

Review of Proposed Marine Farm Sites

for

The Ministry of Primary Industries

Hudson Associates Landscape Architects:

Response to Peer Review: Landscape and Natural Character Assessment;
Drakeford Williams Ltd. (September 2016)

With Hudson Associates comments 7 October 2016

Introduction

Drakeford Williams Ltd. has undertaken a Peer Review of the Hudson Associates “Review of Marine Farm Sites” in Marlborough Sounds for the Ministry of Primary Industries, and comments from the Peer Review have been incorporated into the Hudson Associates document.

Due to the complexity of the documents, the Ministry of Primary Industries has requested a breakdown of the Hudson Associates response to the Peer Review. This document sets out the Hudson Associates response, with responding comments from Hudson Associates inserted into the Drakeford Williams report for clarity.

The Drakeford Williams report is shown in grey; Hudson comments are in black italics.

Proposed Marine Farm Sites Marlborough Sounds

Peer Review Landscape & Natural Character Assessment

Prepared for

The Ministry for Primary Industries

By

Drakeford Williams Ltd

September 2016

Overview

1.0 Purpose

The purpose of the Drakeford Williams report is to peer review the document 'Review of Proposed Marine Farm Sites' prepared by Hudson Associates Landscape Architects 16 August 2016, considering the approach, methodology and conclusions of the landscape assessment.

2.0 Background

Ministry of Primary Industries has been working with the Marlborough District Council and New Zealand King Salmon (NZKS) to determine what might be required to implement the Best Management Practice Guidelines for Salmon Farms in the Marlborough Sounds. This includes the potential relocation of some farms to more suitable locations to ensure the guidelines can be met. A key component of the assessment of environmental effects is a landscape assessment of the proposed farm relocations. Hudson Associates were engaged to assess the landscape and natural character effects of the exchange, which includes a total of 15 sites in all. The landscape review, together with a number of other reports including navigation, benthic quality, heritage and recreation and tourism, will inform the Ministry for Primary Industries decision making.

The six existing salmon farm sites being considered for relocation are:

Pelorus Sound	<i>Waihinau</i> <i>Forsyth Bay</i> <i>Crail Bay x 2</i>
Queen Charlotte Sound	<i>Ruakaka</i> <i>Otanerau</i>

The final nine sites under investigation as new alternative locations are:

Pelorus Sound and in Waitata Reach	<i>Blow Hole Point North</i> <i>Blow Hole Point South</i> <i>Mid channel Waitata</i> <i>Richmond Bay South</i> <i>Horseshoe Bay</i>
Tory Channel	<i>Tipi Bay</i> <i>Te Weka Bay</i> <i>East of Motukina Point</i> <i>Tio Point</i>

3.0 Review Process

The review was designed to be undertaken and delivered in two stages:

- Stage 1, a review of methodology used in the Hudson report; and
- Stage 2, a review of the 15 site specific assessments and their cumulative effects.

Stage 1 included familiarisation with a number of relevant documents that informed the Hudson report, as well as background documentation on the RMA context for marine farms in the Marlborough Sounds.

3.1 Documents reviewed

Marlborough District Council Technical Reports

- Boffa Miskell et al. June 2014. **Natural Character of the Marlborough Coast**: Defining and Mapping the Marlborough Coastal Environment. Prepared for (MDC) by Boffa Miskell Limited, Lucas Associates, Department of Conservation, Taramoa Ltd, Landcare Research and Shona McCahon.
- Boffa Miskell August 2015. **Marlborough Landscape Study**: Landscape Characterisation and Evaluation. Prepared for Marlborough District Council

MDC decided to rationalise the current resource management framework by combining the Marlborough Regional Policy Statement (RPS) and the Marlborough Sounds Resource Management Plan and Wairau/Awatere Resource Management Plan to create the Marlborough Environment Plan. Mapping from the Natural Character and Landscape studies has been incorporated into the Proposed Marlborough Environment Plan. Substantial consultation was undertaken with land owners to refine the mapping prior to releasing the studies and in May 2016 the Council notified the Proposed Marlborough Environment Plan for public input. The plan does not include the provisions relating to marine farming, which are still subject to review.

Board of Inquiry New Zealand King Salmon Plan Change

- Boffa Miskell Limited August 2011. Natural Character, Landscape and Visual Amenity Effects. Final Report prepared for New Zealand King Salmon with a number of additional appendices updated over 2011 and 2012.
- Evidence of landscape architects Frank Boffa, Peter Rough and Stephen Brown

The Board of Inquiry on the New Zealand King Salmon Plan Change considered a proposal from NZKS for plan change requests to the Marlborough Sounds Resource Management Plan (MSRMP) and applications for resource consents for salmon farms and salmon farming at nine sites in the Marlborough Sounds. The Inquiry held over 2012 and the final decision was released in February 2013. The hearing predated the release of the final MDC Natural Character and Landscape Reports but documents issues and concerns which have potential to inform this review.

3.2 Glossary

The following glossary contains acronyms that have been used throughout this report.

MDC	Marlborough District Council
MPI	Ministry of Primary Industries
NZKS	New Zealand King Salmon
ONC	Outstanding Natural Character
ONL	Outstanding Natural Landscape
ONF	Outstanding Natural Feature
ONFL	Outstanding Natural Feature and/or Landscape
MCS	Marlborough Coastal Study
MLS	Marlborough Landscape Study

Stage 1 Methodology Review

The methodology review is based on the methodology contained in NZILA Best Practice Note: Landscape Assessment and Sustainable Management (10.1).

4.0 Scope

NZILA Best Practise note includes:

Identification of:-

- *The purpose and focus of the assessment*
- *The landscape issues being considered*
- *Those holding mana whenua and mana moana*
- *Key stakeholders*
- *The policy context*
- *The terms of reference of the study*

The report defines the purpose and scope of the assessment with the focus of the assessment on Landscape and Coastal Natural Character and sets out the policy context of the assessment. It is understood that key stakeholders and those holding mana whenua and mana moana will be identified more fully once all the technical reports have been evaluated and the list of potential alternative locations has been finalised.

The assessment process has been facilitated by the recent studies of landscape and natural character prepared for MDC. These form the background to the Hudson report and set out the wider landscape context. Although they are in the *Proposed* rather than *Operative* Regional Plan, they are large, district-wide reports incorporating information from a number of environmental specialists that use recently established best practice methodology to articulate the complex differences between landscape and natural character attributes. However the mapping and assessment generally occurs at regional and district levels, with only high end values mapped at a more localised level.

Excerpts from the MCS have been included in an Appendix in the report, together with an overview of the MLS. However the Hudson study is concerned for the main part with assessment at a site specific scale. MPI provided access to expert benthic assessment from NIWA to inform the marine ecology, which was more detailed than the information used for the MCS. The study notes that expert terrestrial ecological information was not required as salmon farms do not impact directly on land based ecology, and I support this decision.

Additional information required

The terms of reference should include more detail needed on the specific effects that can be expected from the proposed changes. The proposed and existing salmon farms have been described on a site by site basis in the site specific assessment but an overview of generic effects should include brief discussion on the following components and how they affect visibility and by inference, perceptual values.

- a. Description of salmon farms, both existing and proposed
Each farm will create a specific range of effects on natural character and of landscape values that are likely to be a major area of concern for key stakeholders further down the selection process.
 - Size of farm and area of surface coverage.
For example I note that Te Weka Bay (site 47) is proposed to have 5 rectangular pens whereas Tio Point (site 156) has 4 rectangular pens. Mid channel Waitata Reach has 5 circular square pens whereas Blowhole Point North has 3 circular square pens.
 - What is the difference in site coverage?
 - Does an increase in site coverage increase effects on benthic values and on the consequent natural character values?
 - Does the shape of the pens affect their visibility?
 - The scale of the above ground/water structure
 - The use or not of recessive materials/colour.
 - Description of the barge – size and colour
 - Where there is no permanent barge and the farm is to be service by a visiting vessel, how frequently will the barge be at the farm?
 - Distance of the farm from shoreline/coastline

Hudson Associates:

Details on each farm design will be confirmed/refined by King Salmon as work progresses. The Hudson report makes a number of assumptions about the proposed farms based on the information provided. Extracts from the Navigation Report showing farm layout and sizes have been included for each site in the Hudson Report. These can be scaled by reference to the Navigatus Report. The standard design assumes black netting and dark colours for all features. Recommendations are made on the preferred design where this is considered important e.g. use of circular pens, no permanent barge. These are set out under the Proposed Change section of the individual site Assessment of Effects pages, and have been used as the basis for the assessment.

b. The visibility of the salmon farm including:

- Daytime and night time effects.
- The relationship between viewing distance and visibility. Does visibility vary in views from land and sea? Does visibility vary with angle of view and viewing elevation? For example is there a difference viewing from a track on a headland versus from a house on the beach? Does visibility vary when a farm is viewed from the interisland ferry or scenic cruise boat or a sea kayak?
- Comparison of visibility of existing and proposed farms, given that salmon farm design has evolved and the new farms have been designed to reduce the visual impact of the farm layout and the individual components including buildings, cages, and netting.
- The removal of an existing farm and the replacement of proposed farm are not necessarily like for like in terms of visual effects.
- Weather and sun conditions.

There is useful material in BOI NZKS application on visibility and viewing distances. My conclusion from a review of the expert evidence is that the viewing distance /visibility figures in the Application (based on existing farms at the time) were challenged only on the basis that the photographs and calculations were made in overcast rather than clear weather, and that the visibility could potentially be increased in good weather conditions. Viewing distances may be disputed in the future as this MPI process moves forward, but making them explicit in this study will clarify the basis for the assessment ratings

Hudson Associates:

Visibility tables developed by Boffa Miskell for the 2012 BOI hearing have now been incorporated into the Hudson Review, and used as a guide for assessment of visual effects. This give guidance on potential effects from elevated land positions and from sea level. It should be noted that many factors affect visual effects, including site attributes, context and individual viewer biases, as well as light conditions, sun angle, backdrop, wave conditions, angle of view, and structure design and colour. The distances are therefore general rather than specific to every situation. It is noted that the table used for the BOI was based on assessments of existing salmon farms in Tory Channel, with white/green netting. Only black netting is recommended for the site swap proposal.

Useful additional information

The Hudson study has adopted some of the terminology used in the MDC studies with an emphasis on the level and scale of assessment. While this has been described, the *Figure 6* diagram in the MCS illustrates the terminology more clearly and would provide useful background to this study.

Natural Character Assessment Scale

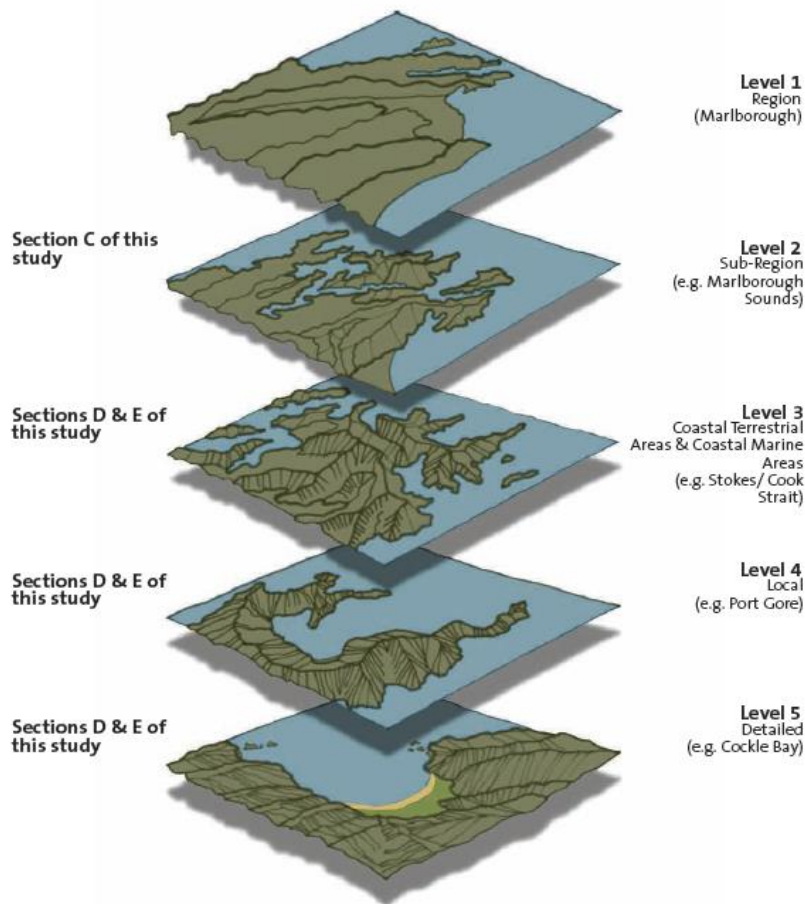


Diagram representing range of study scales.

Figure 6 from MCS: Natural Character of the Marlborough Coast

Hudson Associates:

A decision was made to include excerpts from the Boffa Miskell Landscape and Natural Character studies only where the information related most closely to the scale of the sites being dealt with in this project. This was due to the growing amount of information in the Hudson report, and the amount of information which could potentially have been included from the earlier Landscape and Natural Character studies.

With regards to study scales and assessment, the Boffa Miskell Landscape and Natural Character studies use different terminology, with the Landscape study using National/Regional/District, and the Natural Character study using Level1/2/3/4/5. If information was to be included from one study, it would also need to be included from the other, resulting in two unmatched scales appearing in the Hudson report.

5.0 Methodology

NZILA Best Practise note includes:

Description: A systematic account of landscape attributes in the assessment area.

These will include:-

- *Biophysical elements, patterns, and processes*
- *Sensory qualities*
- *Spiritual, cultural and social associations, including both activities and meanings.*

Where relevant, a description of a proposed project will be undertaken.

The description phase may involve collaboration with tangata whenua, stakeholders, communities, and other experts, utilising a range of sources of information.

Given the benefit of the recent broad scale Marlborough natural character and landscape studies, the Hudson study quite correctly focuses on the site specific analysis and has used the MLS and MCS to provide a wider Level 3 description on landscape attributes.

Additional information required

- a. Information from other technical reports to complete the associative baseline including: Tourism and Recreation; Heritage; and Cultural reports.

Hudson Associates:

Information from Cultural Impact Assessment, Tourism and Recreation Assessment and Social Impact reporting have become available since the Drakeford Williams Review, and have now been incorporated into the Hudson document.

- b. Clarification that the same value scale has been used in the benthic study or whether the values identified in the benthic study have been interpolated and translated into the landscape study value scale.

Hudson Associates:

Benthic information was used as provided. Where an evaluative conclusion has been reached in the Benthic studies, this has been accepted as an expert opinion and transferred into the Hudson report. Where 'Significant benthic effects' are stated as occurring, this is the opinion of the benthic scientist undertaking the assessment and is based on direct discussions.

- c. Clarification on the relative weighting of the benthic and terrestrial values for the Natural Science rating.

Hudson Associates:

Marine ecology has been slightly weighted in the Natural Science rating, as salmon farms have no physical effects on terrestrial ecology. The coarseness of the NZILA rating scale in relation to the complexities of this particular project has been a factor in some of the rating outcomes. For example, if terrestrial ecology has been rated Low-Moderate, and marine ecology has been rated High, there is no mid-point rating on the scale available as an option. In that case the score on the marine ecology side has been weighted, resulting in (in this example) a Natural Science baseline rating of High-Moderate.

Useful additional information

- d. The Marlborough Coastal Study uses specific terminology and methodology to assess Natural Character, assessing the marine and terrestrial attributes separately. The Hudson study covers the same overall components but it would have been useful to have employed similar terminology to dovetail into the wider district study. For example, it is unclear whether geomorphology and terrestrial ecology values have been jointly considered for the Terrestrial Rating, or whether the rating is derived solely from the terrestrial ecology value. The MCS separates marine and terrestrial geomorphology. For example; separate landform backdrop (terrestrial) and coastal edge (marine).

Hudson Associates:

The Marlborough Landscape Study (Boffa Miskell 2015) and Natural Character of the Marlborough Voast (Boffa Miskell 2014) were not consistent in terminology, so while it would have been ideal to use the same terminology as previous MDC work, it proved difficult to achieve consistency with both reports. Further, because the site swap was assessed at a smaller scale than either of the Boffa Miskell reports, it was necessary to break down the broader categories used in those reports, in order to show a greater transparency for each of the sub-attributes. The final Hudson Associates attribute list of site attributes used to assess against is a fit within the broader categories in both the Boffa Miskell reports. (Refer particularly to the breakdown of "Aesthetic Values" explained on page 17 of the Boffa Miskell Landscape Study – Memorability, Naturalness, Vividness, Coherence - from the amended Pigeon Bay criteria). The Hudson list of attributes was designed to fit with the NZCPS as well as the amended Pigeon Bay criteria.

Terminology used in the 2014 Natural Character Study is:

- *Abiotic*
- *Biotic*
- *Experiential*

Terminology used in the Marlborough Landscape Study 2015 is:

Section C:

- *Biophysical/Natural Science Values (Geological Values; Ecological and Biological Values);*
- *Sensory Values (Aesthetic Values)*
- *Associative Values (Shared and Recognised; Heritage; Tangata Whenua)*

Section D (Outstanding) uses:

- *Biophysical*
- *Perceptual*
- *Associative*

The Hudson Review has no rating for Geomorphology as a natural science attribute because “rating” it would effectively be turning it into a perceptual attribute, and therefore be double scoring. It is rated under the perceptual/sensory headings under Vividness and Memorability, Expressiveness and Perceived Naturalness (where existing modifications are taken into account).

- e. The study notes some ambiguity in the MLS with regard to ONFL ratings in the Outer Sounds. I recommend that the issue is discussed with the authors of the MLS to clarify the extent of the ONFL status on identified sites.

Hudson Associates:

Confidentiality precluded discussion at the time of writing.

6.0 Characterisation

NZILA Best Practise note includes:

Characterisation: Expert interpretation of landscape character based on classification of different types of landscape, through:-

- *Identification of patterns of natural and cultural features, processes and influences.*
- *Analysis of their characteristics and spatial location, and the extent to which they are distinctive, representative or typical at the different scales.*

Detailed characterisation has been undertaken for each of the proposed and existing sites, with information on the wider landscape context from MCS and MLS included in an appendix at end of the study.

Additional information required

- a. Characterisation at the wider Level 3-4 scale for areas with groups of sites, namely Waitata Reach /upper Pelorus Sounds and Tory Channel. BOI NZKS documentation indicates that these 2 areas are regarded as landscapes in their own right, and should be characterised and evaluated in their entirety rather than as the sum of individual farm sites.

The site specific characterisation is at Level 5. Characterisation in the MCS and MLS is largely at Level 3 but will provide background. Re Tory Channel for example, the MCS notes:

Coastal marine Area E Tory Channel

This mainly sheltered waterway is moderately modified by a small number of salmon farms and mussel farms. Tory Channel is the main transportation route for the Cook Strait ferries offering a number of visitors their first close up view of the South Island when travelling from Wellington. Crayfish diving and spear fishing is also experienced in outer Tory Channel. The channel is reasonably narrow and there are a number of jetties and wharves located within more sheltered bays. Based on this, the waters of Tory Channel therefore display high experiential natural character values.

Coastal Terrestrial Area 4 Arapawa

The constrained nature of Tory Channel offers passengers on the Cook Strait ferries an opportunity to view and experience this terrestrial area either side of Tory Channel at close proximity, and many for the first time. Therefore experiential values are reasonably moderately high.

Hudson Associates:

Characterisation for the Waitata Reach and Tory Channel have now been incorporated into the Hudson Review.

7.0 Evaluation

NZILA Best Practise note includes:

Evaluation: An explicit account and weighing up of the landscape values of the existing landscape including those expressed within the statutory context of the assessment. This stage will include engagement as appropriate with tangata whenua, communities, stakeholders and interest groups.

The evaluation employs a standard best practice scale, which is consistently applied for individual sites and is consistent with the scale used for the MCS and MLS.

Additional information required

- a. Establish the point where effects can be considered 'minor'.

The study states (page 14) *It is concluded that adverse landscape and visual effects from the proposal on district-scale landscape values will be no more than minor.* I recommend direction is given on how the 7 point scoring system translates into RMA terminology.

For example, given the 7 point scoring system of *Very High/High/High-Moderate /Moderate/Moderate-Low/Low/Very Low*, it could be stated that a Low rating equates in RMA terms to 'minor' and very low as 'less than minor'.

Hudson Associates:

Hudson Associates had a number of discussions with the planner on the project (Frances Lojkine, MWH) with regards to terminology relating to effects. The report is guided in its terminology by those discussions.

It is worth noting that although the NZILA 7-point scale is widely used throughout New Zealand and endorsed by the Institute, a number of practitioners are now veering away from the numbered scale, and assessing through description instead, as this is considered less restrictive. This was discussed recently at a DOC-led workshop on landscape assessment, held in Wellington, and attended by Hudson Associates.

8.0 Conditions and effects

NZILA Best Practise note includes:

Condition and effects: An analysis of the way the landscape(s) are likely to respond to change, including:

- *Landscape resilience, and capacity*

- *Landscape sensitivity and vulnerability*
- *Opportunities, risks and threats*

Assessment of condition and effects was an integral part of the study evaluation of the effects arising from the proposal. There is undoubtedly a large body of work behind the final farm evaluations. This needs to be made explicit so that there is a clear connection in the process from characterisation to effects on natural character and landscape values.

Hudson Associates:

There is a clear link in the site assessments between characterisation (descriptions) and extracted values. Explicit assessment of effects on values is included in the evaluative comments in the individual site assessment of effects tables. More detailed scoring of effects was carried out, with a scale developed to sit behind the NZILA 7-point rating scale, but this has not been included due to its complexity, and the need to align the assessments with the NZILA best practice scale. This is explained in the Methodology section of the Hudson report.

Additional information or explanation required

- Establish the magnitude of change of effect.

The report states: *This report has found that the degree of change for the majority of sites would fall with the 1 point 'moderate' range on the 7 point rating scale, although there is a greater change for a small number of sites. Positive changes have been assessed for areas where existing salmon farms are to be removed, while negative changes have been assessed for vacant areas where new salmon farms are proposed.*

I am unclear what is meant by this. Does it mean that effects for most sites are moderate or that the magnitude of effect for a change from 1 point to the next is moderate? Or rather than where the level of effects shifts by 1 point on the scale, the magnitude of change is 'very low'.

Hudson Associates:

The paragraph has been edited for clarity. The magnitude of change is the difference between the baseline and resultant ratings for a site. The effects of this change are assessed at each site.

- Potential viewing audience. The study does not clarify whether existing dwellings have been identified (other than the dwelling at Motukina Point) and if there will be any effect on the visual amenity of the residents. For example the Tui Nature Reserve dwelling above Yellow Cliffs in Waitata Reach may have views across the reach to Richmond North 3.5-4km distant. If there is a clear line of view, what is the visibility of the site and what are the effects?

Hudson Associates:

Viewing audience is addressed inside the Visual Appraisal for each site. Effects for residents has been further reviewed and analysis strengthened.

- Cumulative effects. Cumulative effects are evaluated at the wider scale of Waitata Reach and Tory Channel and I agree with this approach. The report clarifies that

when considering the cumulative effects on Natural Character, weight has been given to the findings of the benthic studies. No specific score has been given to cumulative effects.

There was a strong emphasis on cumulative effects in the BOI NZKS hearing. The collective landscape architects held different expert opinions on the level of effects, but focussed on the methodology for evaluating the character components.

I recommend that the study describe in more detail potential cumulative perceptual and associative effects. The overall magnitude of effects may be low but given the scrutiny that will be given to the report, the process of evaluation should be seen to be robust and encompassing. I note for example that at the NZKS BOI Frank Boffa assessed the addition of Ngamahau Farm to the existing Clay Point and Te Pangu farms would have a moderate cumulative effect on Natural Coastal character in the upper Tory Channel. In this study case one might anticipate that the further addition of 2 or possibly 3 farms has the potential to further increase cumulative effects.

Hudson Associates:

Cumulative Effects has been further reviewed and updated.

Additional information required

- d. Cumulative effects could be set out in a similar manner to site specific effects to make explicit the effects on natural science, perceptual and associative character components. This is not to say that the final evaluation would change but assessment needs to be explicit and transparent. For example

Tory channel					
Character component	Existing character		Resultant character		Mitigating factors
	Key site values	Baseline rating	Effects	Resultant rating	
Natural science		Moderate			
Perceptual		Moderate			
Associative		Mod-High			
Overall baseline Natural character		Moderate	Resultant Natural character	Moderate – low	
Overall baseline Landscape		Moderate	Resultant Landscape	Moderate - low	

and should include consideration of:

- Existing aquaculture (both mussel and salmon farms) and
- Potential viewing audience. It is unclear if existing dwellings have been identified. Consideration should be given to effects within Waitata Reach on the Tui Nature Reserve dwelling (identified in Boffa NZKS AEE as W2) from sites at Richmond North and Mid Channel and effects within Tory Channel on dwellings such the distinctive house on a spur (identified in Boffa NZKS AEE as N2) on sites at Motukina Point and Tipi Bay.

- How/where seen from ie from the ferry and elevated above the water, from sea kayak, from beach or from a track
- Cumulative effects of night lighting
- A brief analysis of the combined visual envelope using specific data on the visibility of salmon farms. Is there a single arc of view where 2 farms can be seen at once eg can Richmond North and Horseshoe Bay be seen from Maude Island or can Blowhole North and South view be viewed simultaneously from a boat passing Blowhole Point?
- Are there sequential views for residents, not just over the length of the channel or reach landscape but potentially over the length of a journey eg for a resident travelling by boat from Picton to their property in Tory Channel?

Hudson Associates:

Cumulative Effects has been further reviewed and updated.

Useful changes

- e. Information on site sensitivity has been included as a footnote for each final site assessment. Viewer sensitivity and site sensitivity to change will always be calibrated to fit the specific site context but a more complete description of the generic effects could usefully have been in the overview of methodology at the front of the report.

Hudson Associates:

Analysis of generic effects of salmon farms was not part of the initial brief for the project. With so many variables (e.g. site attributes, farm design, context) the value of generic analysis is in our opinion questionable here anyway. Analysis of generic effects of a particular type of development, prior to analysis of effects of a specific proposal, is not recommended as a standard part of the NZILA best practice guidelines for assessment.

- f. An explanation of visual sensitivity would include the potential number of viewers and the importance of view to viewer eg whether viewer is a resident or tourist or worker.

Hudson Associates:

Assessment has been based on available information. Comment has been included in the Visual Appraisal on potential viewers. Detailed information on numbers is not known.

- g. I would advise careful use of terminology:
 - avoid the word 'significant'
 - avoid the term minor or less than minor unless using specific RMA language eg compromised in any more than a minor way (page 14)
 - 'will ensure that any adverse effects are minimised' (page 5) is not helpful.
 - 'limited adverse effect' – what is this on the 7 point scoring system?

Hudson Associates:

Use of the word “significant” has been looked at through the report and amended as appropriate. As previously outlined, Hudson Associates had a number of discussions with the planner on the project (Frances Lojkine, MWH) with regards to terminology relating to effects. The report is guided in its terminology by those discussions.

9.0 Change Management

NZILA Best Practise note includes:

Change management: Identification of ways and opportunities to ensure and enable sustainable landscape management in response to the existing trends and any proposed or anticipated change. This may include:

- Statutory and non-statutory plan objectives, policies and methods*
- Consideration of alternatives, and their costs and benefits*
- Identification of ways to enhance or create values*
- Actions to avoid, remedy or mitigate adverse landscape effects*

The table of overall assessment of effects for each site contains a column headed *Mitigation* (for proposed farms) and *Existing Mitigation* (for existing farms). The list covers a variety of site attributes, farm design components and landscape characteristics including:

- Use of a visually recessive black colour for structures and netting;*
- Barge design and recessive khaki colour reduces visual impact of the proposal.*
- Use of a circular form will provide a softer intrusion into the environment;*
- No barge reduces visual impact of the proposal.*
- Working landscape character – proposal is a fit with;*
- Visually more complex backdrop with low coherence receives structures more readily;*
- Expansive context provides for greater absorption;*
- Structures will be a “fit” with existing character.*
- Low coherence backdrop is more readily able to receive and absorb change.*

Additional information required

a. I recommend that the table more specifically identify/separate the mitigation elements. For example:

- i) farm design factors that have the potential mitigate effects
 - Use of a visually recessive black colour for structures and netting;*
 - Barge design and recessive khaki colour reduces visual impact of the proposal.*
 - Use of a circular form will provide a softer intrusion into the environment;*
 - Locating the barge in a position which allows the adjacent landform to act as a backdrop.*
- ii) characteristics of the site that are mitigating factors
 - Working landscape character – proposal is a fit with;*
 - Visually more complex backdrop with low coherence receives structures more readily;*
 - Expansive context provides for greater absorption;*
 - Low coherence backdrop is more readily able to receive and absorb change.*

- iii) and potential for additional/future mitigation
 - *Visual effects would be reduced with use of the circular design option, with its lower profile, dark recessive colour, and softer overall shape. The round design is recommended at this location, however they would need to also synchronise with round mid-channel farms if they are implemented.*

Hudson Associates:

Column heading has been edited to reflect inclusion of both mitigating design features and site attributes which provide mitigating factors.

I have discussed at point **4.0 Scope** those elements of farm design that could usefully be evaluated at a generic level rather than within each site specific assessment.

Hudson Associates:

As previously responded to.

Useful information

- b. There is an opportunity to identify additional/potential mitigation measures that could be undertaken such as a minor shift of the farm or a change to the farm layout. I note that additional mitigation may be outside the scope of this study.

Hudson Associates:

This has occurred as part of the on-going assessment process.

10.0 Summary Methodology Review

Overall the Hudson study follows best practice methodology that is robust in principle and uses appropriate and consistent comparison measures. I recognise that the landscape assessment of the proposed farm relocations has been undertaken as a preliminary study for a potential plan change, and as such cannot be specific on the detail of each farm proposal. Given the time constraints, the focus of Part 1 of this peer review is to identify areas where additional material is required or where existing material could be reorganised to make the assessment process more explicit and transparent.

Stage 2 Individual Site Assessment Review

Proposed Sites

The nine sites under investigation as new alternative locations are:

Pelorus Sound and in Waitata Reach

Site 34 Blow Hole Point North
Site 122 Blow Hole Point South
Site 125 Mid channel Waitata
Site 106 Richmond South
Site 124 Horseshoe Bay

Tory Channel

Site 42 Tipi Bay
Site 47 Te Weka Bay
Site 82 East of Motukina Point
Site 156 Tio Point

Proposed site: Blow Hole North Baseline		
	Comment	Rating Agree with rating ✓
Natural Science Baseline:	Agree with written description of key values, especially having reviewed the landscape context of Waitata Reach and of the wider context of the less accessible and less developed areas of the Sounds	Moderate ✓
Perceptual/ Sensory Baseline:	<ul style="list-style-type: none"> Pasture creates cohesive ridgeline backdrop until it meets plantation. Would be useful to have discussion re visibility of mussel farms on approach. What is the distance where they become visible? What is the distance where they are prominent? Visible up to 0.5km away? <p><i>Hudson: Required analysis would go beyond the initial brief, which had salmon farms and site selection as its focus, and would constitute a separate more in-depth site analysis, however the presence of mussel farms has been considered in determining effects at the site scale.</i></p> <ul style="list-style-type: none"> The 'very dark sky may amplify remoteness' but existing mussel farms already in the bay have night lighting. <p><i>Hudson: Comments on night sky darkness and effects from existing mussel farm lighting have been reviewed and amended.</i></p> <ul style="list-style-type: none"> Agree re the memorability of the gateway 	Moderate ✓
Site Associative Baseline:	<ul style="list-style-type: none"> Agree that associative values are more related to the wider context than to this site itself 	High-moderate ✓
OVERALL RATING		
Natural character baseline		Moderate ✓
Outstanding natural character	Agreed that site does not meet ONC	
Landscape baseline		Moderate ✓
Outstanding natural landscape or feature	Agreed that site itself does not meet ONF	
Site Sensitivity:	Concur with description of site sensitivity given the natural character and landscape baseline and the location at gateway of district wide importance	

Overall assessment of Effects: Blow Hole North			
Character component	Existing Baseline Rating	Effects	Resultant rating
<i>Natural science</i>	Moderate		Low-moderate
<i>Perceptual</i>	Moderate	Salmon farm pushed out of bay past headlands due to presence of existing mussel farms. Visibility of farm on entry to Pelorus Sound from Cook Strait. Loss of night sky on entry into Pelorus.	Low-moderate
<i>Associative</i>	High-moderate	Need further analysis information re gateway location and potential cumulative effects of this site in conjunction with Blowhole Point South. I disagree that farm is located in a side bay. Location reduces size of the 'gateway' and brings working landscape further out into Pelorus Sound and at the entry into Cook Strait. <i>Hudson: Cumulative effects have been reviewed and amended to incorporate legal advice provided by MPI which post-dates the Drakeford Williams Review.</i> <i>Definition of the position of the site is a professional difference of opinion.</i> <i>Pine forestry is the most visually dominant element at this site, and in our opinion is likely to remain so.</i> <i>The working landscape is clearly evident from the forestry even without a salmon farm.</i>	Moderate-low and potentially lower depending on visibility of new farms
Overall baseline Natural character	Moderate	Resultant Natural character	Moderate- low ✓
Overall baseline Landscape	Moderate	Resultant Landscape <i>It is accepted that the headland adjacent to the site has associative values linked to the recognised "gateway" into Pelorus Sound. It is not considered that these values would be compromised in any more than a minor way by the proposal, due to the expansive scale of the context, which will be able to visually accept the proposal'p14. I agree that for this farm, the landscape values are reduced to moderate to low. However the headland is also close to Blowhole Point South, with the potential for increased effects for the 2 sites when considered together.</i> <i>Hudson: Cumulative effects have been reviewed and amended to incorporate legal advice provided by MPI which post-dates the Drakeford Williams Review.</i>	Moderate- low ✓ and potentially lower depending on visibility of new farms
ONC		Agreed with assessment of effects	
ONFL		Agreed with assessment of effects	

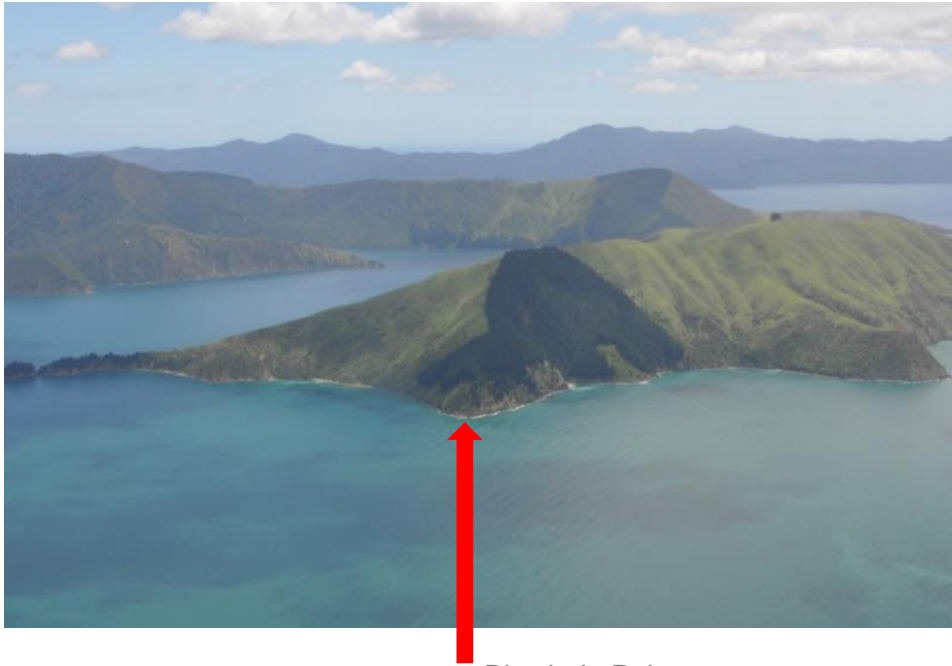
Hudson Associates: We have reviewed our ratings for the site and are comfortable with conclusions reached. Comparisons of ratings between all sites has had to be a consideration.

Proposed site: Blow Hole South Baseline		
	Comment	Rating Agree with rating ✓
Natural Science Baseline:	<ul style="list-style-type: none"> • More sheltered site so more advanced revegetation than BH site to north • Agree with written description of key values, especially having reviewed the landscape context of Waitata Reach and of the wider context of the less accessible and less developed areas of the Sounds 	Moderate ✓
Perceptual/ Sensory Baseline:	<ul style="list-style-type: none"> • Distinctive landforms • Would be useful to have discussion re visibility of mussel farms on approach. What is the distant where they become visible? What is the distance where they are prominent? Visible up to 0.5km away? <i>Hudson: Required analysis would go beyond the initial brief, which had salmon farms and site selection as its focus, and would constitute a separate more in-depth site analysis, however the presence of mussel farms has been considered in determining effects at the site scale.</i> • The 'very dark sky may amplify remoteness' but existing mussel farms already in the bay have night lighting. <i>Hudson: Comments on night sky darkness and effects from existing mussel farm lighting have been reviewed and amended.</i> • Agree re the memorability of the gateway 	High-Moderate ✓
Site Associative Baseline:	<ul style="list-style-type: none"> • Agree the site lies at the edge of the gateway but that its associative values are more related to the wider context than to this site itself 	High ✓
OVERALL RATING		
Natural character baseline		Moderate ✓
Outstanding natural character	Agreed that site does not meet ONC	
Landscape baseline		High-Moderate ✓
Outstanding natural landscape or feature	Agreed that site itself does not meet ONF	
Site Sensitivity:	Concur with description of site sensitivity given the natural character and landscape baseline and the location at gateway of district wide importance	

Overall assessment of Effects: Blow Hole South			
Character component	Existing Baseline Rating	Effects	Resultant rating
<i>Natural science</i>	Moderate		Moderate- Low
<i>Perceptual</i>	High-moderate	<ul style="list-style-type: none"> Farm shown as sited within the bay (if the bay is defined by a line drawn between the 2 containing headlands). But this is a very shallow bay/cove and with the headland at the south end running parallel to the reach, it might be said the farm will be located in the gateway, albeit to the side. Visibility of farm on entry to Pelorus Sound from Cook Strait. Loss of night sky on entry into Pelorus. 	Moderate- Low
<i>Associative</i>	High	<ul style="list-style-type: none"> Location reduces size of the 'gateway' and brings working landscape further out into Pelorus Sound and at the entry into Cook Strait Location opposite Kaitira Need further analysis information re gateway location and potential cumulative effects of this site in conjunction with Blowhole Point North. 	Moderate-Low and potentially lower depending on visibility of new farms
Overall baseline Natural character	Moderate	Resultant Natural character	Moderate- Low ✓
Overall baseline Landscape	Moderate	<p>Resultant Landscape</p> <p><i>It is accepted that the headland adjacent to the site has associative values linked to the recognised "gateway" into Pelorus Sound. It is not considered that these values would be compromised in any more than a minor way by the proposal, due to the expansive scale of the context, which will be able to visually accept the proposal'p14. I agree that for this farm, the landscape values are reduced to moderate to low. However the headland is also close to Blowhole Point South, with the potential for increased effects for the 2 sites when considered together.</i></p> <p><i>Hudson: Cumulative effects have been reviewed and amended to incorporate legal advice provided by MPI which post-dates the Drakeford Williams Review.</i></p>	Moderate ✓ and potentially lower depending on visibility of new farms
ONC		Agreed with assessment of effects	
ONFL		Agreed with assessment of effects	

Hudson Associates: We have reviewed our ratings for the site and are comfortable with conclusions reached. Comparisons of ratings between all sites has had to be a consideration.

Combined Effects: Blow Hole North + Blowhole South



Blowhole Point

*Aerial view of 2 sites, looking directly towards Blowhole Point in middle of photo.
(Hudson Associates photo)*

The Hudson report concludes re cumulative effects for Blowhole Point: *‘The two most northern sites, being Blowhole North and Blowhole South, are considered as one small group. The distance between them and the separation caused by the landform and enclosing bays are sufficient to remove any adverse cumulative effects from occurring.’* (Page 5)

I disagree. The two farms are located at the entry to Pelorus Sounds and in the area described as the Outer Sounds Outstanding Natural Landscape in the MLS, and the Cook Strait (terrestrial) plus Pelorus Sound (marine) in the MCS. In other words, they sit at the boundary of the ‘wild’ landscape and ‘working’ landscape (as described in the report). While they are separated by a small headland, viewed from a distance they will be seen simultaneously or immediately one after the other, and in conjunction with a number of existing mussel farms.



Blowhole Point

Blowhole Point site showing existing mussel farm consents (blue)

In my opinion locating farms on two sites will have an effect on the ONFL values as the cumulative effects are more than low given the high associative and perceptual values of the gateway location.

Character component	Existing Baseline Rating	Effects	Resultant rating
<i>Natural science</i>	Moderate	<ul style="list-style-type: none"> • Unchanged from individual Blowhole North and South sites 	
<i>Perceptual</i>	Moderate	<ul style="list-style-type: none"> • Jointly form a memorable gateway 	
<i>Associative</i>	High-moderate	<ul style="list-style-type: none"> • Associative values are elevated due to the location in this wider context 	
Overall baseline Natural character	Moderate	Resultant Natural character	Moderate- Low and potentially lower depending on visibility of new farms
Overall baseline Landscape	Moderate	Resultant Landscape Increased effects for the 2 sites when considered together.	Low
ONC		Effects on Pelorus high marine values but no effect on overall potential ONC	
ONFL		Potential effects on Port Ligar, Forsyth and Kaitira ONF boundaries	

Hudson Associates:

This comes down to a professional difference of opinion. Hudson Associates has re-reviewed its position on cumulative effects, and has made amendments to incorporate legal advice provided by MPI which post-dates the Drakeford Williams Review.

Proposed site: Mid channel Waitata Baseline		
	Comment	Rating Agree with rating ✓
Natural Science Baseline:	<ul style="list-style-type: none"> Disagree re statement 'Includes aspects of modified land use on surrounding areas including forestry, pastoral use, indicative of working Landscape'. Lowering the natural science values because of the distant terrestrial /marine modifications indicates that this site does not fit the methodology process. The site is well off shore and away from coastal margins. One may as well say that marine farming at Ngamahau affects marine values at Tipi Bay given the relative distances from the shore. Or that Clay Point and Te Pangu and Motukina Point will affect the terrestrial values of Tio Point <p><i>Hudson: The reference to marine farms and terrestrial modifications under Marine Ecology has been moved to the Perceptual column, as it is agreed that the influence of these on natural science values at the site is minimal. The modifications have more of a perceptual influence at the site. Assessment of the marine ecology rating was based on benthic information provided, and consideration that the Sound has been modified in the past by dredging.</i></p> <ul style="list-style-type: none"> Do not agree with Very low marine rating although I cannot tell what part benthic values play in overall rating compared to marine abiotic values. I would rate the site as High-Moderate or High <p><i>Hudson:</i> The rating is based on the benthic information provided which identified no special benthic features, and takes into account that Pelorus Sound has been modified in the past by dredging. Marine Natural Science does not include perceptual values, such as waterscape.</p>	<p>Low x</p> <p>I consider this to be at least Moderate if not Moderate –High given the undeveloped nature of Waitata Reach waterscape.</p>
Perceptual/ Sensory Baseline:	<ul style="list-style-type: none"> Very high sense of remoteness and high visual amenity values 	Very high ✓
Site Associative Baseline:	<ul style="list-style-type: none"> There is not enough information on wider values due to other expert information not being available 	Moderate ✓
OVERALL RATING		
Natural character baseline	<p>As noted above, I think the methodology has not adequately considered with the values of this site. I consider the Natural Character to be High.</p> <p><i>Hudson response: Under the recent model developed by Boffa Miskell (and discussed under the heading "Assessment Process" at the start of the Hudson Review), natural science factors are weighted in determining a Natural Character baseline. Perceived naturalness is considered a perceptual attribute and receives equal weighting with other attributes under the landscape baseline rating.</i></p>	Moderate x
Outstanding natural character	Agreed that site does not meet ONC	

Landscape baseline	Agreed Perceptual/sensory values at this site are very high.	High ✓
Outstanding natural landscape or feature	Agreed that site itself does not meet ONF	
Site Sensitivity:	<p>The report considered the site to have a low sensitivity due in part to the absorption capacity of the expansive scale of the Reach. I do not agree given the location of the site in the middle of the reach, which presumably is the most trafficked area and most visible from the water.</p> <p><i>Hudson response: Other factors besides expansiveness contributed to the analysis of site sensitivity – such as the wider (visible) productive context, the water depth and the high flow rate. This is a professional difference of opinion.</i></p>	

Overall assessment of Effects: Mid channel Waitata			
Character component	Existing Baseline Rating	Effects	Resultant rating
Natural science	Low I consider rating to be Moderate	<ul style="list-style-type: none"> The methodology should be adjusted to allow for a site that sits well away from the landform and generally will be seen as part of the wider marine landscape, disassociated from landforms either side of the reach <p><i>Hudson: In my opinion the site is not "disassociated" from the landforms either side of the reach. The surrounding landforms may be distant, but they still form part of the visual context from the site, and provide its sense of wider enclosure within a productive landscape. This doesn't mean that for all sites the very distant hills need to be considered, as at other sites the more distant context may be over-ridden by more immediate landforms.</i></p>	
Perceptual	Very high	<ul style="list-style-type: none"> Looking at the wider landscape setting, development of the Waitata Reach site would set a precedent as the first farm in the middle of the reach or strait in Marlborough Sounds. 	
Associative	Moderate	<ul style="list-style-type: none"> Travelling along Waitata Reach towards Cook Strait, farms at Waitata and Richmond 'channel' views out to the outer passage to the northeast, directly towards the proposed Waitata Reach farm, which elevates effects on perceptual and associative values. <p><i>Hudson: I disagree that existing farms "channel" views. The farms are some 2kms apart on either side of the Reach.</i></p>	
Overall baseline Natural character	Moderate	Resultant Natural character I would assess baseline NC as High, and resultant NC as Moderate-Low	Moderate-Low ✓
Overall baseline Landscape	High	Resultant Landscape I would assess the resultant landscape as Moderate	High-Moderate x
ONC		Agreed with assessment of effects	
ONFL		Agreed with assessment of effects	

Hudson Associates: We have reviewed our ratings for the site and are comfortable with conclusions reached. Comparisons of ratings between all sites has had to be a consideration.

Proposed site: Richmond South Baseline		
	Comment	Rating Agree with rating ✓
Natural Science Baseline:		High-Moderate ✓
Perceptual/ Sensory Baseline:	<ul style="list-style-type: none"> Existing Kopaua salmon farm in Richmond Bay should be included in the baseline description/assessment <i>Hudson: Comment on the existing farm has been incorporated.</i>	High-Moderate ✓
Site Associative Baseline:	<ul style="list-style-type: none"> Existing Kopaua salmon farm in Richmond Bay should be included in the baseline description/assessment <i>Hudson: Response as above.</i>	Moderate ✓
OVERALL RATING		
Natural character baseline		High-Moderate ✓
Outstanding natural character	Agreed that site does not meet ONC	
Landscape baseline		High-Moderate ✓
Outstanding natural landscape or feature	Agreed that site itself does not meet ONF	
Site Sensitivity:	Agree that site baseline values for High-Moderate for both Natural Character and Landscape dictate Sensitivity for this location.	

Overall assessment of Effects: Richmond South			
Character component	Existing Baseline Rating	Effects	Resultant rating
<i>Natural science</i>	High-moderate		
<i>Perceptual</i>	High-moderate	<ul style="list-style-type: none"> Potential views from Tui Scenic Reserve not considered. <i>Hudson: Amended to comment on effects for Tui Reserve.</i>	?
<i>Associative</i>	Moderate	<ul style="list-style-type: none"> The site faces Maud Island. Will there be any reverse effects on Maud Island ONF or ONC values? <i>Hudson: Amended to comment on Maud Island.</i>	?
Overall baseline Natural character	High-Moderate	Resultant Natural character	Moderate ✓
Overall baseline Landscape	High-Moderate	Resultant Landscape	Moderate ✓
ONC		Agreed with assessment of effects	
ONFL		Agreed with assessment of effects	

Overall I agree with the assessment of effects for this site, but note the potential for increased effects with the potential location of Horseshoe and Richmond South farms so close together.

Hudson Associates:

Cumulative Effects have been reconsidered and amendments made to incorporate legal advice provided by MPI which post-dates the Drakeford Williams Review.

Proposed site: Horseshoe Bay Baseline		
	Comment	Rating Agree with rating ✓
Natural Science Baseline:	<ul style="list-style-type: none"> • Strong revegetation backdrop • Significant ecological features 	High-Moderate ✓
Perceptual/ Sensory Baseline:	<ul style="list-style-type: none"> • Distinctive landform viewed from air but less memorable from the water • High visual amenity 	High-Moderate ✓
Site Associative Baseline:	<ul style="list-style-type: none"> • There is not enough information on wider values due to other expert information not being available 	Moderate ✓
OVERALL RATING		
Natural character baseline		High-Moderate ✓
Outstanding natural character	Agreed that site does not meet ONC	
Landscape baseline		High-Moderate ✓
Outstanding natural landscape or feature	Agreed that site itself does not meet ONF	
Site Sensitivity:	Concur that there are no unique attributes or factors to review attributed site sensitivity values.	

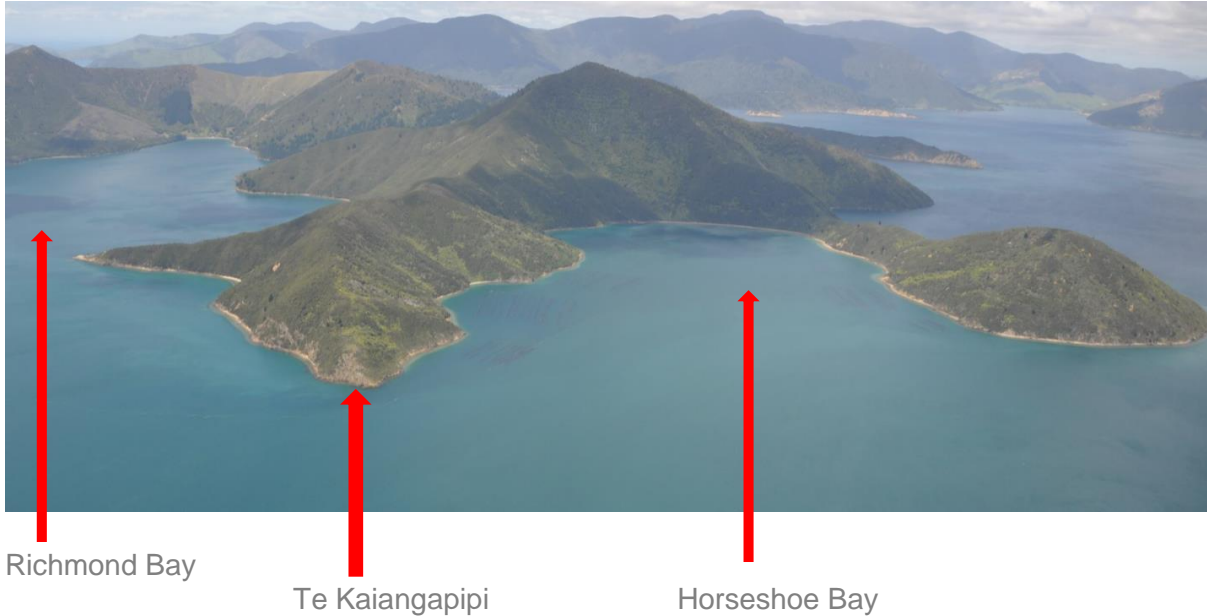
Overall assessment of Effects: Horseshoe Bay			
Character component	Existing Baseline Rating	Effects	Resultant rating
<i>Natural science</i>	High-Moderate		
<i>Perceptual</i>	High-Moderate	<ul style="list-style-type: none"> The report notes re introduction of the proposed new structures. <i>'The proposal would be a "fit" with the extensive mussel farming at the site, although the fairly unobtrusive nature of the mussel farms and lack of other highly visible productive uses such as pasture/farming, has meant that character of this bay has remained moderately high in perceived naturalness.'</i> <p>I would be careful with statements like this (although it does have a modifier on it re the unobtrusiveness of mussel farms) because then the reverse would be that a site with no mussel farms is <i>not</i> a fit for a salmon farm. Eg the Mid channel Waitata site.</p> <p>Hudson: Point noted and comment amended to "fit with productive context".</p>	
<i>Associative</i>	Moderate	<ul style="list-style-type: none"> The site faces Maud Island. Will there be any reverse effects on Maud Island ONF or ONC values? <p>Hudson: Comment on Maud Island is included in the Visual Appraisal.</p>	
Overall baseline Natural character	High-Moderate	Resultant Natural character	Moderate ✓
Overall baseline Landscape	High-Moderate	Resultant Landscape	Moderate ✓
ONC		Agreed with assessment of effects	
ONFL		Agreed with assessment of effects	

Overall I agree with the assessment of effects for this site, but note the potential for increased effects with the potential location of Horseshoe and Richmond South farms so close together.

Hudson Associates:

Cumulative Effects have been reconsidered and amendments made to incorporate legal advice provided by MPI which post-dates the Drakeford Williams Review.

Combined Effects: Horseshoe Bay + Richmond South



Aerial view of 2 sites (Hudson Associates photo)

Overview

The report concludes re cumulative effects 'The southern length of the Reach contains the sites for two proposed farms (Richmond South and Horseshoe). The two farms are separated by the headland that lies between Richmond Bay and Horseshoe Bay, creating sufficient separation to remove adverse cumulative effects'. Page 5

I disagree. I would describe the 2 farms as being located side by side with only the headland separating them. Viewed from a distance they potentially will be seen simultaneously or immediately one after the other.

This is where an overview of viewing distances (as discussed in Part 1 Methodology review) is necessary to demonstrate what viewing distances would do to visibility for the 2 farms. ie will viewers 800m off the Te Kaiangapi headland see both the farms in a single viewshaft, and if so, are they visually prominent?

The only data I have located, from the NZKS LAV report (Proposed Salmon Farms, Marlborough Sounds Natural Character, Landscape and Visual Amenity Effects Final Report Prepared for New Zealand King Salmon by Boffa Miskell Limited August 2011) contains the following table.

I note that the 2016 proposed farms have been described as having more recessive materials and a more sympathetically designed barge and accommodation block so viewing distances potentially can be reduced.

Table 6A: Visibility of Salmon Farms from the water

Distance	0-500m	0.5-1km	1-2km	2-3km	3km and beyond
Impact on view	Dominant	Prominent	Visible	Partially visible or minor part of the view	Components become difficult to see

I would regard the cumulative effects of these 2 farms as less than the cumulative effects of the Blowhole farms, due to their location within the Reach and away from the 'gateway' to Cook Strait. However they are reasonably close to Maude Island which has both ONC and ONF values, and at the very least the potential for any reverse effects should be evaluated.

Character component	Existing Baseline Rating (for each site)	Effects	Resultant rating
<i>Natural science</i>	High-Moderate	<ul style="list-style-type: none"> Unchanged from individual Richmond North and Horseshoe Bay sites 	
<i>Perceptual</i>	High-Moderate	<ul style="list-style-type: none"> Jointly form around and diminish one of the sequence of headlands in the Reach 	
<i>Associative</i>	Moderate	<ul style="list-style-type: none"> Associative values are elevated due to the proximity of these sites to Maud Island context 	
Overall baseline Natural character	High-Moderate	Resultant Natural character	Moderate
Overall baseline Landscape	High-Moderate	Resultant Landscape increased effects for the 2 sites when considered together.	Moderate- Low
ONC		Not part of an ONC but will it affect Maude Island natural character values?	
ONFL		Not part of an ONF but will it affect Maude Island landscape values?	

Hudson Associates:

This comes down to a professional difference of opinion. Hudson Associates has re-reviewed its position on cumulative effects, and has made amendments to incorporate legal advice provided by MPI which post-dates the Drakeford Williams Review.

Proposed site: Tipi Bay Baseline		
	Comment	Rating Agree with rating ✓
Natural Science Baseline:	<ul style="list-style-type: none"> Revegetation is well established, although further progression to broad leaved species may take much longer in these exposed conditions. Given the Reserve status of the land, one can expect on-going increasing vegetation values. <p><i>Hudson: It is likely that wilding pines will continue to spread, having a reducing effect on natural science values.</i></p> <ul style="list-style-type: none"> Notable benthic communities and reef features identified at the site 	High-Moderate ✓
Perceptual/ Sensory Baseline:	<ul style="list-style-type: none"> Perceived Naturalness: 'Further into the Sound a salmon farm is also visible on the other side of the Channel and Ngamahau salmon farm is on the opposite side of the Channel.' (Page 42) Are these not the same farm? Ngamahau is the only salmon farm on the opposite side of the channel in this area. <p><i>Hudson: Typo amended.</i></p> <p>However I disagree with the reference to existing salmon farms for the site specific evaluation as it is not consistent with other site assessments such as Richmond South with Kopaua farm in the same bay. In other words, the assessment baseline should be consistent – either specific to the site and the very immediate context or acknowledging neighbouring farms.</p> <p><i>Hudson: The existing salmon farm in Tory Channel has an amplified effect within the context due to the narrowness and strong enclosure of the Channel. At the Richmond South site the existing Richmond farm has less of an influence due to the expensive context and the greater distance between the existing farm and the proposed site. Comment has been added to the Richmond South assessment in this regard.</i></p> <ul style="list-style-type: none"> I would rate this as Moderate given the lack of development, the strong 'gateway' association and the remoteness. Even though the site is on the ferry route, it is still perceived as natural & remote <p><i>Hudson: This is a professional difference of opinion.</i></p>	Moderate-Low x
Site Associative Baseline:	<ul style="list-style-type: none"> Agreed 	High-moderate ✓
OVERALL RATING		
Natural character baseline		High-moderate ✓
Outstanding natural character	Agreed that site does not meet ONC	
Landscape baseline		Moderate ✓

Outstanding natural landscape or feature	Agreed that site itself does not meet ONF but it directly adjoining a landform with an ONF rating due to its 'gateway' location	
Site Sensitivity:	Agreed	

Overall assessment of Effects: Tipi Bay			
Character component	Existing Baseline Rating	Effects	Resultant rating
<i>Natural science</i>	High-Moderate	<ul style="list-style-type: none"> Potential effects on notable benthic communities 	
<i>Perceptual</i>	Low-Moderate I rate this as Moderate	<ul style="list-style-type: none"> Will it be seen from across the channel from the house in Ngamahau Bay? 'Surrounding the site (headlands either side) provide some enclosure for the site, and will mean the proposed structures will appear reasonably tucked away'; (Table, Page 45). I note the farm structure will sit outside the headlands, and is effectively located in Tory Channel. 	
<i>Associative</i>	High-Moderate	<ul style="list-style-type: none"> Brings development closer to the 'gateway', particularly on the eastern side of channel 	
Overall baseline Natural character	High-moderate	Resultant Natural character <i>'There will be adverse effects on the perceptual/sensory aspect of natural character from this proposal, including a reduction in perceived naturalness. However, the site currently appears as only <u>moderately natural</u>' (Page 44) The natural character has been assessed as High-moderate</i> Hudson: Wording amended.	Low ✓
Overall baseline Landscape	Moderate	Resultant Landscape	Moderate-Low ✓
ONC		Agreed with assessment of effects	
ONFL		Potential effects on rating of adjoining Arapawa Island and East and Wests Heads ONF Hudson: I disagree.	

I agree that on this site the ratings will drop at least 2 rather than 1 point (on the 7 point scoring system with the introduction of a salmon farm. This is due in part to the increased sensitivity as this would be the first marine farm on entry from Cook Strait, and in part to the notable marine ecological features and consequent high benthic values.

Proposed site: Motukina Point Baseline		
	Comment	Rating Agree with rating ✓
Natural Science Baseline:	<ul style="list-style-type: none"> High benthic values 	High-Moderate ✓
Perceptual/ Sensory Baseline:	<ul style="list-style-type: none"> Geometry of pines is less visible in close views – just see dense swathe of vegetation, with variation between pines and kanuka/Manuka so regard Coherence as Moderate Question why the proximity of Clay Point is noted for this site but not for Tio Point I would evaluate this baseline as Moderate due to the values of the natural wider setting, the location on Tory Channel and the moderate perceived naturalness I would rate perceptual values as Moderate <p><i>Hudson: This is a difference of professional opinion. In our opinion the managed character of the land is a defining characteristic, power-poles and other structures are visible, and perceived naturalness is Low-Moderate.</i></p>	Moderate-Low x
Site Associative Baseline:	<ul style="list-style-type: none"> Site is visible from a number of houses both sides of Tory Channel <p><i>Hudson: Covered in the Visual Appraisal.</i></p>	High-Moderate ✓
OVERALL RATING		
Natural character baseline		High-Moderate ✓
Outstanding natural character	Agreed that site does not meet ONC	
Landscape baseline	<p>I rate the landscape baseline as High-Moderate</p> <p><i>Hudson: A difference of professional opinion. Comparisons of ratings between sites has also had to be a consideration.</i></p>	Moderate x
Outstanding natural landscape or feature	Agreed that site itself does not meet ONF	
Site Sensitivity:	Concur with description of site sensitivity given the marine ecological features and existing dwelling in the bay. Agree that site is sensitive to the addition of a Salmon Farm.	

Overall assessment of Effects: Motukina Point			
Character component	Existing Baseline Rating	Effects	Resultant rating
<i>Natural science</i>	High-Moderate		
<i>Perceptual</i>	Moderate-Low	<ul style="list-style-type: none"> Look at wider viewing audience & other dwellings that may look across Tory Channel to farm plus increased sensitivity of these residents post the NZKS Hearing 	
<i>Associative</i>	High-moderate	<ul style="list-style-type: none"> High values due to number of site users and residents and location of site on headland. 	
Overall baseline Natural character	High-Moderate	Resultant Natural character	Low ✓
Overall baseline Landscape	Moderate	Resultant Landscape I rate the L baseline as High-Moderate	Moderate-Low ✓
ONC		Agreed with assessment of effects	
ONFL		Agreed with assessment of effects	

I agree with the overall evaluation for although I have some concerns that the perceptual rating should be Moderate rather than Moderate-Low which would raise the baseline landscape evaluation to High-Moderate due to what I regard as a moderate cohesiveness and perceived naturalness.

Hudson Associates: This is a difference of professional opinion.

We have re-reviewed and made minor changes for our ratings for this site and made some minor adjustments for consistency between sites, although our assessment of the Landscape Baseline Rating remains unchanged.

Proposed site: Tio Point Baseline		
	Comment	Rating Agree with rating ✓
Natural Science Baseline:	<ul style="list-style-type: none"> Is that natural landform at the coastal edge or erosion caused by wash from the ferry before speeds were lowered? <p><i>Hudson: A comment added on this has been added.</i></p> <ul style="list-style-type: none"> Any effects from Clay Point? <p><i>Hudson: No comment on this from Niwa.</i></p>	Moderate ✓
Perceptual/ Sensory Baseline:	<ul style="list-style-type: none"> Naturalness reduced to some extent by proximity of existing salmon farms Clay Point and Te Pangu Memorable/visible site in an angle of the channel 	Moderate ✓ Or potentially High-Moderate due to site location
Site Associative Baseline:		High – Moderate ✓
OVERALL RATING		
Natural character baseline		Moderate ✓
Outstanding natural character	Agreed that site does not meet ONC	
Landscape baseline	<p>Potential High-Moderate rating due to pivotal location on Tory Channel</p> <p><i>Hudson: A difference of professional opinion. Comparisons of ratings between sites has also had to be a consideration.</i></p>	Moderate X
Outstanding natural landscape or feature	Agreed that site itself does not meet ONF	
Site Sensitivity:	Concur re natural character some sensitivity due to the notable marine communities identified in the vicinity but not unduly sensitive t from a landscape perspective.	

Overall assessment of Effects: Tio Point			
Character component	Existing Baseline Rating	Effects	Resultant rating
<i>Natural science</i>	Moderate		
<i>Perceptual</i>	Moderate	•	
<i>Associative</i>	High-Moderate	•	
Overall baseline Natural character	Moderate	Resultant Natural character	Moderate-Low ✓
Overall baseline Landscape	Moderate	Resultant Landscape In my opinion, landscape values will be reduced, but I would assess baseline as High-Moderate. <i>Hudson: This comes back to a problem with the coarseness of the rating scale. We agree there will be a lowering effect on landscape values, and had seen that as being not large enough a change to warrant a 1-point change in rating, when considered/compared with judgements at other sites. However, this is being taken to mean there will be no effects. Accordingly we have amended the resultant Landscape baseline to Low-Moderate for the sake of clarity.</i>	Moderate ✓
ONC		Effects 'Not significant.' Is this Low or Very Low? <i>Hudson: Terminology with regards to effects has been guided by the planner on the project.</i>	
ONFL		Agreed with assessment of effects	

Overall I agree with the effects on the natural character and landscape ratings although I would start with a High-moderate landscape value and a resultant landscape value of Moderate.

However I do not consider that the site can be viewed in isolation from the wider receiving aquaculture context. The site cannot be viewed in isolation as will pass existing salmon farm(s) whether approaching the site from Cook Strait or Picton.

Hudson Associates: This is cumulative effects, which have been considered separately.



Tio Point
site

*Aerial photo taken in a slightly wider site context with Clay Point in the foreground
(Hudson Associates photo)*

Proposed site: Te Weka Bay Baseline		
		Rating Agree with rating ✓
Natural Science Baseline:	<ul style="list-style-type: none"> Statement is <i>'the coastal margin is unmodified'</i>(page 59) but is this true? There is currently a jetty and presumably some modification where the cables on the poles down the ridgeline go underground. Or are they solely for use of the dwelling and do not extend across the channel? <p>Hudson: Error has been corrected.</p> <ul style="list-style-type: none"> <i>'Natural science baseline ratings (marine and terrestrial) at the site are both moderate at present'.</i> (Page 62) In fact Marine values are High and Terrestrial values are Moderate-Low with final rating High-moderate. <p>Hudson: Error has been corrected.</p>	High-Moderate ✓
Perceptual/ Sensory Baseline:	<ul style="list-style-type: none"> Report (page 60) <i>'Summary of Perceptual Characteristics: Visible tracking on slopes, but few structures'</i>. This needs updating as newly installed line of poles is very visible. <p>Hudson: Edits made.</p> <ul style="list-style-type: none"> Site located at a pivotal point in the channel for water traffic, and the ferries in particular. 	Low-Moderate ✓
Site Associative Baseline:	<ul style="list-style-type: none"> No mention of adjacent Scenic Reserve in Site Associative Baseline. 	High ✓
OVERALL RATING		
Natural character baseline		High-Moderate ✓
Outstanding natural character	Agreed that site does not meet ONC	
Landscape baseline		Moderate ✓
Outstanding natural landscape or feature	Agreed that site itself does not meet ONF	
Site Sensitivity:	Agree that the associational values of the boat traffic and presence of a dwelling within the bay have an influence on the sensitivity of this site in terms of landscape values. Also the site has a number of significant ecological features in the vicinity which have been identified in the benthic assessment, which increase site sensitivity to a Salmon Farm in terms of Natural Character. However the recently installed power / telecommunication poles may lower the sensitivity of the site perceptual and associative values.	

Overall assessment of Effects: Te Weka Bay			
Character component	Existing Baseline Rating	Effects	Resultant rating
<i>Natural science</i>	High-Moderate		
<i>Perceptual</i>	Moderate-Low	<ul style="list-style-type: none"> 'Views from small boats will be more side on, with viewers more likely to perceive the structure's height out of the water than its whole size.' (Page 62). I do not agree - small boats will run along the length of the farm. <p>Hudson: Wording edited. Small boats will not perceive the m² area of the farms in the same way as from a more elevated viewpoint.</p>	
<i>Associative</i>	High	<ul style="list-style-type: none"> Assessment of Effects page 63 'There will also be adverse effects on the associative values of the adjacent Scenic Reserve, although these are reduced due to the proliferation of wilding pines that currently exist throughout it. This may change in time if the pines are removed.' I do not agree with this statement. The scenic reserve values exist with associative values as much as natural science values. This statement confuses the two value sets. <p>Hudson: Wording edited.</p>	
Overall baseline Natural character	High-Moderate	Resultant Natural character	Moderate ✓
Overall baseline Landscape	Moderate	Resultant Landscape	Low-Moderate ✓
ONC		Agreed with assessment of effects	
ONFL		Agreed with assessment of effects	

The natural character rating has not been updated to reflect the impact of the telecommunication poles, not just for their visual effects but the effects on perceptual and associative values, representing 21st century infrastructure's arrival in this part of Tory Channel (not just what they look like but what they represent).

It may reduce baseline natural character and landscape values. Alternatively the lowered baseline values may reduce the sensitivity of the salmon farm, and leave resultant values as presented.

Hudson Associates: Telecommunication poles have been taken into account in the ratings. Wording has been amended to clarify. Ratings have been re-reviewed and in our opinion are correct.

Existing Sites

The six existing salmon farm sites being considered for relocation are:

Pelorus Sound	<i>Waihinau</i>
	<i>Forsyth Bay</i>
	<i>Crail Bay x 2</i>
Queen Charlotte Sound	<i>Ruakaka</i>
	<i>Otanerau</i>

Existing site: Waihinau Baseline		
	Comment	Rating Agree with rating ✓
Natural Science Baseline:	<ul style="list-style-type: none"> Mod-high- veg appears to be progressing into broadleaf species <i>Hudson: Primarily early stage regen with groups of pines and wilding pines.</i> Needs to be clarification on the weighting of the attributes. Terrestrial values have been rated High-Moderate and Marine values as Moderate-Low and on the basis of other evaluations, I would expect the Natural Science rating to be Moderate. Does this mean that benthic values have a heavier weighting than terrestrial values? <i>Hudson: Ratings have been re-reviewed and adjusted for consistency. Marine ecology has been slightly weighted in the Natural Science ratings in the Hudson Review where the rating scale has forced a choice, (as outlined in the response comments in Part1 of this report), due to the fact that marine farms will have no impact on terrestrial ecology.</i> 	Moderate-Low x
Perceptual/ Sensory Baseline:	<ul style="list-style-type: none"> High coherence and picturesque qualities, affected mainly by the presence of the high visual impact salmon farm 	High-Moderate ✓
Site Associative Baseline:	<ul style="list-style-type: none"> Classic Sounds bay settlement 	High ✓
OVERALL RATING		
Natural character baseline		Moderate ✓
Outstanding natural character	Agreed that site does not meet ONC	
Landscape baseline		High-Moderate ✓
Outstanding natural landscape or feature	Agreed that site itself does not meet ONF as it sits outside the Pelorus 'gateway'	
Site Sensitivity:	Agree nearby ONF and settlement increases the site sensitivity	

Overall assessment of Effects: Waihinau			
Character component	Existing Baseline Rating	Effects	Resultant rating
<i>Natural science</i>		<ul style="list-style-type: none"> Removal of farm will have beneficial effects on marine ecology 	
<i>Perceptual</i>		<ul style="list-style-type: none"> Removal of farm will have beneficial effects on perceived naturalness and transient values 	
<i>Associative</i>		<ul style="list-style-type: none"> Removal of farm will have beneficial effects on associative values 	
Overall baseline Natural character	Moderate ✓	Resultant Natural character	High ✓
Overall baseline Landscape	High-moderate ✓	Resultant Landscape	High ✓
ONC		Agreed with assessment of effects	
ONFL		The distinctive form of Waihinau Bay and the Turner Peak backdrop create a memorable landform/landscape feature. However I agree that the early stages of revegetation, the settlement and mussel farms in the bay will preclude the existing ONF extending further west and south to include around the bay.	

I agree with overall ratings although would prefer to have any form of weighting clarified; it appears that marine/benthic values have been weighted more heavily than terrestrial values.

Hudson Associates: Marine ecology has been slightly weighted in the Natural Science ratings in the Hudson Review where the rating scale has forced a choice, (as outlined in the response comments in Part 1 of this report), due to the fact that marine farms will have no impact on terrestrial ecology.

Proposed site: Forsyth Bay Baseline		
	Comment	Rating Agree with rating ✓
Natural Science Baseline:	<ul style="list-style-type: none"> Unmodified landform and complex cover of regenerating bush with broadleaf species succeeding scrub in gullies. Question how <i>High</i> terrestrial ecology + <i>Moderate-Low</i> marine ecology values = High-Moderate Natural science values <p><i>Hudson: Ratings have been reviewed and adjusted for consistency.</i></p>	High-Moderate x
Perceptual/ Sensory Baseline:	<ul style="list-style-type: none"> Rugged expressive landform High perceived remoteness and naturalness diminished by aquaculture and salmon farm in particular 	High-Moderate ✓
Site Associative Baseline:	<ul style="list-style-type: none"> No comment impact of lighting on night sky values <p><i>Hudson: All sites have been edited for consistency with regards to comments on night sky darkness and lighting on existing mussel farms.</i></p>	Moderate ✓
OVERALL RATING		
Natural character baseline		High-Moderate ✓
Outstanding natural character	Agreed that site does not meet ONC	
Landscape baseline		High-Moderate ✓
Outstanding natural landscape or feature	Site is not part of the Pelorus gateway and I agree that it does not meet ONF	
Site Sensitivity:	Would describe the existing site sensitivity as being reflected in Landscape baseline.	

Overall assessment of Effects: Forsyth Bay			
Character component	Existing Baseline Rating	Effects	Resultant rating
<i>Natural science</i>	High-Moderate	<ul style="list-style-type: none"> Removal of farm highly beneficial for benthic values 	High
<i>Perceptual</i>	High-Moderate	<ul style="list-style-type: none"> Agree that increased naturalness and remoteness at the site will have beneficial flow-on effects to those nearby areas (Forsyth Island and Bird Island) which are classified as ONF 	Very high-High <i>Hudson: This is not a rating option on the NZILA 7-point scale.</i>
<i>Associative</i>	Moderate	<ul style="list-style-type: none"> There is not enough detailed information on Associative values that might be affected/improved by the removal of the salmon farm, or where new activities might occur with the removal of the farm. I would expect this information to be contained in other expert review such as Cultural Values and Tourism and Recreation <i>Hudson: Information has since become available and been included.</i> 	High
Overall baseline Natural character	High-Moderate ✓	Resultant Natural character	High ✓
Overall baseline Landscape	High-Moderate ✓	Resultant Landscape	High ✓
ONC		Agreed with assessment of effects	
ONFL		Agreed with assessment of effects	

Proposed site: Crail Bay x 2 Baseline		
	<p>Comment</p> <p>The two Crail Bay sites are located either side of a consented mussel farm site, and are viewed as a single farm.</p>	<p>Rating</p> <p>Agree with rating ✓</p>
Natural Science Baseline:	<ul style="list-style-type: none"> • Low benthic values • Complex mix of regenerating native bush in various stages of succession plus some development/modification in the form of dwellings and forestry earthworks 	High-Moderate ✓
Perceptual/ Sensory Baseline:	<ul style="list-style-type: none"> • Perceived naturalness rating out of line with other existing farm sites in that the sites are not currently in use and none of the usual salmon farm infrastructure is present on site. <p><i>Hudson: Under the existing consent King Salmon could decide to put structures back tomorrow. The ratings are therefore based on what is currently permitted and could be there at any time.</i></p>	High ✓
Site Associative Baseline:	<ul style="list-style-type: none"> • I do not have enough information to make an assessment. Presence of DoC reserves potentially would elevate values? 	Moderate ✓
OVERALL RATING		
Natural character baseline		High-Moderate ✓
Outstanding natural character	Agreed that currently site does not meet ONC	
Landscape baseline		High-Moderate ✓
Outstanding natural landscape or feature	Agreed that site itself does not meet ONF	
Site Sensitivity:	<p>I do not agree that 'the site surrounds are considered to be suited to the absorption of these Salmon Farms in terms of Landscape values and this reduces sensitivity from a landscape perspective.' Despite the presence of other aquaculture activities, the scale of the adjacent landform, the expanse of the bay and the proximity of an identified ONF on the adjacent ridgeline make the landscape sensitive to the impacts of salmon farm activity.</p> <p><i>Hudson: The productive character of the bay and its context is a defining characteristic here, reducing site sensitivity.</i></p>	

Overall assessment of Effects: Crail Bay x 2			
Character component	Existing Baseline Rating	Effects	Resultant rating
<i>Natural science</i>	High-Moderate	<ul style="list-style-type: none"> Improved benthic values 	
<i>Perceptual</i>	High	<ul style="list-style-type: none"> Increase in perceived naturalness 	
<i>Associative</i>	Moderate	<ul style="list-style-type: none"> Potential for moderate increase in values wrt DoC reserves 	
Overall baseline Natural character	High-Moderate	Resultant Natural character	High ✓
Overall baseline Landscape	High-Moderate	Resultant Landscape Resultant rating will be High but potential to be Very High as perceived naturalness and associative values increase	High ✓
ONC		Agreed with assessment of effects	
ONFL		Despite presence of mussel farms, potential over time to extend existing ONF to mark entry gateway to Crail Bay	

I agree with the evaluation although it is not completely clear with regard to the existing and resultant ratings that the sites are not currently in use and none of the usual salmon farm infrastructure is visibly present on site. It would be useful to note this in the description of the *Proposed change: Surrender of the site* (Page 80)

Hudson Associates: Under the existing consent King Salmon could decide to put structures back tomorrow. The ratings are therefore based on what is currently permitted and could be there at any time. Edits were made to reflect this post the report going to Drakeford Williams.

Existing site: Ruakaka Baseline		
	Comment	Rating
		Agree with rating ✓
Natural Science Baseline:	<ul style="list-style-type: none"> Advanced revegetation, particularly in gullies and on south facing slopes. 	High-moderate ✓
Perceptual/ Sensory Baseline:	<ul style="list-style-type: none"> High impact salmon farm (older design) reduces perceived naturalness 	Moderate ✓
Site Associative Baseline:	<ul style="list-style-type: none"> I would rate this Moderate-high due to its key location and the importance of its site in Queen Charlotte Sound <p><i>Hudson: Account has been taken of the position of the site and the increased viewing audience, although I consider that views from the ferry are less impacting than views from smaller boats travelling straight past the site.</i></p>	Moderate X
OVERALL RATING		
Natural character baseline	Queen Charlotte Sound to the west has very high marine ratings and high terrestrial ratings	High-moderate ✓
Outstanding natural character	Agreed that site does not meet ONC but potential long term to increase to ONC rating as benthic values improve	
Landscape baseline	Sited in a bay surrounded by ONF	High-moderate ✓
Outstanding natural landscape or feature	Agreed that site itself does not meet ONF but potential to elevate site to ONF	
Site Sensitivity:	Agree Ruakaka Bay is very sensitive to the presence of a salmon farm due to the enclosure of this location, high visual amenity and high visibility boat traffic on Queen Charlotte Sound. The low flow rate increases the sensitivity of the benthic environment.	

Overall assessment of Effects: Ruakaka			
Character component	Existing Baseline Rating	Effects	Resultant rating
<i>Natural science</i>	High-moderate		
<i>Perceptual</i>	Moderate	<ul style="list-style-type: none"> Large viewing audience on ferry plus dwelling north of Ngatakore Point across the bay <p><i>Hudson: Building on Ngatakore Point is listed as Outbuilding/Storage Sheds, and is likely to have views of the site blocked by landform.</i></p>	
<i>Associative</i>	Moderate	<ul style="list-style-type: none"> I would increase the associative values, due to the importance of QCS as a recreational hub in the wider sounds. The removal of this farm would leave Queen Charlotte Sound free from any type of marine farm. <p><i>Hudson: Rating has been reviewed and adjusted.</i></p>	Very high
Overall baseline Natural character	High-moderate	Resultant Natural character	High ✓
Overall baseline Landscape	High-moderate	Resultant Landscape	Very high ✓
ONC		Agreed with assessment of effects. Long term potential to increase to ONC rating as benthic values improve	
ONFL		Agreed with assessment of effects. Potential to incorporate site into existing ONF once farm is removed	

Proposed site: Otanerau Baseline		
	Comment I did not visit this site, so my assessment is based on the information in the Hudson Report and the MCs and MLS	Rating Agree with rating ✓
Natural Science Baseline:	<ul style="list-style-type: none"> • Forestry inhibits terrestrial values • Farm has lowered site marine values in MCS 	Low ✓
Perceptual/ Sensory Baseline:	<ul style="list-style-type: none"> • Strong 'working character' to southwest edge of East Bay 	Moderate-Low ✓
Site Associative Baseline:	<ul style="list-style-type: none"> • Heritage and tangata whenua values 	Moderate ✓
OVERALL RATING		
Natural character baseline		Low ✓
Outstanding natural character	Agreed that site does not meet ONC	
Landscape baseline		Moderate-Low ✓
Outstanding natural landscape or feature	Agreed that site does not meet ONF	
Site Sensitivity:	Agree that productive forestry and aquaculture activity is the dominant characteristic in this location and the site is considered to have a reduced level of landscape sensitivity to the presence of a salmon farm.	

Overall assessment of Effects: Otanerau			
Character component	Existing Baseline Rating	Effects	Resultant rating
<i>Natural science</i>	Low		
<i>Perceptual</i>	Moderate-Low	•	
<i>Associative</i>	Moderate	•	
Overall baseline Natural character	Low	Resultant Natural character	Moderate-Low ✓
Overall baseline Landscape	Moderate-Low	Resultant Landscape	Moderate ✓
ONC		Agreed with assessment of effects	
ONFL		Agreed with assessment of effects	

I agree with the overall evaluation. While the farm is sited relatively close to Queen Charlotte Sound and at the edge of the Arapawa Island and East and West Heads ONL, it is set back into East Bay and within a smaller cove backdropped by forestry. Removing the farm will improve benthic effects and increase visual amenity but existing mussel farms and forestry continue to limit perceptual and associative values.

Summary Site Assessment

The table below is copied from the Hudson Report, using the same colour graphic to illustrate where the peer reviewer rating differs from the Hudson rating.

Salmon Farm	Location	Existing Baseline		Resultant Rating	
		Natural Character	Landscape	Natural Character	Landscape
Proposed New Site (Potential Addition)					
Blowhole Point North	Pelorus Sound	Moderate	Moderate	Moderate-Low	Moderate-Low
Blowhole Point South	Pelorus Sound	Moderate	High-Moderate	Moderate-Low	Moderate
Landscape Cumulative effects rating on combined farms above					DW=Low
Mid-channel Waitata	Pelorus Sound	Moderate DW = High	High	Moderate-Low	High-Moderate DW =Moderate
Richmond South	Pelorus Sound	High-Moderate	High-Moderate	Moderate	Moderate
Horseshoe Bay	Pelorus Sound	High-Moderate	High-Moderate	Moderate	Moderate
Landscape Cumulative effects rating on combined farms above					DW= Moderate-Low
Tipi Bay	Tory Channel	High-Moderate	Moderate	Low	Low-Moderate
Motukina Point	Tory Channel	High-Moderate	Moderate DW = High-Moderate	Low	Moderate-Low
Tio Point	Tory Channel	Moderate	Moderate DW = High-Moderate	Moderate-Low	Moderate
Te Weka Bay	Tory Channel	High-Moderate	Moderate	Moderate	Moderate-Low
Existing Site (Potential Removal)					
Waihinau Bay	Pelorus Sound	Moderate	High-Moderate	High	High
Forsyth Bay	Pelorus Sound	High-Moderate	High-Moderate	High	High
Crail Bay (2 Sites)	Pelorus Sound	High-Moderate	High-Moderate	High	High
Ruakaka Bay	Queen Charlotte Sound	High-Moderate	High-Moderate	Very High	Very High
Otanerau Bay	Queen Charlotte Sound	Low	Moderate-Low	Moderate-Low	Moderate

Hudson Assessment Rating Range

Very High -----Moderate----- Very Low

Very High	High	High-Moderate	Moderate	Moderate - Low	Low	Very Low
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In summary

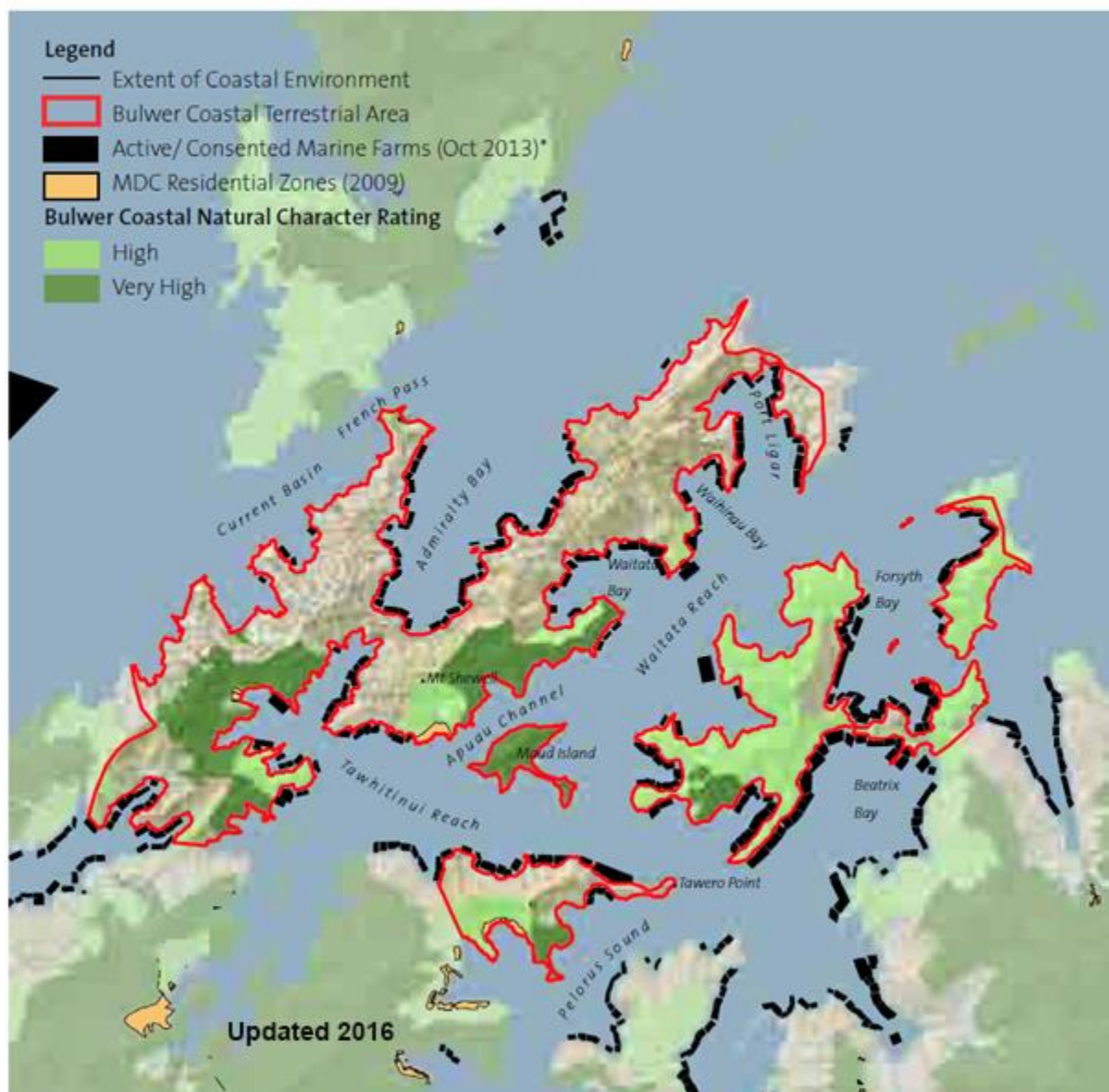
Mid channel Waitata	<p>The site is well off shore and away from coastal margins. Lowering the natural science values because of the distant terrestrial /marine modifications indicates that this site does not fit the methodology process. The report considered the site to have a low sensitivity due in part to the absorption capacity of the expansive scale of the Reach. I do not agree given the location of the site in the middle of the reach, which presumably is the most trafficked area and most visible from the water.</p> <p>The outcome is:</p> <ul style="list-style-type: none"> • Natural Character drops from the Baseline High to Resultant Moderate-Low, a decrease of 3 points on the rating scale. • Landscape drops from a Baseline rating High to a Resultant Moderate. This is a decrease of 2 points on the rating scale.
Motukina Point	<p>I regard the site as having a Moderate Perceptual rating due to its Moderate coherence, the values of the natural wider setting, the location on Tory Channel and the Moderate perceived naturalness. This elevates the Landscape baseline to High-Moderate.</p> <p>The outcome is:</p> <ul style="list-style-type: none"> • Landscape drops from a Baseline rating High-Moderate to Moderate-Low, a decrease of 2 points on the rating scale.
Combined Blowhole North and South sites	<p>The location of two farms at this site will have an effect on the ONF values given the high associative and perceptual values of the gateway landscape.</p> <p>The outcome is:</p> <ul style="list-style-type: none"> • Landscape drops from a Baseline rating Moderate to Low, a decrease of 2 points on the rating scale.
Combined Richmond South and Horseshoe sites	<p>The location of two farms around a headland in the reach elevates their visibility and reduces the perceived naturalness of the landform. The site is opposite Maude Island and has the potential to affect its ONC and ONF values.</p> <p>The outcome is:</p> <ul style="list-style-type: none"> • Landscape drops from a Baseline rating High-Moderate to Moderate-Low, a decrease of 2 points on the rating scale.

Hudson Associates: The above points have been addressed within the site assessment tables in the earlier part of the report, and in the Cumulative Effects section. Ratings have been reviewed and some slight amendments made for consistency across sites. Consistency and comparison of ratings from site

to site has been a consideration. We are comfortable with the ratings we have come to. There are always likely to be some differences in professional opinion on some aspects, which is why adherence to an accepted methodology is important.

Cumulative Effects

Site: Waitata Reach



Existing farms in Waitata Reach

Diagram from MCS indicating active and consented marine farms as of October 2013 with the addition of salmon farms consented and constructed between 2013-2016.

There are 3 salmon farms currently sited in Waitata Reach:

- Waihinau is sited in Waihinau Bay, set well back from Waitata Reach, is an older design, a large farm with pale grey pens and infrastructure and a barge. It is proposed to remove this farm;
- Waitata is sited at the side of Waitata Reach, alongside Whitehouse Rock headland that separates Waitata and Waihinau Bays;
- Kopaua (Richmond) sits slightly back into Richmond Bay, back from the Taipipi headland but only a few hundred metres from Waitata Reach channel. Both Waitata and Kopaua have a split level 'boatshed' accommodation block and a state of the art barge designed to look more boat-like in terms of its bulk, layout and overall silhouette. Buildings, barge and pens are recessive dark green;



Newer model barge (*Photograph taken from NZKS website*)

There are also large numbers of existing mussel farms, as shown on plan above, although these are located in bays and set back from the main channel. They have a low visual presence both day and night for water traffic on Waitata Reach but are visible for boats accessing the bays.

Waitata Reach character

Waitata Reach is the entry point into Pelorus Sound and runs between the open waters of Cook Strait and Tawhitinui Reach at Maud Island. The entry point into Pelorus Sounds from Cook Strait is through the rugged, exposed and dramatic landforms at Te Akaroa (West Entry Point) and Kaitira (East Entry Point) and into the more sheltered Port Ligar and Waitata Reach. Waitata Reach is a broad body of water up to 4km wide and 12km long, contained by a convoluted (Peter Rough uses the term 'labyrinth'¹) landscape of hills, bays and headlands, and further to the south by Maud Island. Due to the width of the water channel and the relatively low ridgelines, the landform encloses rather than dominates the reach.

Vegetation patterns are variable and fragmented. Land to the west of the reach land has been farmed although large areas are now reverting, particularly on the steeper faces on the coastal

¹ NZKS BOI Peter Rough Evidence (paragraph 41)

edge where the dry, steep hill slopes slip directly into the sea; land to the east has more extensive areas of native bush. There are areas of plantation forest on both sides of the reach. There are a number of dwellings in the reach. Due to the very limited road access, many are accessible only by boat but buildings and their accompanying jetties and boatsheds are generally set back into bays with a low visual presence.

Overall Waitata Reach appears to be both more remote and less accessible than Tory Channel. The MCS describes the marine landscape clearly: *'due to the scale of the waterways, surface modification appears small and experiential values are relatively high'*.²

I travelled Waitata Reach by boat and visited proposed and existing sites in July 2016 but I am not familiar with the place and its landscape to the same level of detail as the landscape architects who undertook the review of the proposed salmon farms sites. To supply further detail and analysis, I have examined the landscape evidence provided by NZKS BOI by Frank Boffa, Peter Rough and Stephen Brown. The evidence provides an in-depth evaluation of 'Waitata Reach' natural character and landscape values, although the evaluation was by its very nature made prior to the introduction of Waitata and Kopaua salmon farms into the site and is less helpful for the evaluation of the current values of Waitata Reach.

The MCS and MLS reports were released subsequent to the NZKS hearing and the consents for Waitata and Kopaua farms, but prior to the actual installation of the infrastructure. I assume that the studies were updated to reflect these consents, however they are not very helpful at the more detailed scale of Waitata Reach:

- Kaitira and Port Ligar headlands that include Blowhole Point (and the 2 Blowhole sites) are identified as ONF.
- The western side of the reach from Yellow Cliffs to Buckland Bay and Maud Island are identified as ONF.
- Waterscape between Kaitira and Port Ligar headlands has high marine natural character values
- Waterscape between Maud Island and the western side of the reach has high marine and very high terrestrial natural character values

At the time of the hearing when the only salmon farm in Waitata Reach was the Waihinou farm, which is set back into Waihinou Bay, the three landscape architects agreed that Waitata Reach had High natural character values and landscape values that ranged from High to Very High but were not as a whole considered Outstanding.

Frank Boffa's opinion was that the natural character of the Reach overall varied on the natural scale continuum from indigenous natural to modified natural (i.e. working rural landscapes). (Paragraph 6.15)

Stephen Brown concluded that Waitata Reach *'has a clear and legible structure, a strong sense of being remote, even wild and elemental (not uncommon on the edge of Cook Strait), and is conspicuously natural.'* (Paragraph 87)

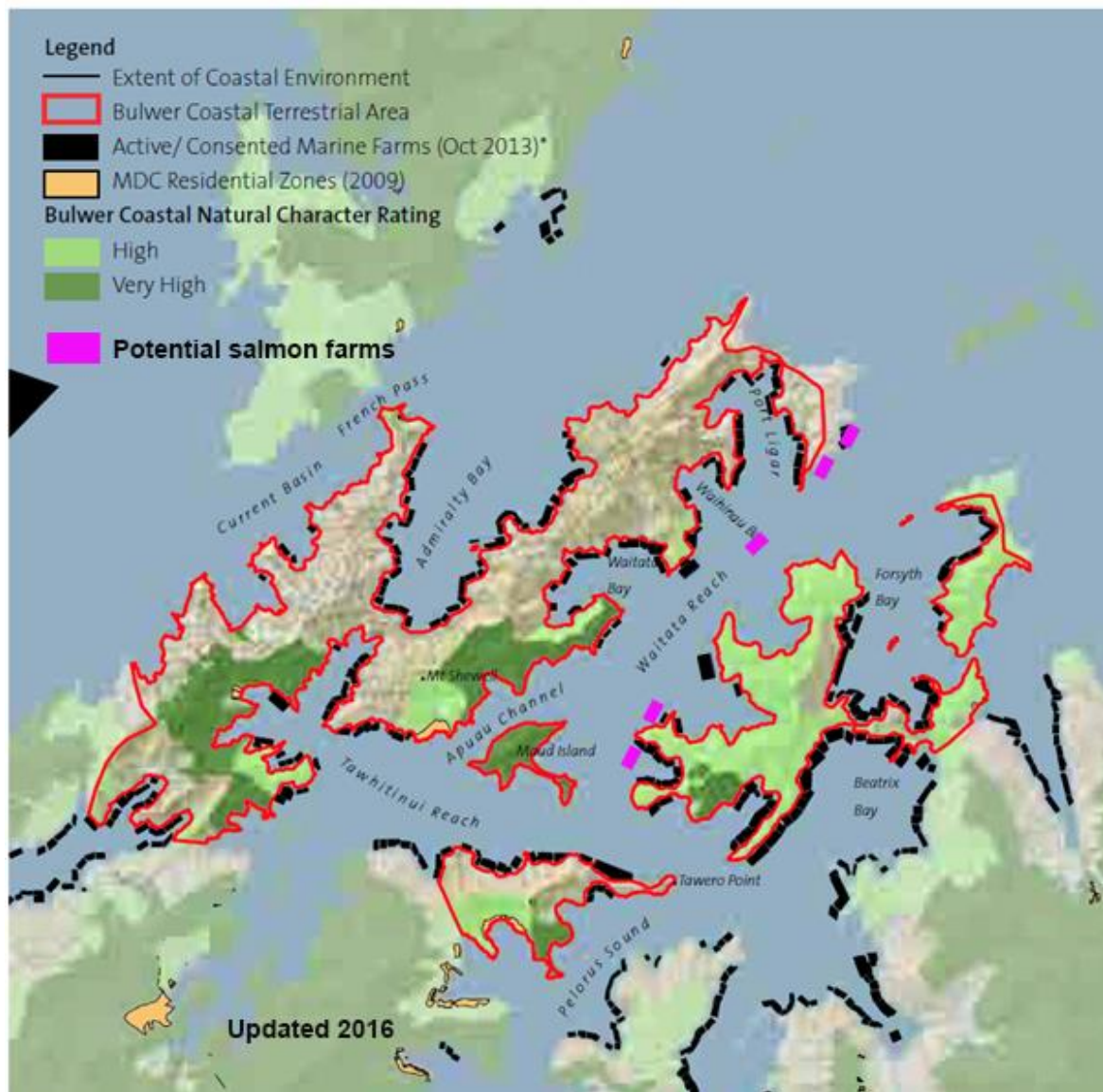
² Marlborough Coastal Study. Page 72.

Peter Rough particularly noted that an *‘aesthetic quality of the Waitata Reach is the framed views of the sea’s horizon that are afforded from on the water..... In the more central areas of the Waitata Reach views of the horizon are afforded on either side of the Chetwodes.’* (Paragraph 78)

Cumulative effects

It is proposed/there is potential to add farms to the following sites:

- **Blow Hole Point North**, located just outside the headlands of Matakana Point and Blow Hole Point and opposite Goat Point and the entry into Waitata Reach;
- **Blow Hole Point South**, located south of Blow Hole Point, backdropped by the long headland of Te Akaroa (West Entry Point) and opposite Kaitira (East Entry Point);
- **Waitata Reach**, located mid-channel in Waitata Reach;
- **Richmond Bay North**, on the other side of Richmond Bay from Kopaua, set back slightly behind the headlands but effectively at the outer edge of the bay; and
- **Horseshoe Bay**, sited south of Te Kaiangapihi headland at the outer edge of Horseshoe Bay.



Combined Existing and Potential farms in Waitata Reach 2016

- All 5 proposed and the 2 existing sites are located in or at the edge of Waitata Reach;
- The Blowhole and Waitata Reach farms will be constructed using the circular frame structures. Richmond Bay North and Horseshoe Bay farms have a similar rectangular form to the existing Waitata and Kopaua Farms using pens dark netting and a barge.
- All farms will have night lighting.

In all therefore, there is potential for 7 salmon farms comprising 2 different layouts/structures along the length of Waitata Reach, an increase of over 300% in salmon farms. Of particular note is that the Blowhole sites sit at the West Entry Point, opposite Kaitira. The plan below shows the relative locations of the sites proposed at the NZKS BOI (*blue rectangle*) and the Marine Farm site proposed for the 2016 review (*red pentagon*).

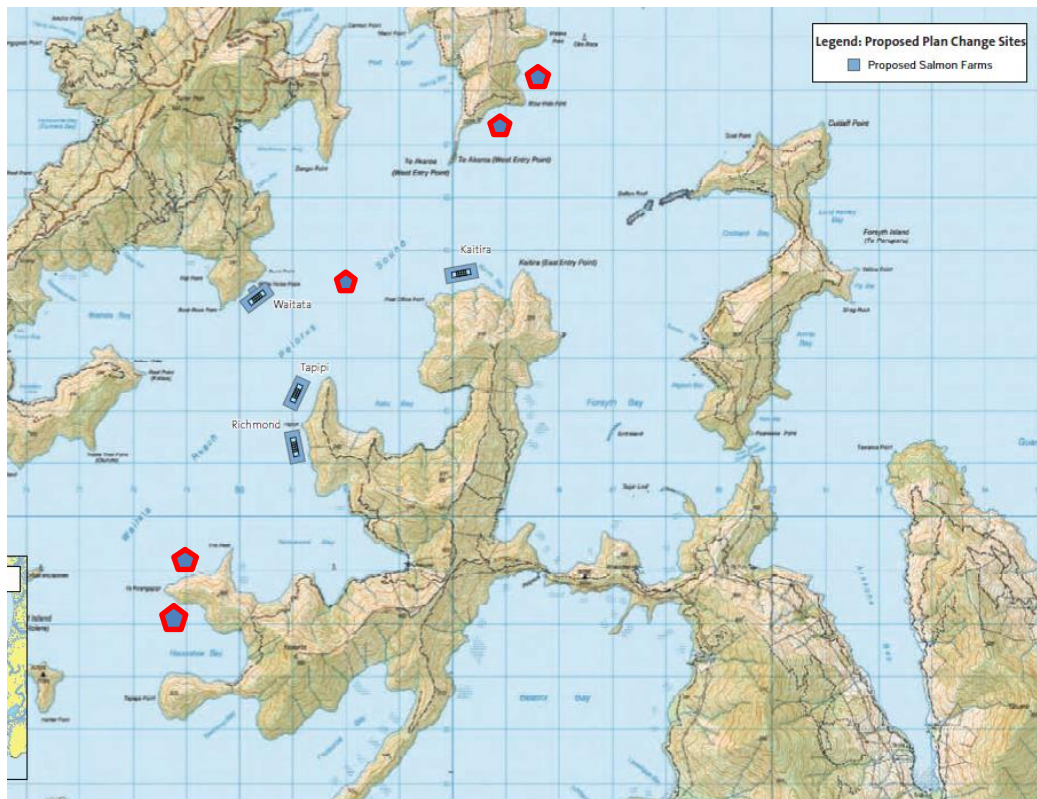


Figure B1: Site Location Plan: Waitata Reach

In my opinion the evidence given at the NZKS BOI provides useful background for addressing cumulative effects.

In his evidence Frank Boffa stated *'Given the openness of the Waitata Reach and the locations of the five proposed salmon farms within the Reach, I consider there will be little or no significant adverse effects in terms of direct physical or ecological effects on the Waitata Reach as a whole. There will, however, be the potential for cumulative natural character effects, in terms of the perception or appearance of naturalness rather than effects on ecological naturalness per se. (Paragraph 6.18).* He concluded however that the cumulative effects on natural character the 4 farms proposed in Waitata Reach would be high and the cumulative effects on landscape values would be moderate.

Peter Rough concluded that *'In respect of maintaining and/or enhancing the overall existing high to outstanding natural character of the Waitata Reach, and indeed preserving the natural character of its coastal environment from inappropriate use and development, as per section 6(a) of the RMA and Policy 13 of the NZCPS, it is my opinion that the development of all or any of NZKS's proposed salmon farms will be a retrograde step. It would introduce a highly visible form of marine farming into the coastal environment of a significant part of Pelorus Sound where presently there is virtually no marine farming or other forms of built development.'*(Paragraph 61)

Both Peter Rough and Stephen Brown expressed concerns with regard to the impact of a potential farm at Kaitira Heads due to high effects on natural character for a prominent headland that denotes the entry to Waitata Reach. Stephen Brown stated *'The proposed Kaitira Salmon Farm would substantially undermine this pattern of 'containment' by promoting*

*the migration of marine farming out in the main channel margins of Pelorus Sound. The related impacts on the landscape and natural character values of this gateway would be of a **Very High** order.’ (Paragraph 154)*

The cumulative effects on natural character and landscape values arising from the 5 additional sites proposed in 2016 therefore must be considered within the context of the pre and post BOI Waitata Reach landscape. Otherwise the effects of the proposal are likely to be negatively perceived as creeping cumulative effects.

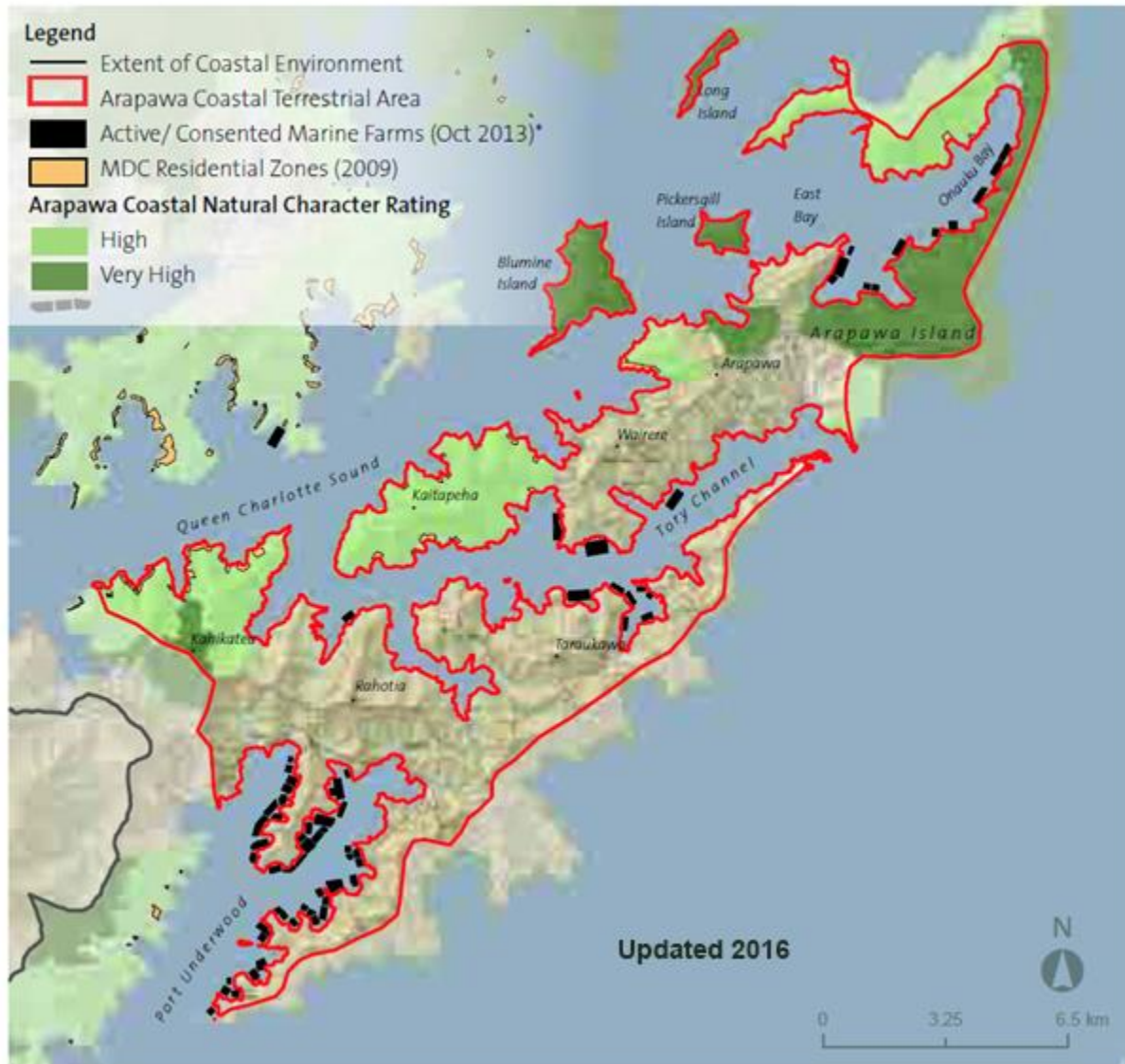
At the time of the hearing, it was generally agreed that:

- Waitata Reach had High natural character values and landscape values that ranged from High to Very High but were not as a whole considered Outstanding.
- Cumulative effects of an additional four salmon farms would be High (at a minimum) on natural character values and at least Moderate on landscape values.

The proposal introduces 2 farms at the West Entry Point, effectively replicating the earlier Kaipira farm in its gateway location, 2 farms either side of the Te Kaiangapipi headland, one of the sequence of headlands along the reach, and most significantly a farm in the middle of Waitata Reach. It appears that the Waitata Reach farm would be the first salmon farm to be located in the middle of a water channel or reach, where it would have adverse effects on the seascape and sea horizon values described by Peter Rough and referenced earlier in this review. The night lighting of this farm would further decrease experiential values, particularly for local residents.

Based on this information, the additional of five salmon farms to create a total of seven farms since the BOI, and including a farm sited in the middle of Waitata Reach will have High to Very High cumulative effects on natural character. Given the high experiential values and visual amenity of Waitata Reach, I would expect cumulative effects on landscape values to be High. However I note that the proposed farms and the circular pens in particular may have a lower visual prominence than the older existing farms. This would potentially reduce the resultant experiential/sensory component of natural character and landscape ratings, although not necessarily reduce effects on perceived naturalness.

Site: Tory Channel / Kura Te Au



* Data represents active and consented marine farms as of October 2013. Marine farms mapped may not be operational.

Existing farms in Tory Channel

Diagram from MCS indicating active and consented marine farms as of October 2013 with the addition of salmon farms consented and constructed between 2013-2016.

Existing farms in Tory Channel

There are 3 salmon farms currently sited in Tory Channel, all with nets sitting 2m high above water plus barges/accommodation structures:

- **Te Pangu** is set back from the main channel into Te Pangu Bay. The farm is an older design with a large, dark grey/green 2 storey accommodation barge and pale grey/metallic pens and infrastructure;
- **Clay Point** is a smaller farm, sited into a curved along Tory Channel and with a lighter coloured structure;

- **Ngamahau** is the most recent farm. It sits to one side of Tory Channel. It is a new farm with a split level 'boatshed' accommodation block and with recessive coloured pens and netting. I visited the site mid-winter and mid-afternoon with low sun angles and note the increased visibility of the farm with sun coming from behind the infra structure and lighting up the vertical elements.

There are also numbers of existing mussel farms, although these are located in bays and set back from the main channel and. They have a low visual presence both day and night for water traffic on Tory Channel.

Tory Channel character

Tory Channel is an important 'gateway' to the South Island and a water road for local dwellings and aquaculture farms. It is a relatively narrow waterway, approximately 1.2-1.5 km in wide and extending from West and East Heads at the entry to Cook Strait through to Takatea Point, some 12.5 km.

There is little native forest in Tory Channel, although large areas are increasing in as pasture reverts to indigenous cover. The best quality vegetation is the western side of the channel on Arapawa Island; vegetation is more modified on the west facing slopes on the mainland, a mix of pasture, forestry and areas of low scrub with wildling pines. Other modification in the Tory Channel landscape includes plantation clearance with consequent haul tracks and logging roads and also power and communication infrastructure with poles and cabling. There is some residential development but generally it is set back into bays with jetties and boatsheds down at water level, backdropped by landform and vegetation. Marine natural character also has been influenced by forestry and aquaculture, as well as historic and existing ferry wake.

I travelled Tory Channel by boat and visited all proposed and existing sites in July 2016 but I am not familiar with the place and its landscape to the same level of detail as the landscape architects who undertook the review of the proposed salmon farms sites. To supply further detail and analysis, I have examined the landscape evidence provided by NZKS BOI by Frank Boffa, Peter Rough and Stephen Brown. The evidence provides an in-depth evaluation of 'Tory Channel' natural character and landscape values. I note that the hearing occurred over 2011-2012, before the final Marlborough Landscape (2015) and the Natural Character of the Marlborough Coast (2014) studies were released.

Frank Boffa evidence

- *'..... the entrance to Tory Channel from Queen Charlotte Sound displays a mosaic of landscape attributes that share aspects of both natural and cultural patterns, evidenced by way of a combination and scattering of buildings, jetties, forestry activity and native vegetation in various stages of succession. The mid section of Tory Channel, within which the proposed Ngamahau site is located, is characterised more by productive rural activities rather than the indigenous natural attributes which are evident but not visually prominent.'* (Paragraph 6.74)

Stephen Brown evidence

- *'Although the entry into Tory Channel from Cook Strait is dramatic as the Interislander and Bluebridge ferries skirt West Head, the landscape revealed inside Tory Channel is, by contrast, much more utilitarian and unexceptional: somewhat of a let-down after the drama of the narrow entry point and the rugged Straits landscape revealed on the outside of Arapawa Island and West Head.'* (Paragraph 108)
- *'.....it is clear that Tory Channel does not exhibit the same unified character and appeal as other Sounds landscapes. It lacks the fundamental cohesion of elements, sense of structure and order, and aesthetic appeal that the likes of Pelorus Sound and most of Queen Charlotte Sound so clearly evoke. This is unfortunate, given the Channel's enticingly (and, at times, excitingly), narrow entry from Cook Strait, and the manner in which it is framed – both by the rounded, yet rather sculptural, profile of Arapawa Island's outer hills and ridges, and the narrow peninsula of jagged rocks of West Head.'* (Paragraph 123)

Peter Rough evidence

- *'.....features such as dwellings, roads, power lines, jetties and wharves, remains of old whaling stations, navigation lights and the presence of vessels all detract from the natural character of the Tory Channel landscape. Utilisation of the land for farming and forestry has, however, had a more marked effect in diminishing the landscape's originally very high/ pristine natural character prior to the arrival of European settlers.'* (Paragraph 171)

In summary, Frank Boffa, Peter Rough and Stephen Brown were in general agreement that Tory Channel natural character and landscape values are not high, particularly in the mid-section where the existing salmon farms are located. *Note: this was prior to Ngamahau salmon farm being consented and constructed.* Conferencing records note the consensus that Tory Channel has Low-Moderate natural character and Low landscape values.

This evaluation has been upheld in the subsequent MCS and MLS reports, with no ONC areas recorded within Tory Channel, and limited sites of ONF, based primarily on landform and location.

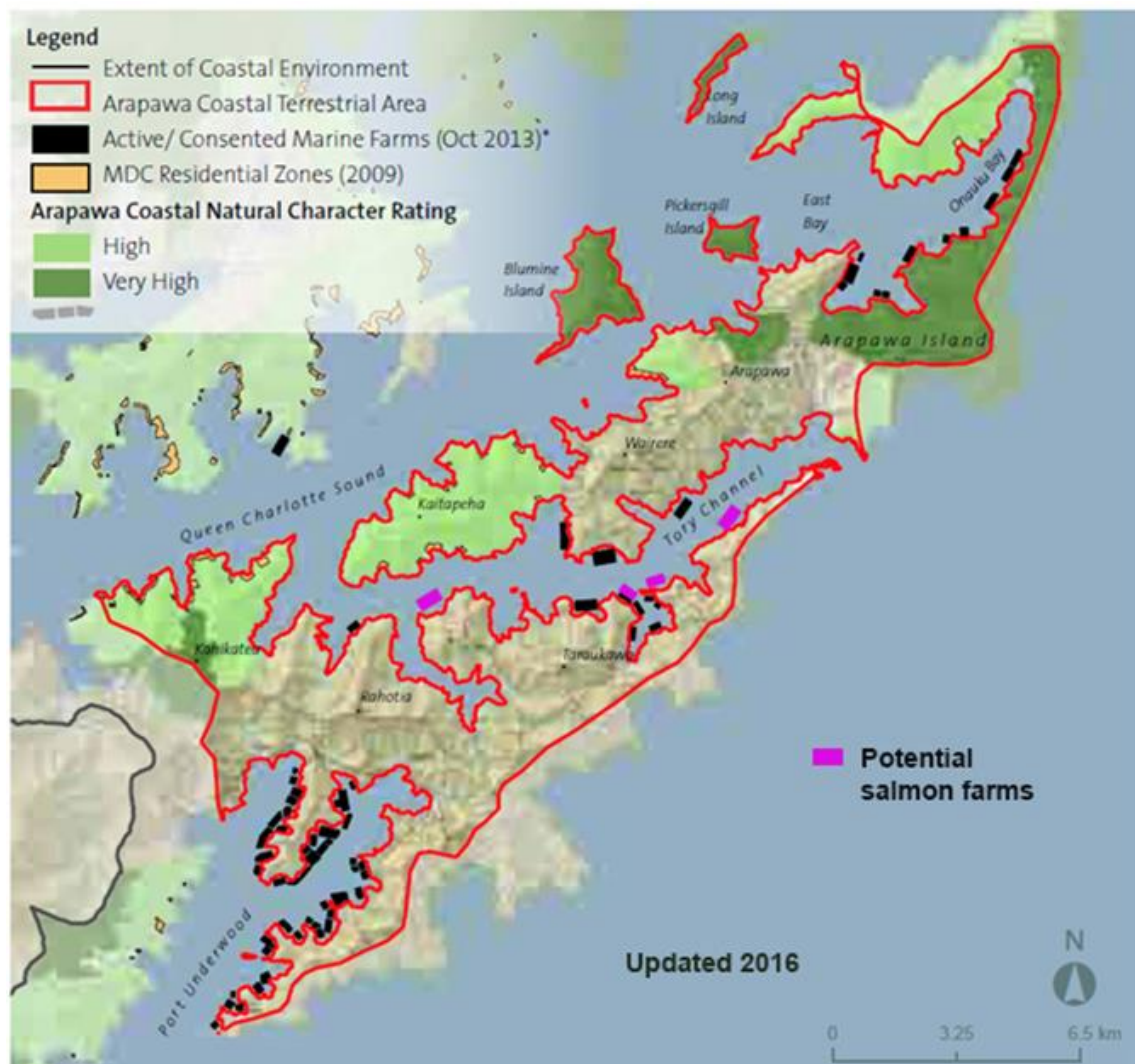
Cumulative effects

At the NZKS BOI, Frank Boffa considered the cumulative effects of Clay Point, Te Pangu and the proposed Ngamahau would be moderate.

Peter Rough and Stephen Brown considered the cumulative effects of adding Ngamahau to the existing Clay Point and Te Pangu farms in general would be low. However Peter Rough concluded that *'While the combined and successive types of cumulative effects (taking into account the proposed Ngamahau salmon farm and the existing salmon farms in Tory Channel) will be low, there will be sequential cumulative effects experienced from vessels that ply the waters of the Channel should the proposed Ngamahau salmon farm be established.'* (Paragraph 196)

It is proposed/there is potential to add farms at the following sites:

- **Tipi Bay**, located at the edge of Tory Channel and set beyond the bay headlands. The site is immediately west of an identified ONF landscape, although the immediate backdrop has only High-moderate natural character and landscape values;
- **Motukina Point**, set back into the curved edge of Tory Channel east of Motukina Point. This is the narrowest point of the channel and at a point where outbound water traffic turns slightly northeast;
- **Tio Point**, sited slightly off the main channel at the mouth to Oyster Bay but visible to for water traffic heading west into Queen Charlotte Sound; and
- **Te Weka**, set slightly into Te Weka Bay, and with the outer edge of the pens in line with the headlands. The bay is located just east of the point where Picton-bound ferries start their turn into Queen Charlotte Sound.



Combined Existing and Potential farms in Waitata Reach 2016

- All 4 proposed sites are located along the mainland, on the eastern side of Tory Channel with lower landscape and natural character values than Arapawa Island to the west.
- All the proposed and existing farms are located in or at the edge of Tory Channel.
- The proposed farms have a similar rectangular form, 4-5 pens, dark netting and a barge. The existing farms appear to be of at least 2 different forms.
- All farms have night lighting.

In all therefore, there is potential for 7 salmon farms comprising 3 different layouts/structures along the length of Tory Channel, with only 7.5km between Te Weka (westernmost farm) and Tipi Bay (easternmost farm), and an increase of over 200% in salmon farms.

Tory Channel provides a dramatic entry into Marlborough Sounds, due in part to the narrowness of the channel, the proximity of the high, steep slopes that enclose the water and the very complex shoreline. The perceptual and associative values of the landscape are heavily influenced by this wider setting and the 'gateway' location. However the addition of up to 4 salmon farms (noting the Hudson Report recommendation to not proceed with the Motukina Point site) cannot but influence the sequential experience of travelling through Tory Channel, its perceived naturalness and transient values.

- In terms of viewer prominence, inter island ferry travel times are in the order of 30 minutes to travel the length of Tory Channel. In other words, over the course of 30 minutes, travellers will see 7 salmon farms.
- Based on information from the NZKS application, Frank Boffa notes that from marine based viewpoints, the visual effects will vary depending on the viewpoint location and the context in which the salmon site is viewed. In general, the effects will be high from distances within 1km, moderate in the 1 to 2 km distance zone, and low from distances beyond 2 to 3 km. I have no information on the proposed salmon farms to the contrary. Therefore all farms will be within 0.5-1km of the ferry or of boat traffic, where views of salmon farm will be prominent.
- In terms of night lighting, there currently are five navigation lights in the vicinity of the entrance to Tory Channel and another three at the junction of the outer and inner reaches of the Channel. In addition to these lights are the lights of dwellings and the mussel farms in the bays of the outer Channel. The 3 existing salmon farms are lit and it is proposed to add another 4 farms with night lighting.
- The proposed farms extend the 'working character' of Tory Channel further west to Te Weka Point and further east to Tipi Bay at the edge of the West Head ONF

Based on this information I regard the sequential cumulative effects, even without the addition of Motukina Point farm, as at least Moderate and possibly even High-Moderate.

However these effects must be balanced against the very positive effects of removing Ruakaka Farm from Queen Charlotte Sound. Ruakaka farm was the most visually prominent of all the salmon farms I visited. It is the only Salmon farm in Queen Charlotte Sound, an area with High natural character and an ONF along the western side of the sound. I agree with the Hudson report that removal of the salmon farm would result in the site becoming eligible for consideration as ONF at the site and district scales.

Conclusions

OVERALL METHODOLOGY

Overall the Hudson study follows best practice methodology that is robust in principle and uses appropriate and consistent comparison measures. I recognise that the landscape assessment of the proposed farm relocations has been undertaken as a preliminary study for a potential plan change, and as such cannot be specific on the detail of each farm proposal. However there are a number of areas where additional material is required or where existing material could be reorganised to make the assessment process more explicit and transparent.

1.0 Scope - Additional information required includes:

- Description of salmon farms, both existing and proposed including size, height, surface coverage, materials, barge and accommodation block and the distance of the farm from shoreline/coastline.

Hudson Associates:

Details on each farm design will be confirmed/refined by King Salmon as work progresses. The Hudson report makes a number of assumptions about the proposed farms based on the information provided. These are set out in the AEE and under the Proposed Change section of the individual site Assessment of Effects pages, and have been used as the basis for the assessment.

- The visibility of existing and proposed farms salmon farm including daytime and night time effects; weather and sun conditions ;

Hudson Associates:

Visibility tables developed by Boffa Miskell for the 2012 BOI hearing have now been incorporated into the Hudson Review, and used as a guide for assessment of visual effects. It should be noted that many factors affect visual effects, including site attributes, context and individual viewer biases, as well as light conditions, sun angle, backdrop, wave conditions, angle of view, and structure design and colour. The distances are therefore general rather than specific to every situation.

2.0 Methodology - Additional information required includes:

- Information from other technical reports to complete the associative baseline including: Tourism and Recreation; Heritage; and Cultural reports;

Hudson Associates:

Information from Cultural Impact Assessment, Tourism and Recreation Assessment and Social Impact reporting have become available since the Drakeford Williams Review,

and have now been incorporated into the Hudson document.

- Clarification that the same value scale has been used in the benthic study or whether the values identified in the benthic study have been interpolated and translated into the landscape study value scale.

Hudson Associates:

Benthic information was used as provided. Where an evaluative conclusion has been reached in the Benthic studies, this has been accepted as an expert opinion and transferred into the Hudson report. Where 'Significant benthic effects' are stated as occurring, this is the opinion of the benthic scientist undertaking the assessment and is based on direct discussions.

- Clarification on the relative weighting of the benthic and terrestrial values for the Natural Science rating.

Hudson Associates:

Marine ecology has been slightly weighted in the Natural Science rating, as salmon farms have no physical effects on terrestrial ecology. The coarseness of the NZILA rating scale in relation to the complexities of this particular project has been a factor in some of the rating outcomes. For example, if terrestrial ecology has been rated Low-Moderate, and marine ecology has been rated High, there is no mid-point rating on the scale available as an option. In that case the score on the marine ecology side has been chosen, resulting in (in this example) a Natural Science baseline rating of High-Moderate.

3.0 Characterisation - Additional information required includes:

- Characterisation at the Level 3-4 scale of Waitata Reach and Tory Channel.

Hudson:

Reach Characterisations have been added.

4.0 Evaluation - Additional information required includes:

- Establish where effects can be considered 'minor' and 'more than minor' on the 7-point scoring system if and where this RMA terminology forms part of the evaluation. For example, given the 7 point scoring system of Very High/High/High-Moderate /Moderate/Moderate-Low/Low/Very Low, it could be stated that a Low rating equates in RMA terms to 'minor' and very low as 'less than minor'.

Hudson Associates:

We have had a number of discussions with the planner on the project (Frances Lojkin, MWH) with regards to terminology relating to effects. The report is guided in its terminology by those discussions.

There is no fixed correlation between a change in the 7 point scale and the RMA terminology of 'minor'. This is a professional judgement based on the site and situation.

5.0 Conditions and Effects - Additional information required includes:

- Clarify the rating system for the magnitude of change of effect on Natural Character and Landscape values;

Hudson Associates:

The magnitude of change determines the nature and degree of change that will occur as a result of the proposal. This assessment has not used a numeric rating system for the magnitude of change. The effect is considered to be the difference to the Baseline value that will occur as a result of the proposal.

- Cumulative effects including: consideration of existing aquaculture (both mussel and salmon farms); the potential viewing audience and their location ie from the ferry and elevated above the water, from sea kayak, from beach or from a track; and the cumulative effects of night lighting.
- An analysis of the combined visual envelope using specific data on the visibility of salmon farms to determine whether 2 farms can be seen at once from a single viewpoint, as well as an analysis of sequential views for residents.

Hudson Associates:

Cumulative Effects has been further reviewed and updated.

6.0 Change management - Additional information required includes:

- Organise mitigation in the individual site 'Assessment of Effects' summary table to more specifically identify/separate the mitigation elements. For example: farm design factors that have the potential mitigate effects; characteristics of the site that are mitigating factors; and potential for additional/future mitigation.

Hudson Associates:

Column heading has been edited to reflect inclusion of both mitigating design features and site attributes which provide mitigating factors.

INDIVIDUAL SITE ASSESSMENTS

The summary review of individual sites generally aligns with the Overall Baseline and Resultant ratings. Identified differences in Natural Character and Landscape ratings occur at the following sites.

Mid channel Waitata

The site is well off shore and away from coastal margins. Lowering the natural science values because of the distant terrestrial /marine modifications indicates that this site does not fit the methodology process. The report considered the site to have a low sensitivity due in part to the absorption capacity of the expansive scale of the Reach. I do not agree given the location of the site in the middle of the reach, which presumably is the most trafficked area and most visible from the water.

The outcome is:

- **Natural Character drops from the Baseline High to Resultant Moderate-Low, a decrease of 3 points on the rating scale.**

- **Landscape drops from a Baseline rating High to a Resultant Moderate. This is a decrease of 2 points on the rating scale.**

Hudson Associates:

This amounts to a difference in professional opinion – and possibly a difference in approach. Particularly relevant is the stated methodology taken from the recent model developed by Boffa Miskell (and discussed under the heading “Assessment Process” at the start of the Hudson Review), whereby natural science factors are weighted in determining a Natural Character baseline. Perceived naturalness is considered a perceptual attribute and receives equal weighting under the landscape baseline evaluation.

Motukina Point

I regard the site as having a Moderate Perceptual rating due to its Moderate coherence, the values of the natural wider setting, the location on Tory Channel and the Moderate perceived naturalness. This elevates the Landscape baseline to High-Moderate.

The outcome is:

- **Landscape drops from a Baseline rating High-Moderate to Moderate-Low, a decrease of 2 points on the rating scale.**

Hudson: This is a difference of professional opinion. In our opinion the managed character of the land is a defining characteristic, power-poles and other structures are visible, and perceived naturalness is Low-Moderate. In our opinion coherence is low-moderate, with fragmented vegetation patterns and wilding pines apparent. There is no analysis in the Peer Review which explains the stated 2-point drop for the resultant rating.

Combined Blowhole North and South sites

The location of two farms at this site will have an effect on the ONF values given the high associative and perceptual values of the gateway landscape.

The outcome is:

- **Landscape drops from a Baseline rating Moderate to Low, a decrease of 2 points on the rating scale.**

Combined Richmond South and Horseshoe sites

The location of two farms around a headland in the reach elevates their visibility and reduces the perceived naturalness of the landform. The site is opposite Maude Island and has the potential to affect its ONC and ONF values.

The outcome is:

- **Landscape drops from a Baseline rating High-Moderate to Moderate-Low, a decrease of 2 points on the rating scale.**

The peer review finds that the Hudson study follows best practice methodology that is robust in principle and uses appropriate and consistent comparison measures. The review then goes beyond methodological comment and recommends some changes to ratings within the Hudson assessment without having undertaken its own detailed assessment. Some amendments have been made to the Hudson report accordingly, while recognising the validity of variance due to independent professional judgement.

CUMULATIVE EFFECTS

Assessment of cumulative effects has been a desktop exercise, with information drawn from the Hudson Report, and the 2011/12 NZKS BOI including briefs of evidence of three landscape architects and their conferencing notes. Based on this information, the following conclusions were made.

Waitata Reach

The proposal introduces two farms at the West Entry Point, effectively replicating the earlier Kaipira farm in its gateway location, plus two farms either side of the Te Kaiangapihi headland, one of the sequences of headlands along the reach, and most significantly a farm in the middle of Waitata Reach. The Waitata Reach farm would be the first Marlborough salmon farm to be located in the middle of a water channel or reach, where it would have adverse effects on the seascape and sea horizon values. The night lighting of this farm would further decrease experiential values, particularly for local residents.

Based on this information, the additional of five salmon farms to create a total of seven farms since the BOI, and including a farm sited in the middle of Waitata Reach will have High to Very High cumulative effects on natural character. Given the high experiential values and visual amenity of Waitata Reach, I would expect cumulative effects on landscape values to be High. However I note that the proposed farms and the circular pens in particular may have a lower visual prominence than the older existing farms. This would potentially reduce the resultant experiential/sensory component of natural character and landscape ratings, although not necessarily reduce effects on perceived naturalness.

Tory channel

The proposed farms extend the 'working character' of Tory Channel further west to Te Weka Point and further east to Tipi Bay at the edge of the West Head ONF. Potentially therefore all farms will be within 0.5-1km of the ferry or of boat traffic, where views of salmon farm will be prominent and there will be additional cumulative effects from night lighting of both salmon and existing mussel farms.

Based on this information I regard the sequential cumulative effects of the proposed and existing salmon farms, even without the addition of Motukina Point farm, as at

least Moderate and possibly even High-Moderate. However these effects must be balanced against the very positive effects of removing Ruakaka Farm from Queen Charlotte Sound, an area with High natural character and an ONF along the western side of the sound. I agree with the Hudson report that removal of Ruakaka salmon farm would result in the site becoming eligible for consideration as ONF at the site and district scales.

Hudson Associates:

Cumulative Effects has been further reviewed and updated.

Julia Williams

Drakeford Williams Ltd

22 September 2016