have owned our home since 1996. During this time we have fished and visited many parts of all the sounds. We wish to comment on three specific items relating to the salmon farm expansion plan.
2. First and foremost the plan for the farm named in the plan as Richmond Bay South #106. We are against this position because of the reef close by named Richmond Reef. This beautiful reef structure is a very productive blue cod fishery, and in fact on a fine clear day you can look down upon this reef and observe juvenile blue cod on and about the reef. We believe this reef to be a great breeding ground.
3. We have read the expert reports on the waste deposition stating the waste maximum distance at 900 metres (6.5.1.1) Summary Assessments of Environment Effects, but we are not convinced. We believe the outgoing tide will carry waste and reach the reef 500 metres North West. In 1995 MDC declined the application (RC#U950285, Report attached) because the MDC committee was of the opinion that the proposal had potential for introducing more than minor adverse effects on the reef. The committee was also concerned about the adverse cumulative effects of encouraging further applications in this bay in which marine farming was designated as prohibited in the proposed MSRMP.
4. In the unlikely event the Advisory Panel allows the Richmond Bay South Farm the Advisory Panel should insist on the Richmond Reef being subject to the Undue Adverse Effects Test on Fishing (UAE) as stipulated in the Fisheries Act for proposed marine farming areas. The test should be carried out close to and prior to the opening of the blue cod fishing season and at the same time every year. Although we very seldom venture as far out as the Blow Hole point sites the reef separating these two proposed farms should also be subject to the UAE test.

Written Comments No: 0236

5. Our second concern is the obvious discrepancies in the navigation report on pages 18 and 19. (See attached report.) We believe this should read generally boats OVER 5 metres. If you have a boat under 5 metres with one or more engines over 90HP and 5 people on board in the area being referred to, and with little knowledge or skill, these boats would not make it to this area without mishap. We take exception to the paragraph for the following reason.

Most boaties we encounter and know personally are very careful when fishing the Waitata Reach with its very fast changeable weather, rocky outcrops and large boats creating wake. Without maps or on board navigation units it is hard to recognise the route from Elaine Bay, Havelock, or Kenepuru.

6. We also think Navigatus has under estimated the numbers and size of vessels and it is not sparse as stated on page 18. Also they have not considered the very large barges coming on stream to remove the estimated 500,000 tonnes of logs to be harvested over the next 10 – 20 years. Most going through Waitata Reach to Picton. (See attached report.)

7. Our final comment concerns the two Crail Bay farms. These farms have never been used by NZKS, therefore to allocate 0.5 hectare for each farm of structure relocation is inherently wrong. In fact in 2014 the farm sites were in a very poor condition and a stern letter was sent to NZKS by the Harbour Master. (See copy of attached letter).

Thank you for reading our submission


..... Ronald (Ron) Keith Rolston


..... Lorraine Eileen Rolston

6.5.1 Benthic

NIWA's technical investigation of the seabed at the potential Richmond Bay South site is summarised in Table 6-12.

Table 6-12: Richmond Bay South benthic summary

Site	Benthic Environment
Richmond Bay South	<ul style="list-style-type: none"> • Depths range from 30-56m. • No particular notable ecological communities identified, but scallops relatively abundant. • Abundance of mobile epifauna including brittle stars, eleven armed starfish and several species of gastropods, with abundance increasing as the seabed profile shallows to 25m. • Small isolated biogenic clumps composed of hydroids, sponges, ascidians, bivalves, and red and green macro-algae occur in a scattered distribution at depths less than about 40m, becoming larger and more common at shallower depths inshore of the farm site. • Reef habitat 500m north of the site and more minor reef habitat along the shore.

6.5.1.1 Effects of Seabed Deposition

The potential site at Richmond Bay South has been assessed based on a scenario assuming a feed input of 6500 tonnes per year (which exceeds the level used in the water quality modelling) resulting in forecast deposition at levels up to ES5 in an area of 0.2ha in the close vicinity of the sea pens. The extent of the depositional footprint is shown in Figure 6-16. Deposition would be mainly focused directly beneath the sea pens and is predicted to move away from the farm in a west-south-west direction for approximately 900m. An area of approximately 26 hectares is forecast to be affected by the wider footprint within which deposition can be expected at a rate decreasing from 12-13kg m⁻²yr⁻¹ (ES5=13kg m⁻²yr⁻¹) closer to the sea pens to about 1kg m⁻²yr⁻¹ (ES3=1kg m⁻²yr⁻¹) at the edges of the footprint. The notable ecological features including patches of reef and cobble and kelp communities inshore of the site are beyond the predicted footprint of deposition and are unlikely to be affected directly.¹⁵¹ Because the feed level modelled for the depositional modelling exceeds the level used in the water quality modelling, a feed limit of 5000 tonnes per annum is proposed at this site for the purposes of public consultation.

¹⁵¹ NIWA (2016) Benthic Ecological Assessment for Proposed Salmon Farm Sites, p.33

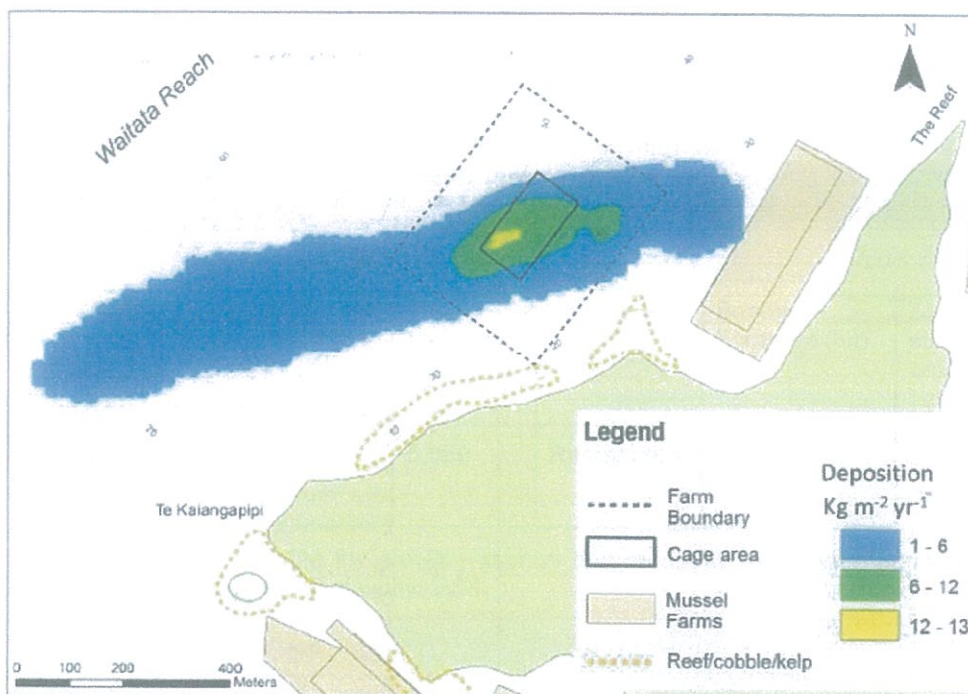


Figure 6-16: Depositional footprint at Richmond Bay at an annual feed discharge rate of 6500 tonnes

6.5.2 Landscape and Natural Character

6.5.2.1 Natural Character

A proposal consisting of a rectangular above-water steel structure with eight net pens, and a service barge moored as close as possible to the landform has been assessed to determine effects on landscape and natural character at the Richmond Bay South site. The site is located north of the headland between Richmond Bay and Horseshoe Bay, and between Te Kaiangapipi and the northern tip of The Reef, at the southeast end of Waitata Reach, Outer Pelorus Sound.

Methodology

A description of the method used to undertake the natural character assessments is contained in Section 6.2.2.1 of this report. For the potential Richmond Bay South relocation site:

- Level 1 is not identified in the analysis outlined in the Marlborough Natural Character Study
- Level 2 is defined as the whole of the Marlborough Sounds
- Level 3 is defined as the whole of Pelorus Sound
- Level 4 is not defined in the Marlborough Natural Character Study for the area where the potential Richmond Bay South relocation site is located
- Level 5 is not defined for any of the areas where the potential relocation sites are located, but can be considered to be the specific bay in which each site is located

The discussion below outlines the baseline evaluation, the effects that might occur on natural character and the significance of those effects at the different scales at which natural character is assessed.

Assessment

In terms of natural character the landform adjacent to the site is unmodified. There is regenerating indigenous scrub over much of the headland slopes, and although coverage is for the most part extensive, it is still in the fairly early stages. There is some modification of the coastal margin by mussel farming and there are no notable marine communities at the site. There is a simplicity and very high

The site is within the area used by the main Duffers Reef King Shag colony as a feeding and foraging ground.¹⁴⁹

A summary of the key effects at the potential Richmond Bay South site is presented in Table 6-11. A discussion of those effects is contained in the sections that follow.

Table 6-11: Richmond Bay South site summary

RICHMOND BAY						
Biophysical suitability for salmon farming						
Mean current (m/s) for (1) near-bottom & (2) mid-water	Temp (°C)	Depth (m)	Max feed discharge (T)	Cage type	Benthic Footprint (ha)	Surface structure area incl. barge (ha)
(1) 0.18 (2) 0.18	10.7-18.5	30-56	5,000	Rectangular	~22	0.933
<ul style="list-style-type: none"> The site is biophysically suitable for growing salmon and modelled to produce approximately 2,200T of annual salmon production within ES5. 						
Seafloor habitats and communities						
<ul style="list-style-type: none"> There are no particularly notable communities or taxa recorded on the muddy seabed in the immediate vicinity of this site. Scallops are relatively abundant. Reef features are located inshore of the farm, but should not be affected. 						
Landscape and natural character						
<ul style="list-style-type: none"> The landscape assessment undertaken states at a site specific scale the landscape and natural character are both High-Moderate, which would change to Moderate if a salmon farm was located at the site. The effects of this change are not considered to be significant. 						
King Shag						
<ul style="list-style-type: none"> The site is located within 12km of the main Duffers Reef King Shag colony and 4.5km from the satellite King Shag colony at Tawhitinui. While water depth at the site ranges from 30-56m, the majority of the sea pens would be located in depths of 40-56m, towards the deep end of the range of the preferred King Shag foraging depth. 						
Navigation						
<ul style="list-style-type: none"> The site is located on a natural navigational route for vessels heading to or coming from Ketu Bay headland to Pohuenui headland, but represents a low risk for vessel collision. 						
Noise and residential amenity						
<ul style="list-style-type: none"> No significant effects. 						
Key policy issues ¹⁵⁰						
<ul style="list-style-type: none"> Landscape and natural character. Indigenous biodiversity. Water quality. 						

¹⁴⁹ NIWA (2016) Update of Existing Seabird Report with Reference to Relocation of Existing Farms, p. 9

¹⁵⁰ Key policies in relation to cultural effects are identified in section 9 of this report.

ATTACHMENT FOR PARAGRAPH (3)

File Ref: U950285
Ask For: Mr Hessel



8 November 1995

<name>

<add1>

<add2>

<add3> As per attached list

<add4>

<attn>

Dear <greet>,

Application for Resource Consent pursuant to Section 88 of the Resource Management Act 1991 - Coastal Permit

APPLICANT: MARLBOROUGH MUSSEL COMPANY

LOCATION: RICHMOND BAY, PELORUS SOUND

At a meeting held on Tuesday 24 October 1995, the Council considered an application seeking resource consent for a coastal permit to occupy space in the coastal marine area and to disturb the seabed to extend existing Marine Farm Licence 143 by 3.98 hectares for the purpose of marine farming greenshell mussels (*Perna canaliculus*), blue mussels (*Mytilus galloprovincialis*), scallops (*Pecten novaezelandiae*) and oysters (*Tiostrea chilensis*), using standard longline techniques.

The site of the application is located along the eastern side of "The Reef", on the western shores of Richmond Bay, Pelorus Sound.

The Council's decision is as follows:

That pursuant to Section 105 of the Resource Management Act 1991 and having regard to the matters specified in Sections 104 and 105, consent to the application for resource consent, be **hereby declined.**

The grounds for the decision were as follows:

1. The Committee was of the opinion that the proposal had the potential for introducing more than minor adverse effects on the reef.
2. The Committee was concerned about the adverse cumulative effects of encouraging further applications in this Bay in which marine farming is designated as prohibited in the proposed Marlborough Sounds Resource Management Plan. They believed this matter to be significant as the Bay cannot be said to be compromised by marine farming at this stage.

3. The Committee was of the opinion that this extension would occupy the last portion of this reef which has recreational values. They considered that this proposal would have an adverse cumulative effect of further alienating public space to a level which would not provide for a harmonious balance of uses in the area.
4. For the reasons mentioned above, the Committee believed that the proposal was contrary to the intentions of the Marlborough Regional Policy Statement, and the proposed Marlborough Sounds Resource Management Plan.

Please note that the foregoing is the full text of the decision.

Your status as an applicant/person making a submission provides you with certain legal rights with regard to the Council's decision.

For your general guidance, Sections 120, 127 and 357 of the Resource Management Act 1991 provide rights with respect to:

1. Appeal. (S120)
2. Application for change or cancellation of consent conditions. (S127) (applicant(s) only).
3. Objection to certain decisions and requirements of consent authorities. (S357) (applicant(s) only).

Section 127 Involves making an application direct to the Council.

Section 357 Requires that an objection be lodged with the Council within 15 working days of your receipt of the Council's formal decision.

Section 120 Concerning appeal, requires that a "Notice of Appeal" be lodged with the Registrar of the Planning Tribunal and with the Council within 15 working days of your receipt (or receipt by the person who filed the application on your behalf) of the Council's formal decision.

The address of the Planning Tribunal is P.O. Box 5027, Lambton Quay, Wellington. An appeal must be lodged on Form 7 prescribed by the Resource Management (Forms) Regulations 1991 and must be accompanied by a filing fee of \$55.00 (GST inclusive) as specified in those Regulations under Part VI, Section 28, Sub-section (3). A copy of the above Regulations may be purchased from the Government Printing Office.

You should note that a resource consent lapses on the expiry of two years after the date of commencement of that consent, unless the consent is given effect to, or after the expiry of such shorter/longer period as is expressly provided for in the consent. Section 125 of the Resource Management Act 1991 details matters of consent time extension.

If you are intending to exercise your legal rights regarding the Council's decision and you are in any doubt as to how to proceed, it is strongly recommended that you consult with your Agent/Lawyer.

Yours faithfully

A P QUIRK
DISTRICT SECRETARY

PER:

WC10_01CSADMA10-12mm285.doc Saved 07/11/95 14:23

3.5. Pelorus Sound

The Pelorus Sound is a geographically complex area created by a network of drowned valleys with a main channel that extends from the Cook Strait for about 55km to the town of Havelock. There are a large number of inlets, bays, reaches and other sounds off this main channel. The area in the outer sound where the proposed farms are located is known as the Waitata Reach. Pelorus Sound is a gazetted pilotage area for vessels 500 gross tonnage or greater.

A number of natural hazards are present in the Sounds. These include, but are not limited to, logs and trees washed down from the Pelorus and Kaituna Rivers, a comparatively shallow entrance to Pelorus Sound which discourages approaches of very large vessels, submerged rocks and a navigationally complex environment due to the nature of the sound with its many reaches and bays.

3.5.1. Vessel Activity in Pelorus Sound

There are a number of marine and maritime stakeholders present in the Pelorus Sound area. These include:

- Aquaculture workboats and related activities
- Commercial fishing vessels
- Tour, cruise and water taxis who service the local residents and tourists
- Essential travel by local residents
- Recreational and pleasure vessels of local residents, tourists and those related to the local boating clubs or partaking in sailing, cruising, fishing, diving or other recreational pursuits.
- Logging vessels
- Cruise vessels

Vessel activity in Pelorus Sound as a whole, relative to other regions of New Zealand (hotspots including Auckland and Wellington), would be characterised as sparse with mainly itinerant vessel activity⁷. This activity is seasonal with the bulk occurring during the summer months, on public holidays, weekends and over the Christmas period when enjoying the water is part of New Zealand culture.

The more common commercial vessels tend to be well equipped but relatively small power vessels with professional skippers who have very good local knowledge and seamanship skills. The tour operators typically carry up to 40 persons; while the water taxis are limited to around 20 persons and the other operators typically 5.

While large cruise vessels regularly visit the Marlborough Sounds, berth at both Picton and Nelson, and can safely navigate much of the Sounds area, there is little reason for them to enter the Waitata Reach. Cruise ship activity in the vicinity of the farms in this area can therefore be taken as infrequent if not rare.

Recreational vessels represent a significant proportion of vessel volumes during the peak periods. These vessels are characterised as generally trailer boats up to approximately 5m with one or more engines greater than 90hp and invariably equipped with chart plotters. In

⁷ In this context 'itinerant vessels' are those not following a regular route.

the area where the proposed farms are, these vessels make up the bulk of all vessels. Such operations include fishing, diving, transportation to lodgings, general touring or transiting through Waitata Reach on route to other areas at high speeds. A few of these vessels transit from Havelock, but the majority enter the sounds from Elaine Bay or other road heads and transit through Allen Strait in Forsyth Bay. Havelock is the main source of vessels for the inner sounds (generally considered south of Tawero Point). Recreational craft typically carry up to 5 people. There is a wide range in levels of local knowledge and seamanship skills in the recreational sector. This is in line with other regions around the country. In general the level of skill and knowledge of local conditions and rules including the recognition of maritime signs is apparently typically poor.

Sailing boats make up a small proportion of vessels in the Waitata Reach. However due to the topography, travel under sail is quite difficult so motoring is the norm.

3.5.2. Natural Vessel Routes

Pelorus Sound does not have formally recognised navigational routes with regular users on well-defined or programmed paths, such as in Tory Channel with large ferries operating a formally defined path. Instead, itinerant recreational users and workboats servicing mussel farms on variable routes dominate activity in the area. Larger vessels will also be itinerant, with either logging vessels passaging to a particular bay for loading, or conceivably a larger cruise vessel potentially entering for a short sight seeing tour before heading back out.

Despite the lack of defined navigational routes and significantly less vessel activity than other areas of the Marlborough Sounds, there are commonalities in the way vessels transit through Pelorus Sound. Data from the Automatic Identification System (AIS) supplied by Maritime New Zealand (Appendix C) and discussions with local mariners helped to produce a natural transit route map to represent the natural routes taken by vessels in Pelorus Sound. This resulting map shown in Figure 9 and provides some guidance on the placement of all farms but especially the mid channel locations.

This map is based on the recognised mooring locations⁸, recommended anchorages⁹ transit routes from major locations outside Pelorus Sound and the view of local mariners following the principle of straight line point to point and normal chart or radar assisted navigation.

⁸ Marlborough Sounds District Council (2016). *Moorings*. Retrieved from maos.marlborough.govt.nz.

⁹ Murray, K. W. (2013). *New Zealand Cruising Guide - Central Area*.



THE UNDUE ADVERSE EFFECTS TEST ON FISHING

This information sheet provides information on the undue adverse effects test (UAE test) on fishing for proposed marine farming areas.

The Ministry assesses the effects of proposed marine farm areas on fishing through the undue adverse effects test (UAE test).

A proposed marine farm cannot proceed if it would have "undue" adverse effects on recreational or customary fishing, or commercial fishing for non-quota management system (QMS) stocks. And, unless an aquaculture agreement or compensation declaration is reached, a proposed marine farm cannot proceed if it would have "undue" adverse effects on commercial fishing for QMS stocks.

Fishing means the catching, taking or harvesting of fish, aquatic life, or seaweed.

MATTERS RELEVANT TO THE UAE TEST

- » The location of the proposed marine farm in relation to fishing areas.
- » The likely effect of the proposed marine farm on fishing, including the proportion of any fishery that would be affected.
- » The degree that the proposed marine farm would exclude fishing.
- » The extent that fishing for a species in the proposed marine farm area could occur in other areas.
- » The extent that occupation of the coastal marine area by the proposed marine farm would increase the cost of fishing.
- » The cumulative effect on fishing of any authorised aquaculture, including any structures authorised before the introduction of any relevant stock to the quota management system.

MATTERS NOT CONSIDERED IN THE UAE TEST

The Ministry can only consider the six matters listed above for the UAE test. The Ministry cannot consider general navigation issues that may affect both fishing and non fishing vessels. The Ministry cannot consider effects on the enjoyment of fishing or whether a marine farm would affect views while fishing. This means that the UAE test is limited to the effects on the practicalities of catching, taking and harvesting fish.

Marine farm effects that are outside the scope of the UAE test are considered under purpose and principles of the Resource Management Act 1991 when consent authorities process

coastal permit applications. Submissions about effects that are beyond the scope of the UAE test should be provided to the relevant consent authority when it is processing the coastal permit application for a marine farm.

THE AQUACULTURE DECISION

The decision from the UAE test is called an aquaculture decision. Aquaculture decisions are one of, or a combination of, the following:

- » A determination (a green light) – if effects on fishing are not undue.
- » A reservation (a red light) – if effects on recreational or customary fishing or commercial fishing for a non-QMS species are undue.
- » A reservation (an amber light) – if effects on commercial fishing for QMS stocks are undue.
 - A reservation because of effects on commercial fishing means an aquaculture agreement or compensation declaration is needed before the area with a reservation can be developed.

FEES

As of 1 October 2011, the fee for an aquaculture decision is \$2008.20. The fee covers 15 hours of the Ministry's work associated with the coastal permit application. If the work takes more than 15 hours, the additional work is charged at the hourly rate of \$133.88. If the work takes less than 15 hours, the Ministry discounts the fee for time covered by the fee but not used.

FOR MORE INFORMATION ON THE UAE TEST

See the aquaculture decision provisions in the Fisheries Act 1996, the Aquaculture pages on the Ministry for Primary Industries website (www.mpi.govt.nz) or contact the Ministry's Spatial Allocations Team (email UAE@mpi.govt.nz or phone 03 548 1069).

This document is intended to give general technical guidance on aspects of marine-based aquaculture under the 2011 aquaculture legislative reforms. It is not legal advice. For legal advice on any aspect of the legislation you should consult your lawyer.

The general disclaimer on the Ministry for Primary Industries website also applies to this document and should be read in conjunction with it.

LETTER TO

NZLS Written Comments No: 0236 2014

MARLBOROUGH DISTRICT COUNCIL
PO BOX 443
BLENHEIM 7240
NEW ZEALAND

TELEPHONE (0664) 3 520 7400
FACSIMILE (0664) 3 520 7496
EMAIL mdc@marlborough.govt.nz
WEB www.marlborough.govt.nz



**MARLBOROUGH
DISTRICT COUNCIL**

10 September 2014

The NZ King Salmon Company Ltd (NSN)
PO Box 1180
Nelson 7040

Record No: 14190859
File Ref: H100-004-003-14
U060533, MFL048
Ask For: Alex Moore

COPY

Dear Sir/Madam

Marine Farm – Site 8513 (Crail Bay)

Council undertook an audit of marine farms in Crail Bay on 4 April 2014 and observed that structures in relation to the above resource consent were not in place. Please advise when these structures will be installed.

It is a condition of your resource consent that your farm is correctly marked and lit, as per the lighting plan issued by the Harbour Master. It is also a requirement under Council's Navigation Bylaws that you must maintain the general state of your farm so that it is not a hazard to navigation. It was noted that the orange buoys which were installed did not have appropriate lighting which is considered a hazard to navigation.

The issue with lighting requires your immediate attention. Please remedy within one month of this notice and notify the Harbourmaster upon completion.

Yours sincerely

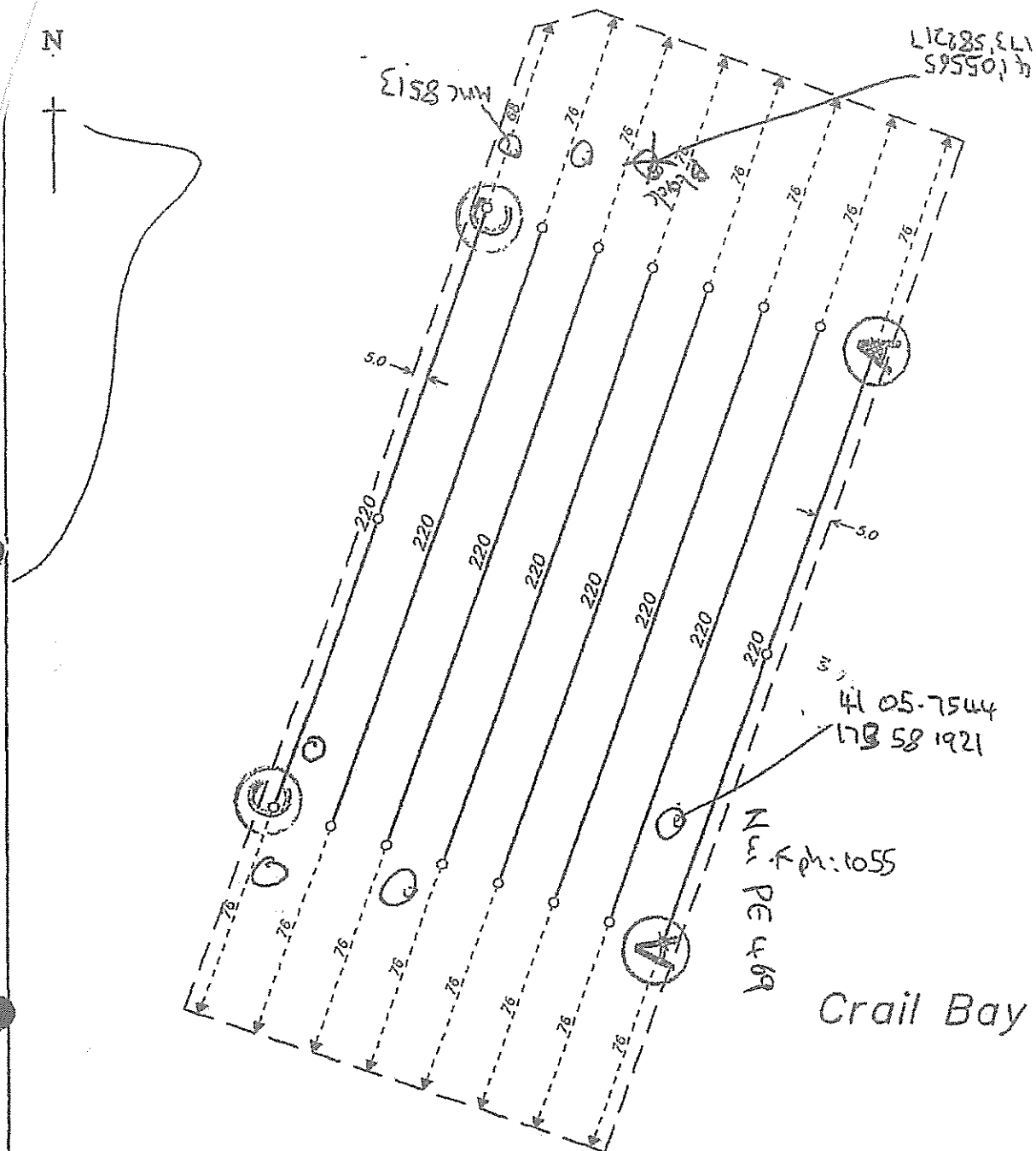
**CAPT. A. VAN WIJNGAARDEN
HARBOUR MASTER**

Written Comments No: 0236
 The NZ King Salmon Company
 Limited (NZK)
 PO Box 1130
 Nelson 7040

MARINE FARM AUDIT FIELD SHEET

Site No: 8513	Bay: Crail	Date: 4/11/14	Time: 1326	
Related Permit/Consents: MFL 048, 4060533				
Audit Team: amc cwh gr.				
Consent Holder/Contact Details: NZ King Salmon				
	Required	Fitted	Operational	Action / Comment
Lights	2	0	0	Urgent action
Radar Reflectors	2	0	0	" "
Reflective Tape	4	0	0	" "
Long-lines Cages	Lines 6? # Consented 9	0	0	11 OR. only 5th 1 Plastic 2 OR. 11th
Identification	4	2	1	Urgent action
Orange Buoys	14?	4	4	

Additional Comments: 4 orange buoys



Layout Details

MFL 048 & U960385 (Site 8513)

Marlborough Mussel Co Ltd

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Bulfield-Johnston-5141

From: Sue Bulfield-Johnston-5141
Sent: Wednesday, 16 April 2014 11:15 a.m.
To: Bruno Brosnan-5050
Subject: RE: Emailing: img-416103757.pdf

Hi Bruno

As discussed can you follow up on the status of U060533. Also there are buoys in the water which you said were placed to indicate the boundaries of the proposed farm (for site visit during the hearing?) these need either to be removed or illuminated.

Cheers

Sue

From: Bruno Brosnan-5050
Sent: Wednesday, 16 April 2014 10:46 a.m.
To: Sue Bulfield-Johnston-5141
Subject: RE: Emailing: img-416103757.pdf

I believe Milligan granted it as a variation to the existing consent.

-----Original Message-----

From: Sue Bulfield-Johnston-5141
Sent: Wednesday, 16 April 2014 10:44 a.m.
To: Bruno Brosnan-5050
Subject: FW: Emailing: img-416103757.pdf
Importance: High

Can you tell me what will happen to U060533 and MFL 048 now that a new consent has been granted over the same coastal space. Is the replacement consent U130781 - if so there is no condition requiring the surrender of U060533.

-----Original Message-----

From: Sue Bulfield-Johnston-5141
Sent: Wednesday, 16 April 2014 10:33 a.m.
To: Bruno Brosnan-5050
Subject: Emailing: img-416103757.pdf

Your message is ready to be sent with the following file or link attachments:

img-416103757.pdf

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

COPY

**Marine Farm Lighting and Marking Plan –
MFL048, U060533 (Site no.8513)**



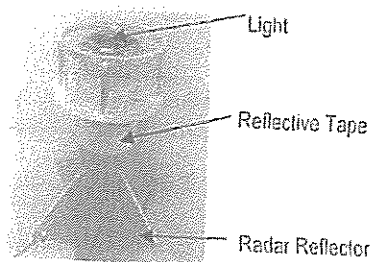
I, Alexander van Wijngaarden, Harbourmaster of Marlborough District Council, hereby approve, under Maritime Delegation from the Director of Maritime New Zealand pursuant to Sections 200, 444(2) and 444(4) of the Maritime Transport Act 1994, the lighting and marking associated with coastal permit MFL048, U060533 (Site no.8513), located in Crail Bay, central Pelorus as follows.

1. That each end of each longline display an orange buoy, as shall the middle of each of the seawardmost and landwardmost longlines.
2. That a yellow light, radar reflector and a band of reflective tape 50 millimetres in width be displayed in the positions marked 'A' on the attached structures plan. The lights shall be solar powered and shall have the following characteristics:

Flash: Flashing (5) every 20 seconds. Length of flashes no less than 1 second. Interval between flashes, no less than 1 second.

Range: At least 1 nautical mile.

Height: Greater than 1.0 metre above the surface of the water.



3. That radar reflectors and a band of reflective tape 50 millimetres in width be displayed in the positions marked 'B' on the attached structures plan.
4. That a band of reflective tape 50 millimetres in width be displayed in the positions marked 'C' on the attached structures plan.

Given under my hand this 5th day of MAY

2008

ALEXANDER VAN WIJNGAARDEN

Subject	SALMON FARM RELOCATION SUBMISSION
From	[REDACTED]
To	aquaculture submissions
Sent	Wednesday, 15 March 2017 8:25 a.m.
Attachments	<<Cristian Roman submission.docx>>

Hi all,

Please see attached my submission which is self explanatory.

Thanks and regards

Cristian Roman, *Tentburn Hatchery Manager*

 New Zealand King Salmon



ŌRA KING™

Written Comments No: 0208

Salmon Farm Relocation

Ministry for Primary Industries

Private Bag 14

Port Nelson

aquaculture.submissions@mpi.govt.nz

To: The Salmon Relocation Advisory Panel

My name is Cristian Roman, manager of our biggest smolt production hatchery in NZ called Tentburn which is located 45km south of Christchurch. I have more than 15 years' experience in fish farming, mainly salmon farming in Chile, a country who produces more than 500k tons of farmed salmon and employed more than 70 thousands direct and indirect jobs.

I come from Chile, where even with these wonderful numbers we made a lot of mistakes in terms of fish production and environmental aspects. Where nobody was worried about a long term plan, overloading marine consents because there were no restrictions about it. And now, for the last 10 years, Chile has suffered the consequences of not taking the control 20 years ago.

That is why I support the potential salmon relocation process being proposed by MPI because I believe the salmon farm relocation will provide for better environmental, social and economic outcomes. Working for this amazing on-growing industry I don't want to do same mistakes that a country did 20 years ago.

I understand that by relocating farms from lower water flow sites to higher water flows sites fish performance will improve and therefore the health of the salmon. It will also have a lower level of effect on the seabed which will have positive environmental benefits.

Environmentally, adopting the Best Management Practice guidelines that were agreed by the Council and community is the future for aquaculture globally.

There will be more direct and indirect jobs created if this proposal goes ahead resulting in economic improvements for the communities in the top of the south.

Moving some farms away from baches to more remote locations will improve social amenities which is also a good thing especially from a navigation viewpoint.

I'd be happy to discuss further in case hearings panel wants to.

Written Comments No: 0140

Subject	Salmon farm relocations
From	Philip Rose
To	aquaculture submissions
Sent	Tuesday, 28 February 2017 5:50 p.m.

To whom it may concern

I would like to offer my support for the relocation of up to six salmon farms in the Marlborough sounds. I have worked for New Zealand king salmon for 26 years and have found them great to work for. Their desire to focus on a quality product rather than quantity and always looking at ways to provide the best conditions for growing salmon and growing the business in a sustainable manner. I do not wish to be heard at any hearing but once again offer my support.

Regards

Phillip Rose

[REDACTED]
[REDACTED]

Subject	Marlborough Salmon Relocation
From	[REDACTED]
To	aquaculture submissions
Sent	Monday, 6 March 2017 9:52 p.m.

I am fully in support of the relocation plan of up to 6 salmon farms.

The benefits to both the environmental footprint for the Marlborough Sounds and the economy for the top of the south island should be fully encouraged.

Salmon farming has proven itself to be a high value industry with relatively low impact on the environment. New Zealand needs to ensure the future of its salmon industry that has already outperformed many other countries in successful farming of the superior King Salmon species.

The vision to create more jobs and growth in the local area has a far reaching effect that will follow through to many other industries that supply materials, services, equipment and transport. Most of the new sites are further away from bays and holiday homes and therefore is net positive for those local communities.

The MPI relocation initiative will cement New Zealand as a quality producer of premium salmon on the world stage and should go ahead in its entirety.

Julie Rosewarne

[REDACTED]

Sent from [Mail](#) for Windows 10

Written Comment No: 0386

Subject	Final submission from Grant Rosewarne - please use this version
From	[REDACTED]
To	aquaculture.submissions@mpi.govt.nz
Sent	Monday, 27 March 2017 5:22 PM
Attachments	<<Submission by Grant Rosewarne .doc>>

Kind regards,

Grant

Grant Rosewarne, CEO and Managing Director

[REDACTED] www.kingsalmon.co.nz



MPI Potential Relocation of Salmon Farms in Marlborough Sounds

A Win:Win for All Stakeholders

Private submission from Grant Rosewarne
(CEO New Zealand King Salmon)

I am in SUPPORT of the MPI proposal to relocate 9 surface hectares of low-flow salmon farming space (six existing farm sites) to 9 surface hectares of high-flow space. If the MPI proposal goes ahead, the environment will be improved and there will be better social and economic outcomes.

I grew up on a wheat and barley farm and my parents still live there. As well as our cereal crops we maintained some livestock to put food on the table - we had a cow and a bull, about 100 chickens and 30 to 40 sheep. Though there were always issues, as farmers, we enjoyed a high level of public support for what we were doing. This is typically the case of terrestrial farmers because we have been doing it for thousands of years, people have to have to eat and farming is well understood and accepted. When I joined New Zealand King Salmon as CEO in 2009 I was aware of the very positive metrics of the industry and assumed community support would be even higher. Aquaculture can make strong claims about helping to take pressure off the wild fishery. However, it soon became apparent to me that there was some unjustified prejudice against salmon farms and much of the negativity originated from British Columbia in Canada. British Columbia is blessed with all of the Pacific species as native fauna and a large wild salmon fishery. The wild fishery has always seen farmed salmon as an environmental and competitive threat and historically has put quite some unflattering stories about the industry into the public domain. Furthermore, well-to-do anglers and environmentalists also see salmon farming as a threat and have often done their best to curtail the farmed industry. A further issue is that aquaculture in New Zealand does not have anywhere near the same property rights as terrestrial farmers and this sets the industry up for a number of conflicts.

What You, the Panel, Are Likely to Hear

I have sat in many hearings like the one the Panel is about to undergo and have sometimes observed submitter after submitter giving evidence saying things which are false or are an exaggeration. Often what is said is from fear or ignorance and at other times it is wilful misrepresentation. Sometimes submitters have worked on the philosophy that if it is said often enough, and emotionally enough, then it must be true or at least some of the "mud will stick". Therefore, I'd like to give you the facts, as I see them, on what you are likely to hear.

We Can Go Onshore

Ours is an anadromous species spending the first and last part of its life-cycle in freshwater with the major growth phase occurring in the sea. Generally, when it comes to animal husbandry, a farmer will obtain the best result by replicating what happens in nature as closely as possible. That's certainly our philosophy. I have often seen claims that the salmon industry would be more

Written Comment No: 0386

environmentally friendly if it all moved on land, usually into large, contained recirculation facilities. Nothing could be further from the truth. Technically it might be possible to have a dairy farm in the sea or in the middle of the outback of Australia, however the resources required to make such an ill-sited farm work would be enormous. So too with the grow out phase of salmon farming, and excessive use of resources damages the environment.

I have visited numerous land-based facilities, the most recent ones being in Iceland, which were quoted during the Environmental Protection Agency (EPA) process as role models we should follow. I have to tell you I was dismayed by what I saw. What tends to happen with full grow out land-based facilities is that because they use massive amounts of energy to oxygenate and move water around they have large capital and operating costs. This inevitably sends them bankrupt, whereby a large part of the capital is written off and a new owner comes in. Generally the cycle is repeated two or three times until there is no equity left in the business and it manages to limp along on a marginal cost basis with no hope of the infrastructure ever being replaced at the end of its useful life. This is exactly what I saw in Iceland and it demonstrates what can happen when good intentions get out of step with proper husbandry and ill-considered use of resources.

The panel should keep in mind that New Zealand King Salmon operates three hatcheries which to all intents and purposes are land-based facilities. We have a good understanding of the capital and operating expenses involved and the best outcome for our fish, and for the environment. The ideal outcome is for them to go to sea as soon as nature intends (generally in the range of 70g to 200g). Other producers might make different choices based on their own situation.

We Can Go Offshore (Open Ocean)

If you listen to claims made by some you might gain the impression that there are already many truly offshore salmon farms in operation today. This is not true. I have visited many farms which have themselves claimed to be offshore or others have made the claim on their behalf. When I get to the 'offshore site' there is generally quite a big island providing shelter from the direction that most of the storms come from. There might be quite a long fetch in another direction that doesn't have severe storms and this is often used to justify that the farm is 'offshore', when it's not. A good question to ask someone who makes the claim about offshore farming is whether they have visited one of these farms and checked for themselves whether it is truly offshore or not.

There is certainly a lot of experimentation going on with offshore farming systems and two dominant models seem to be emerging. One is extremely strong infrastructure similar to what the oil industry uses in its offshore applications or flexible structures that can be submerged below the level of storms. Regarding the first, not even the oil industry can afford its own infrastructure these days so I doubt whether the salmon industry will be able to do so. Regarding the latter, my view is that this technology will ultimately be successful in about 10 years time and then King Salmon will gladly go offshore.

It should be noted that we can never do this entirely because we need to harvest five days a week every week of the year. If there is a storm raging out in the Cook Strait there is no way that fish can be harvested and it might be a week or more until this is possible, so we will always need a mix of sheltered and offshore facilities to allow consistent harvesting. Costs will generally be high offshore because of the expensive infrastructure required and the higher cost of harvesting, feeding and net cleaning. It should be noted that the King salmon species has a swim bladder that requires access to air to adjust its buoyancy in water unlike most other fish species. Farms cannot be permanently submerged for this and other reasons in water. Farms cannot be permanently submerged for this and other reasons.

We Cause Pollution

There is of course truth to this statement. Most of the things that humans do have an impact on

Written Comment No: 0386

the environment. For example, even the Panel hearings are predicated on prior environmental impacts and also have a current environmental cost. For this series of meetings to occur native vegetation had to be cleared, buildings had to be constructed, infrastructure provided to enable people to attend and I'm reasonably certain most of us will use fossil fuels to transport ourselves.

If we are to be good stewards we must choose options that minimise our impact and as far as animal protein production goes, it's hard to beat salmon farming. The Company's submission has quite a bit of detail on this point so I won't go into it again here, but suffice to say that salmon farming has a very low use of feed compared to meat output, uses a relatively small amount of space and has an environmental footprint which is physically small. This is why aquaculture is increasingly winning the support of eNGOs such as WWF and Bellona – again please see the Company's submission.

It should be noted that so-called water pollution downstream from a salmon farm can be safely drunk, were it not for the salt. In fact, having spent some time on the salmon farms around Twizel I have seen campers do exactly this.

Heavy Metals on the Seafloor

People certainly like to use emotive terms to make their point. Although it's technically correct that zinc and copper can be referred to as heavy metals I think it's misleading to do so within the aquaculture context. Zinc and copper are present in multi-vitamin capsules and nobody says they are contaminated with heavy metals, or when they are excreted by people, that they are contaminating the environment with heavy metals. We previously used copper on our predator nets to prevent biofouling; however we have discontinued this and now use in-water net cleaners. So, if the copper ever was an issue it is not going to be going forward. Regarding zinc, this is required in trace amounts in our fish feed and for many living animals for their health. It's a trace nutrient element and that's why it is present in multi-vitamin capsules. When looking at trace elements such as copper and zinc the actual ideal scenario is to have them present in the environment in trace amounts.

Heavy Metals / PCBs / Dioxins etc

We have test results which prove that our fish are free of contaminants¹ such as heavy metals, PCBs and dioxins. New Zealand is made up of volcanic islands and it might surprise the Panel to realise that this inevitably means heavy metals (the 'real ones' like mercury and cadmium) are found in wild fish. This is not at levels which are unsafe to eat but are certainly much higher than farmed salmon which is zero (or virtually zero). Our salmon are in a controlled environment so we can specify feed quality levels. Any inference that our farm salmon is not nutritious is wrong. I am happy to provide testing results and documentation to the Panel.

Disease

All animal populations suffer from disease, including humans. New Zealand was quite fortunate when salmon was brought here because none of the serious salmon diseases from their natural range were accidentally imported with them. Therefore, our industry has had a relatively easy time as far as disease goes.

New Zealand King Salmon has had some mortality events but we don't believe these are related to a primary pathogen, rather they are a convergence of issues such as feed that's not entirely suitable for our species, high temperature and low oxygen (low-flow sites). When enough factors converge then secondary pathogens, generally present in the environment, will opportunistically

¹ Please note that as testing methodologies have become increasingly sophisticated, down to the parts per billion, at some point most chemicals will be detected but this is not contamination.

Written Comment No: 0386

take advantage of the weakened animal. Despite people saying that if salmon start dying from disease this will lead to a broader ecological disaster there are no ongoing environmental issues arising from prior mortality events

The Panel should note that New Zealand King Salmon is able to withstand biological events that might bankrupt other salmon companies because of the high value associated with our brands and value added products.

Antibiotics

The salmon industry is often unfairly portrayed as one that is irresponsible with the use of antibiotics. With one exception, the complete opposite is true. The biggest producer, Norway, has not used any significant amount antibiotics for almost 30 years. What they do use is for the sake of fish welfare and it's a fraction of what our dairy, lamb and beef industry (responsibly) use. I have personally seen some use of antibiotics in Chile which is inappropriate in my opinion. Of all the New Zealand animal production industries, I think salmon, oysters, mussels and wild caught fish are the only ones that don't use any antibiotics.

Artificial Colour

This is an old chestnut and is used to vilify the salmon industry. Salmon have an amazing ability to store carotenoids in their flesh. They store an array of carotenoids but the primary one is astaxanthin. Astaxanthin is one of the most powerful antioxidants known and has many health properties. Benefits for the salmon include protecting them against oxidative stress during their exhaustive run up freshwater rivers and to protect their eggs from oxidation. Salmon lay their eggs in highly oxygenated freshwater streams and without the protection of astaxanthin the fertility of the salmon can decrease significantly.

As the Panel is aware, carotenoids tend to be the colour of carrots. Both wild and farm salmon are orange/red coloured because they eat astaxanthin and store it in their flesh. In the wild the astaxanthin comes originally from algae and is passing along the food chain. In the farming situation it is manufactured by a pharmaceutical company.

If white fish such as snapper eat astaxanthin they stay completely white because they do not have receptors present in their flesh to absorb carotenoids. By the way, some people claim that salmon would be grey without astaxanthin. This is not true, salmon that have a genetic defect and cannot absorb astaxanthin are a pearly white (I can provide a photo if the Panel would like to see it).

Omega-6 to Omega-3 Ratio

The ideal ratio of omega-6 to omega-3 is arguably one-to-one and a ratio of 3:1 is considered acceptable. Unfortunately, the human diet is more like 15:1 with our intake of omega-6 oil being far too high because of the prevalence of seed crops such as soybean, corn, sunflower and to a lesser extent canola. Closely related omega-3 and omega-6 fatty acids act as competing substrates for the same enzymes in the human body and this explains the importance of the proportion of omega-6 to omega-3 fatty acids in the diet.

The omega-6 converts through to inflammatory prostaglandins and omega-3 through to anti-inflammatory prostaglandins. An 'over-the-top' inflammatory response in the human body can lead to problems such as arthritis, some cancers, diabetes, psoriasis, lupus and coronary heart disease etc - all the diseases where the body starts to attack itself. Our salmon happens to have the ideal ratio for humans at one-to-one, so it is somewhat galling when people are critical given that there is virtually no other food in the diet that is going to have a more positive effect.

Whitefish has an extremely good ratio with omega-3 in ahead of omega-6 but there is not much oil present in any case (1%).

Benthos

When I attend salmon conferences overseas the state of the benthos is certainly not a major consideration either by farmers or eNGOs. There are much more pressing needs such as the presence of sea lice, various diseases, and escapes. It's only in New Zealand, and belatedly in the other salmon producing regions that the benthos has been a concern. The reason for this is the other problems are perceived to be extremely serious and the benthic impact of salmon farming is considered to be well understood and quite moderate. It is true that there is a level of enrichment that is disbursed as a result of a salmon farm however if the farm is managed to the Best Management Practice guidelines (BMP) then the benthos will be assimilative, not cumulative, and the natural processes undertaken by worms and micro-organisms will break down salmon organic matter for a good environmental outcome. It should be noted that there are often very sought-after species in greater abundance around a salmon farm, such as paua around Clay Point, so the effect of the localised enrichment is not always perceived to be negative.

Escapes

The escape of fish that have been bred by aquaculture into the natural environment where native salmon exist is considered to be quite a serious offence in regions that have native salmon. I've never seen any data that supports the fact that the farm genetics causes a problem with the wild fish, however, this is the concern. All of the salmon in New Zealand are an introduced species, salmon have been released to the wild beginning back in the late 1800s therefore escapes are therefore not an issue in New Zealand.

Algae Blooms

Algae are the grass of the sea and algal blooms are a natural part of the environment as indeed are toxic algal blooms. A toxic algal bloom is merely where the species of algae has a detrimental effect on shellfish and/or finfish. They've been around long before industrialisation and nobody has ever linked an algal bloom to New Zealand King Salmon's operations.

Land, Cow and Sewage Analogies

Our opponents use all sorts of analogies often comparing us to dairy farms or human sewage from major cities trying to create an alarmist situation. The sea is very adept at assimilating the organic waste from fish – the comparison with cows and human is not appropriate.

When people talk about so-called pollution, many readers are probably thinking of a land farming situation. Farming salmon is completely different to terrestrial farming; for example, as mentioned the water from a salmon farm can be safely drunk were it not for the salt. MPI's proposal to relocate low-flow salmon farms is conditional on there being an improved environmental outcome at high-flow sites.

The "Cliff" and Nitrogen

One of the criticisms sometimes put forward of New Zealand King Salmon's farming is that there is some sort of environmental limit or cliff and if we go past this there will be a major irreversible calamity. First, independent scientific research providers undertake nitrogen modelling to avoid this very scenario. Second, we are talking about two separate water bodies being the Tory Channel and the Pelorus Sound, each with its own carrying capacity. Third, the scale as proposed in the Pelorus is not dramatically different to what has previously been achieved in the Queen Charlotte and fourth, if a serious issue did arise (and we commit that this will not happen), as mentioned earlier the marine environment is extremely dynamic and quick recovering.

Often people think the relatively well publicised effects of nitrogen in freshwater or seawater

Written Comment No: 0386

embayments (typically low- flow) applies in an oceanic situation but the latter is quite different. The Nitrogen Cycle operates in the seawater environment which is generally quite different to freshwater. Anoxia (low oxygen) is quite common in muddy ocean bottoms where there are both high amounts of organic matter and low inflows of oxygenated water over the sediment. Denitrification occurs in this anoxic environment. Anaerobic bacteria convert organic nitrogen present into an inert gas (N₂) that harmlessly goes into the atmosphere, which is then fixed into the land, which then flows down freshwater to the sea etc, and the cycle has been going on for thousands of years and indeed life as we know it in the sea is estimated to stop in about 2000 years if this cycle was to stop. So, when it comes to the marine environment, the nitrogen cycle is the ultimate solution rather than dilution.

We Don't Know What We Don't Know

By definition this statement is always true. In the New Zealand King Salmon aquaculture context this claim is normally applied to nitrogen modelling or the King Shag. New Zealand King Salmon has operated very successfully for 30 years so we are not an unknown quantity. The population of King Shags appears to have been relatively stable for a large number of years.

Uneaten Feed

Given that salmon feed is by far our largest company cost we are quite particular about not wasting it. In the normal situation, which has to be over 99% of the time, we virtually waste no feed. We cut off feeding into the water if pellets start making it down to our cameras at 5m and they still have up to another 30m to run at that point, so they are eaten even if we are cutting off supply because satiation is beginning to occur.

There are certain situations where we are feeding in a temporary environment, such as when towing fish, where a makeshift operation might not be as good as what is normally applied, but every time we have an issue we make further improvements to reduce the likelihood of any waste feed. Furthermore, we now have remotely operated submarine vehicles and regularly check there are no uneaten pellets on the seafloor.

Farmed Salmon Eat More Marine Protein and Oil Than They Produce

Sometimes people erroneously say that our fish consume 10 or 20 times more oil and protein than they produce. This is of course the natural situation with a wild salmon having eaten about 20 times its body weight in fish by the time it spawns. In the farming situation, they don't need as much feed because the whole system is more efficient and we have also substituted with plant and land animal-based proteins. For many years we have been net producers of marine fish protein and fish oil. However, recently we have tried to improve our feed by including more fish meal so temporality this is only true of the marine oil.

Smelly

Although it is not generally the case that our farms smell I have certainly been on them when this is the case. In the past, this tended to be when there was a particular issue such as damaged equipment or a larger than normal number of mortalities. There certainly are ways of completely controlling the smell situation and like every company we continue to work on our culture so that people do the right thing, as well as provide prompt maintenance and good systems. So, in short salmon farms should not smell. Our next generation of farms will be equipped with an ensilaging system which eliminates odours.

Automation

Given that we are an experienced salmon company, I'm amazed at the number of people who seem to know better than us what we can automate. Supposedly we are going to be able to automate and decrease our numbers despite a substantial growth in output!

As a result of our new EPA farms coming on line, we can double our volume over time with a projected increase of about 150 people. That's a 100% increase in output with only a 33% increase in personnel. I think we have allowed for a fair degree of automation. The fact is our species requires more labour than Atlantic salmon. We are very confident of our employment numbers, which are roughly in line with those of PwC, that we will end up with about 900 people if the relation goes ahead with them being roughly evenly split between Nelson and Marlborough and with about 100 people spread around the rest of the New Zealand and the world.

NZKS Unprofitable

New Zealand King Salmon is now a publicly listed company and has been thoroughly analysed by some of the most sophisticated institutional and private investors in New Zealand and around the world. The company is on track to achieve its Prospective Financial Information which was disclosed prior to listing.

We do not deny that some years have been more difficult than others, mainly related to having to invest so much in the EPA process, the delay in obtaining new high-flow sites and having to remain on low flow sites for longer than we had expected. In my opinion, if we had attained the new EPA farms within nine months as per the legislation, and if there was no appeal, many of the Company's problems around mortalities and growth issues would probably not have occurred.

The evidence for this is our current very good biological performance because a lower percentage of our fish are coming from low flow sites (and we also believe our feed has improved). For clarity, having three new high-flow farms has delayed and reduced the use of low flow sites which have been able to be followed whilst our volume increases.

Having anticipated what our opponents might say, I would now like to turn my attention to some of the positive points of MPI's proposed relocation.

Environment

On high-flow sites New Zealand King Salmon can farm to the Best Management Practice guidelines. These were developed in consultation with local and international experts, the Marlborough District Council, New Zealand King Salmon and local community groups. On a low-flow site we achieve a good environmental outcome relative to broad acre land animal farming, but on high-flow farms we can achieve a stunningly good outcome - using the Best Management Practice guidelines we can operate to a world-class environmental standard. Everyone wants this!

It's a fact that most of the Marlborough Sounds is soft fine sediment not dissimilar to what you see around Havelock. Low-flow farm sites were essentially a common mud flat before we started farming them; admittedly they are a smellier mud flat while we are there, and they will revert to an ordinary mud flat after we go. Although we have supported research into remediation, as yet there is no evidence that any intervention in the natural restorative process will lead to an outcome which is superior to nature taking its course. Within a couple of years a low flow site will look very similar to what it was before and within 10 years it will be back to its normal state. This reversion to a natural state is much faster than any land farming method. High-flow farm sites, which will be farmed to Best Management Practice guidelines, are impacted to a far lesser degree and will revert to their normal state much more quickly than a low flow site.

Social Outcomes

Low flow sites were allocated to New Zealand King Salmon up to 30 years ago before the optimum conditions for our species were known and before the technology existed to utilise high-flow sites. The King salmon species requires deep, high-flow, and cooler water conditions. Fortunately, high-flow sites, by their very nature, tend to be further away from holiday homes, recreational areas and people. For example, our existing farm in Waihinau Bay, where there are numerous homes, could be moved a couple of kilometres out into the Waitata Reach where there are none.

Economic Outcomes

NZ King Salmon already employs approximately 450 people in total including about 100 in Marlborough and 300 in Nelson and we are adding more each month because of 3 newly established farms (150 due to be added because of these). The company projects that, over time, the relocation of the low flow farms will generate an additional 300 jobs at New Zealand King Salmon. This will equate to about 400 in Marlborough, 400 in Nelson and 100 spread around NZ and in our various markets. MPI's modelling estimates 511 jobs from the relocated farms and this includes jobs created outside of New Zealand King Salmon such as suppliers etc. That's a lot of families enjoying a Top of the South lifestyle and all achieved while reducing the environmental impact of New Zealand King Salmon's farms!

Health of New Zealand

New Zealand King Salmon has typically focused on the taste properties of its fish under its brands such as Ōra King, Regal and Southern Ocean. We've always been aware, like most people, of the general health benefits of long chain marine omega-3 oils, however, it's only since the company launched into pet food, with the Omega Plus brand focused on health, that the company has seriously delved into the amazing health benefits of salmon in detail. For this reason the submissions from other members of the company might cover health benefits in less detail.

New Zealanders really only eat one oily fish in any significant amount: salmon². Via our breeding program we at NZKS target 26% +/- 2% oil content in the fillets of our salmon because this is what is preferred by chefs. With such high oil content, we have a very high level of long chain marine omega-3 at 2700 mg per hundred grams of flesh. Typically the dominant species grown internationally, Atlantic salmon, is closer to 1000 mg /100g or in some cases up to 1500mg. There are also short-chain plant based omega-3's present in the human diet but they do not have the same health properties as the long chain marine variety and the human body is not good at converting them through to long chain. Most white fish that Kiwis consume, such as Snapper and Hoki, have a fat content of around 1% which means they don't make much of a contribution to long chain omega-3's (EPA and DHA) unless you eat an awful lot. Therefore, Salmon makes a disproportionate contribution to the health and welfare of all New Zealanders and during the EPA process we pointed this out saying that long chain omega-3 content was already woefully low and would get lower if we could not produce more volume and Atlantic salmon flooded into the country. That's exactly what has happened.

Health Benefits of Oily Fish

Omega-3 oils have been linked to higher levels of high density lipoprotein (HDL) and lower levels of triglycerides in the blood and both of these have a positive benefit on cholesterol in the human

² Oily fish have oil in their tissues and in the belly cavity around the gut. Their fillets contain up to 30% oil, although this figure varies both within and between species. Examples include small forage fish, such as sardines, herring and anchovies, and other larger pelagic fish, such as salmon, trout, tuna and mackerel. Please note that only the belly region of tuna is oily and this is not generally consumed in New Zealand.

circulatory system. Cholesterol is mainly produced by the liver. It is involved in strengthening cell walls and in hormone production. Low density lipoproteins (LDL) carry the cholesterol to the cells, while HDL takes the excess cholesterol back to the liver for recycling or removal.

Cardiovascular Disease

Consuming salmon can help to protect against cardiovascular disease, according to the American Heart Association. A study published by the American Physiological Society suggests that fatty fish oils can protect the heart during times of mental stress.

Rheumatoid Arthritis

A study published in *Annals of the Rheumatic Diseases* linked an average daily intake of at least 0.21 grams a day of omega-3 with a 52% lower risk of developing rheumatoid arthritis. Other research suggests that omega-3 fatty acids might protect against the future development of rheumatoid arthritis.

Dementia

Fish oil may offer protection from dementia. Brain cells that were exposed to a mix of fish oil and alcohol had 95% less neuro-inflammation and neuronal death compared with brain cells that were only exposed to alcohol.

Mouth and Skin Cancers

Oily fish consumption may protect from early, and late-stage oral and skin cancers. Omega-3 fatty acid has been found to target and selectively inhibit the growth of malignant and pre-malignant cells at doses that do not affect normal cells.

Sensory, Cognitive and Motor Development

Consuming salmon during the last months of pregnancy can have positive effects on a child's sensory, cognitive, and motor development, research suggests. Eating salmon during pregnancy can benefit children.

Asthma

The children of women who regularly consumed salmon during pregnancy may be less likely to show signs of asthma at the age of two and a half years.

Protecting Vision and Memory

DHA can protect against vision loss. Scientists have identified a link between oily fish consumption and a lower risk of vision loss in older people. A study published in PLOS One indicates that eating oily fish may improve working memory.

Breast Cancer

One meta-analysis of nearly 900,000 women has linked a higher consumption of oily fish with a lower risk of breast cancer.

DHA and Infant Brain Development

The European Union has mandated that infant formulas must contain DHA to a level equivalent to breast milk. The reason for this is that DHA represents about 10% of the human brain and is important for cognitive development. NZKS's salmon has a high level of DHA, about double that of Atlantic salmon, and therefore makes a disproportionately large contribution towards infant and child brain development in NZ.

Written Comment No: 0386

There is a great deal of scientific study required to further develop validate and determine the benefits of long chain marine omega three fatty acids on human health. My point is that the benefits are significant and real. Decisions which increase the supply for New Zealand have important health consequences for the population. New Zealand is an open trading country and Atlantic salmon has periodically been here over the decades but as long as NZKS had sufficient supplies of King's, Atlantic salmon never became established. It was only when our volume declined and we did not have enough to supply the market that Atlantic salmon established itself. Atlantic salmon is an excellent product but it makes a lesser contribution to New Zealand health than the King Salmon is capable of making.

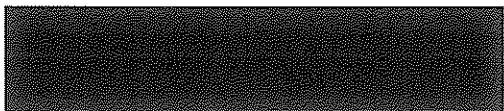
Conclusion


There are relatively few opportunities that come along in life that are truly good for everyone. Where every stakeholder group improves its position. As a society we strive for win:win outcomes but they are often difficult to achieve. The MPI-led initiative to relocate low-flow farms is such an opportunity.

New Zealand King Salmon sees itself as being part of the solution for a sustainable planet, with our relatively efficient use of resources to produce food, while at the same time contributing towards the health and economic well-being of New Zealanders. As I've mentioned we are sometimes not portrayed this way but gradually people are coming to understand the facts of the matter and we are winning more and more support. I thank the Panel for reading my submission and I would like to appear before the Panel in my private capacity as a New Zealand citizen.

Grant Rosewarne

CEO New Zealand King Salmon Co Ltd



Subject	Salmon Farm Relocation.
From	
To	aquaculture submissions
Sent	Wednesday, 1 February 2017 1:52 p.m.

I support the relocation of the Salmon Farms ONLY on the condition that the farms being replaced have all the sediment and contamination removed from the seabed beneath them to a satisfactory standard. This was, I believe, a requirement under the original consent for the Salmon Farms.

The reasons for relocating is, in your own words, "to improve environmental outcomes". Should they not clean up the old Farm sites, then this makes a total mockery of your own requirements.

We have a holiday home at Bulwer which overlooks the Waihinu Bay Farm, one of the farms to be relocated. Over the years we have observed an extremely high rate of fish mortality, possibly up to 1000 tonnes. This has been totally caused by the contamination beneath the farm causing extreme gassing off, (Note, we have many videos/pictures of the gassing off. These were taken from a depth sounder which shows the exact position and date of the videos/pictures).

Regal King Salmon state that the fish deaths were caused by warmer than normal sea water. This is partially correct as when the sea water is warmer, the "compost heap" underneath becomes a lot more active.

I also suggest any relocation is on a 1 for 1 basis, no extra farms.

Regards, PW & KM Ross.

Written Comments No: 0269

Subject	Relocation of Salmon farms in Marlborough Sounds
From	[REDACTED]
To	aquaculture submissions
Sent	Monday, 20 March 2017 5:59 p.m.

I write in strong support of the proposal in the discussion document.

The proposal will maintain the viability of a vital sector of NZ's economy and improve the environmental footprint of the salmon farming industry in Marlborough Sounds. As such the proposal reaches a good balance between environmental and economic and social (employment) outcomes.

By allowing the current sites to recover and placing the farms in areas with better flows the footprint and impact of the farms on the marine environment will decrease. I believe the impacts on the marine environment are acceptable and there will be less impact on people from viewing the farms due to their location in the outer Pelorous Sound.

(signed)

Allan Ross

[REDACTED] Lower Hutt, 5010.

Written Comments No: 0348

Subject	Salmom Farm
From	christine simpson
To	aquaculture submissions
Cc	roughton.umo@xtra.co.nz
Sent	Thursday, 23 March 2017 10:13 p.m.
Attachments	<<salmon extension-1.odt>>

See attachment

This email has been checked for viruses by Avast antivirus software.

<https://www.avast.com/antivirus>

Written Comments No: 0348

Submission on proposed use of Section 360A of the RMA to allow massive expansion of salmon farming in the Marlborough Sounds.

Name of Submitter in full Lynam Roughton	
Address [REDACTED]	
French Pass	
Email [REDACTED]	
Telephone (day) [REDACTED]	Mobile
<input checked="" type="checkbox"/>	I am against the whole Ministry for Primary Industries (MPI) proposal for "Potential Relocation of Salmon Farms in the Marlborough Sounds"
<input type="checkbox"/>	I would like to speak to my written submission at a public hearing in [REDACTED]
<input checked="" type="checkbox"/>	I do not want to speak to my written submission at a public hearing

To the Marlborough Salmon Farm Relocation Advisory Panel and Minister Nathan Guy:

I am writing to express my dismay about Minister Nathan Guy's proposal to overrule the Marlborough District Council's (MDC) plan and allow for up to six new salmon farms in areas prohibited for aquaculture in the Marlborough Sounds.

The MDC's State of the Environment Report 2015 noted that:

- The Marlborough Sounds biodiversity is NOT in good shape.
- The issues include: fewer fish, not as many species, serious loss of biogenic habitats, sedimentation in estuaries and biosecurity incursions.

The Marlborough Sounds needs proposals for protection and restoration of its natural environment and marine ecosystem, **NOT** proposals for further exploitation and degradation such as this one.

It is submitted that the aim of this MPI proposal, thinly disguised as salmon-farming relocation, is in fact a proposal for the massive expansion of salmon farming in the Waitata Reach area of the Pelorus Sound.

If successful it will mean a cluster of 7 farms in Waitata Reach. It will mean 2 to 3 times more waste discharge spread over a wider benthic footprint. It will mean greater adverse cumulative impacts on the water column.

The Marlborough Sounds needs, we submit, more extensive Marine Reserves, **NOT** more Salmon Farms on an industrial scale as is now proposed by MPI and New Zealand King Salmon (NZKS).

The Board of Inquiry drew the limits

In 2012 NZKS applied for nine new salmon farms in areas prohibited for salmon farming via a Board of Inquiry process. They were ultimately allowed three farms. The Board of

Inquiry, and then the Supreme Court, made a number of very important findings, which, it is submitted; this proposal is attempting to ride rough shod over.

It is submitted that this is a blatant attempt to try and achieve for NZKS what it failed to get last time around. This time it is being done under the cloak of a relocation scheme. It is submitted that this is a relocation is factually wrong. Two of the salmon farms to be "relocated" do not in fact exist – there has been no salmon farming on the sites for at least five years.

Once again, MPI and NZKS are trying to put new salmon farm sites into outstanding natural landscapes and, it is submitted, ignoring the legal requirements of the New Zealand Coastal Policy Statement and the adverse cumulative impacts on the this iconic landscape.

This proposal, we submit, ignores the Board of Inquiry finding a threshold limit of two new farms in the Waitata Reach and that the Environment Court subsequently echoed this.

The best Place for Salmon Farming?

The existing NZKS operations are suffering from regular (4 in the last 5 years) unusual mortality events. There is a Controlled Area Notice under the Biosecurity Act in place as a result. Pathogens new to NZ have been discovered in the dead salmon.

We submit that the science shows that 17 degrees Celsius is the maximum sustainable temperature for salmon farming, above this trigger the fish become stressed and vulnerable to disease. MDC records show that the Waitata Reach of the Pelorus Sound has summer seawater temperatures exceeding 17 degrees for long periods. These adverse environmental factors combined with poor management practices is, we submit, demonstrated by these regular significant salmon mortality events.

Instead of allocating clean unspoiled water space for new farms and closing old farms, real pressure should be put on NZKS to operate these existing farms in accordance with Best Management Practice Guidelines. It can be done we submit.

Rather, MPI and NZKS seem to be arguing that the prospect of more jobs and profit justifies ignoring adverse cumulative environmental effects in this iconic public space. This so called MPI report is, we submit, paid for by NZKS using an expert who has a history of working for that company. A truly independent review of this report will, like last time, we submit, show these claims are greatly inflated.

This approach quite wrongly, we submit, gives no credence to the adverse impacts on; endangered species such as the King Shag, recreational users, navigation issues, tourism, and struggling nearby scallop beds.

Other Comments:

Conclusion: this proposal is fundamentally flawed, environmentally

Written Comments No: 0348

unsustainable and should not proceed!

To: Salmon Farm Expansion
Ministry for Primary Industries
Private Bag 14
Port Nelson 7042

Email before 5pm, Monday 27 March 2017
to:
aquaculture.submissions@mpi.govt.nz

Written Comments No: 0230

Subject	Salmon Farm Relocations
From	[REDACTED]
To	aquaculture submissions
Sent	Thursday, 16 March 2017 11:08 a.m.

To Whom it may concern,

I would like to support the proposal to relocate the 6 x Salmon Farms to the higher water flow areas around the Marlborough Sounds.

As a keen outdoors person anything we can do to improve the environment for our children and grandchildren should be done. This is especially so where it also may have an economic benefit to both the national and regional economies.

This outlined proposal seems to enable both these benefits in a win, win situation.

In addition if these moves do take place and are successful, other ancillary benefits will be gained. These include tourism promotion, with our clean, green NZ Image and more employment in an area somewhat short on opportunities for youth.

I sincerely hope this proposal is approved for the benefit of New Zealand.

Dennis Rowe
Wellington